Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Office Action issued November 8, 2019 in UK Patent Application No. GB1604478.6 (3 pages)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Acknowledgement Receipt

EFS ID:	38491840
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Karina Fernandez
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	04-FEB-2020
Filing Date:	29-DEC-2016
Time Stamp:	17:00:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331usIDS.pdf	2380009 e4f1387edd4b6e5ae1f592a43e598abf766a7723	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Non Patent Literature	3	5
Warnings:			
Information:			
	Total Files Size (in bytes):	2380009	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3661
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to place in the USPTO file the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 10/02/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	

ART UNIT	PAPER NUMBER
3666	

NOTIFICATION DATE	DELIVERY MODE
10/02/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
OBLONPAT@OBLON.COM
iahmadi@oblon.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

In re Application of	:	
EDA, TAIKI	:	
Application No. 15/393,646	:	DECISION ON PETITION
Filed: December 29, 2016	:	REGARDING REQUEST TO
Attorney Docket No. 481331US	:	CONSIDER INFORMATION
For: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	:	DISCLOSURE STATEMENT UNDER 37 CFR 1.181(A)(3)

This is in response to applicant's petition under 37 CFR 1.181 (A)(3) filed July 10, 2019 requesting the Commissioner to invoke his supervisory authority to require the Examiner to consider the Information Disclosure Statements filed August 24, 2017 and November 9, 2017.

The petition is **DISMISSED AS MOOT**.

A review of the record reveals that Applicant filed Information Disclosure Statements on August 24, 2017 and November 9, 2017. The examiner initially acknowledged the Information Disclosure Statements on October 10, 2017 and November 16, 2017, respectively, but did not specify that the references were considered. However, since the filing of the petition, the Information Disclosure Statements were acknowledged as considered and made of record on August 2, 2019. Therefore, Applicant's requested relief has been given. The petition is thus DISMISSED as being moot.

Any questions regarding this decision should be directed to Shadi Baniani, Quality Assurance Specialist, at (571) 270-5745.

Rinaldi Rada, Director
Technology Center 3600
(571) 272-5050

/SB/: 09/10/2019

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	09/03/2019	10398978	481331US	3602

22850 7590 08/14/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Taiki EDA, Tokyo, JAPAN;
Gree, Inc., Minato-ku, JAPAN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 08/02/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	

ART UNIT	PAPER NUMBER
3661	

NOTIFICATION DATE	DELIVERY MODE
08/02/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OBLONPAT@OBLON.COM
iahmadi@oblon.com
patentdocket@oblon.com

UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR/ PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
15/393,646	12/29/2016	EDA, Taiki	481331US

		EXAMINER	
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314		MASUD AHMED	
		ART UNIT	PAPER
		3661	20190730

DATE MAILED: _____

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Examiner has considered the IDS submitted on 10/10/17 and 11/16/17 previously, however inadvertently the "all reference considered " was left out. Attached is the corrected IDS forms considered.

/MASUD AHMED/
Primary Examiner, Art Unit 3661

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	US 2011/0319170 A1	12/29/2011	Shimura et al.			
	AB	US 2010/0160039 A1	06/24/2010	Nathan et al.			
	AC	US 2010/0130285 A1	05-27-2010	Luciano, Jr. et al.			
	AD	US 2010/0227682 A1	09-09-2010	Reville et al.			
	AE	US 2012/0295702 A1	11-22-2012	Otero et al.			
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	European Search Report dated July 28, 2017 issued in corresponding European Patent Application No. 14848832.3 (16 pages)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	07/30/2019

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

/MASUD AHMED/ 09/10/2017

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP 2011-142997	07-28-2011	Japan		X
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Office Action for corresponding JP application No. 2016-255511 mail date 4/25/2017, 15 pages (with English translation)
	AX	Office Action for corresponding JP application No. 2016-255512 mail date 4/25/2017, 12 pages (with English translation)
	AY	Taku YAMAZAKI et al., Super Family Computer Fire Emblem: Lineage of Crusades Walkthrough Guide Book, T2 Publishing Co., Ltd., July 20, 1996, 2nd impression, 5 pages.
	AZ	V Jump Books Game Series: Final Fantasy Tactics, Shueisha, Inc., January 18, 1998, 3rd impression, 5 pages

☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	07/30/2019

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

/MASUD AHMED/ 11/12/2017

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

DOCKET NO: 481331US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
TAIKI EDA	: EXAMINER: AHMED, MASUD
SERIAL NO: 15/393,646	:
FILED: DECEMBER 29, 2016	: GROUP ART UNIT: 3661
FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	:

PETITION UNDER 37 C.F.R. §1.181(A)(3)

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

Applicant herein petitions the Commissioner to invoke his supervisory authority to compel the Examiner to consider Documents (AA) – (AE) and (AW) cited on the Information Disclosure Statement of August 24, 2017, and Documents (AO) and (AW) – (AZ) in the Information Disclosure Statement of November 9, 2017. The Information Disclosure Statements, in conformity with the requirements of 37 C.F.R. §1.97-1.98, were originally filed on August 24, 2017, and November 9, 2017. The above-referenced application has now been allowed. It appears that Documents (AA) – (AE) and (AW) and Documents (AO) and (AW) – (AZ) listed in the Information Disclosure Statements have not yet been considered.

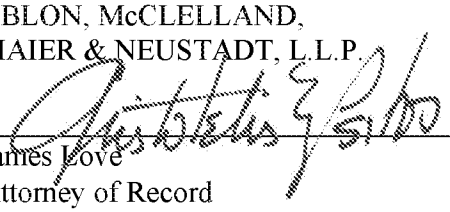
37 C.F.R. §1.181(a)(3) allows petition to invoke the supervisory authority of the Commissioner in appropriate circumstances. The Information Disclosure Statement of August 24, 2017, is in compliance with 37 37 C.F.R. §1.97-1.98 since it was timely submitted

with a showing of relevancy comprising: Document (AW) a search report in European Patent Application No. 14848832.3 in English

indicating the Category "Y" and "A" for cited Documents (AA) – (AE) in accordance with M.P.E.P. 609.4 (a) III listed in the Information Disclosure Statement. No copies of Documents (AA) – (AE) are provided because they are published U.S. Patents, and a copy of Document (AW) may be found on PAIR as a NPL Document. Furthermore, the Information Disclosure Statement of November 9, 2017, is in compliance with 37 C.F.R. §1.97-1.98 since it was timely submitted with a showing of relevancy comprising: Document (AO) a Japanese Patent JP 2011-142997; Document (AW) a Japanese Office action in application No. 2016-255511 with an English translation thereof indicating the degree of relevance of Documents (AO), (AY) and (AZ) cited in the Information Disclosure Statement; Document (AX) a Japanese Office action in application No. 2016-255512 with an English translation thereof indicating the degree of relevance of Documents (AO) cited in the Information Disclosure Statement; Document (AY) Super Family Computer Fire Emblem, T2 Publishing Co. Ltd. July 20, 1996, 2nd impression 5 pages by Taku YAMAZAKI et al; and Document (AZ) V. Jump Books Game Series; Final Fantasy Tactics, Shueisha, Inc. January 18, 1998, 3rd impression, 5 pages. Copy of Document (AO) may be found on PAIR as a FOR document, copies of Documents (AW) – (AZ) may be found on PAIR as NPL documents. Accordingly, it is respectfully submitted that this Petition Under 37 C.F.R. §1.181 be granted and that the Examiner consider the Information Disclosure Statements filed August 24, 2017, and November 9, 2017 including all the Documents cited therein.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.



James Love
Attorney of Record
Registration No. 58,421

Aristotelis M. Psitos
Registration No. 63,739

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

DOCKET NO.: 481331US/smc

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Taiki EDA

GROUP: 3661

SERIAL NO: 15/393,646

EXAMINER: AHMED, MASUD

FILED: December 29, 2016

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

MISCELLANEOUS LETTER
REGARDING APPLICATION OF PREVIOUSLY PAID ISSUE FEE

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

This application was previously withdrawn from issue after payment of the Issue Fee. Applicant requests that the previously paid Issue Fee be applied to the pending Notice of Allowance.

If there is a discrepancy between the amount of the previously paid Issue Fee and the amount indicated as due in the pending Notice of Allowance, the Commissioner is authorized to charge or to credit only the amount of the discrepancy to Deposit Account No. 15-0030.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Maki Saitoh/

James Love
Registration No. 58,421

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 12/16)

Maki Saitoh
Registration No.: 72,208

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

CUSTOMER NUMBER
22850

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	~~$480.00~~ $1000.00	~~$960~~ $0	07/10/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3661	463-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Oblon, McClelland,
2 Maier & Neustadt, L.L.P.
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: GREE, INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Minato-ku, JAPAN

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)* "No Fees Due"

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 15-0030

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Maki Saitoh/ Date 7/10/2019

Typed or printed name Maki Saitoh Registration No. 72,208

Supercell
~~Exhibit 1002~~
Page 15

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Acknowledgement Receipt

EFS ID:	36543796
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Daniel J. Pereira/Dakota Brown
Filer Authorized By:	Daniel J. Pereira
Attorney Docket Number:	481331US
Receipt Date:	10-JUL-2019
Filing Date:	29-DEC-2016
Time Stamp:	14:12:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331us.pdf	1855908 449ad8882f2a922071a1476efbb75f20f3df632f	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Petition for review by the Technology Center SPRE	3	4
	Miscellaneous Incoming Letter	2	2
	Issue Fee Payment (PTO-85B)	1	1
Warnings:			
Information:			
	Total Files Size (in bytes):	1855908	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Best Available Copy

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

CUSTOMER NUMBER
22850

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	~~$400.00~~ $1000.00	~~$960~~ $0	07/10/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3661	463-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Oblon, McClelland,
2 Maier & Neustadt, L.L.P.
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: GREE, INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Minato-ku, JAPAN

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)* "No Fees Due"

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 15-0030

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Maki Saitoh/ Date 7/10/2019

Typed or printed name Maki Saitoh Registration No. 72,208

Supercell
Exhibit 1002
Page 18

United States Patent and Trademark Office

- Sales Receipt -

Adjustment Date: 07/11/2019 HVUONG2

11/26/2018 HVUONG2 00000003 150030 15393646

01 FC:1501 40.00 CR -960.00 OP

United States Patent and Trademark Office

- Sales Receipt -

07/11/2019 HVUONG2 00000009 150030 15393646

01 FC:1501 40.00 DA 960.00 OP

United States Patent and Trademark Office

- Sales Receipt -

Adjustment date: 07/11/2019 HVUONG2

11/26/2018 HVUONG2 00000003 150030 15393646

01 FC:1501 40.00 CR -960.00 OP

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

7590 06/14/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	

ART UNIT	PAPER NUMBER
3661	

NOTIFICATION DATE	DELIVERY MODE
06/14/2019	ELECTRONIC

NOTICE OF NON-COMPLIANT INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement (IDS) filed 06.07.2019 in the above-identified application fails to meet the requirements of 37 CFR 1.97(d) for the reason(s) specified below. Accordingly, the IDS will be placed in the file, but the information referred to therein has not been considered.

The IDS is not compliant with 37 CFR 1.97(d) because:

☒ The IDS lacks a statement as specified in 37 CFR 1.97(e).

☐ The IDS lacks the fee set forth in 37 CFR 1.17(p).

☐ The IDS was filed after the issue fee was paid. Applicant may wish to consider filing a petition to withdraw the application from issue under 37 CFR 1.313(c) to have the IDS considered. See MPEP 1308.

/Bernice Crittenden/

571-272-4200 or 1-888-786-0101
Application Assistance Unit
Office of Data Management

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Petitioner Supercell Oy's Notice of Cross Appeal, dated May 22, 2019; in case No. PGR2018-00008 of U.S. Patent No. 9,597,594 B2. (5 pgs.)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3661
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Robert Tarcu/

James Love
Registration No. 58,421

Robert Tarcu
Registration No. 64,622

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Electronic Acknowledgement Receipt

EFS ID:	36240277
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Barbette Foster
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	07-JUN-2019
Filing Date:	29-DEC-2016
Time Stamp:	16:36:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	2714568 16bc4ad7bb44b6a68bd1252b674c6d568b62963e	yes	7

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Non Patent Literature	3	7
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Transmittal Letter	1	1
Warnings:			
Information:			
	Total Files Size (in bytes):	2714568	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

7590 05/24/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	

ART UNIT	PAPER NUMBER
3661	

NOTIFICATION DATE	DELIVERY MODE
05/24/2019	ELECTRONIC

NOTICE OF NON-COMPLIANT INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement (IDS) filed 05.20.2019 in the above-identified application fails to meet the requirements of 37 CFR 1.97(d) for the reason(s) specified below. Accordingly, the IDS will be placed in the file, but the information referred to therein has not been considered.

The IDS is not compliant with 37 CFR 1.97(d) because:

☒ The IDS lacks a statement as specified in 37 CFR 1.97(e).

☐ The IDS lacks the fee set forth in 37 CFR 1.17(p).

☐ The IDS was filed after the issue fee was paid. Applicant may wish to consider filing a petition to withdraw the application from issue under 37 CFR 1.313(c) to have the IDS considered. See MPEP 1308.

/B./ Bernice Crittenden

571-272-4200 or 1-888-786-0101
Application Assistance Unit
Office of Data Management

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Decision on Request for Rehearing, mailed May 10, 2019; Paper No. 46; in case No. PGR2018-00008 of U.S. Patent No. 9,597,594 B2. (8 pgs.)
	AX	Patent Owner's Notice of Appeal, dated May 10, 2019; in case No. PGR2018-00008 of U.S. Patent No. 9,597,594 B2. (6 pgs.)
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Acknowledgement Receipt

EFS ID:	36064584
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/karina fernandez
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	20-MAY-2019
Filing Date:	29-DEC-2016
Time Stamp:	19:30:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331usIDS.pdf	5782209 03ec3ad0a5cc06ee6c3b3603ff32d16a85356344	yes	16

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Non Patent Literature	3	10
	Non Patent Literature	11	16
Warnings:			
Information:			
	Total Files Size (in bytes):	5782209	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3661
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to place in the PTO file the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22850 7590 04/10/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 04/10/2019

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$40.00	$960	07/10/2019

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

Supercell
Exhibit 1002
Page 32

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

22850 7590 04/10/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$40.00	$960	07/10/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3661	463-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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Page 33

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 04/10/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 04/10/2019

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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Page 34

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, Taiki	
	Examiner MASUD AHMED	Art Unit 3661	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 2/28/19.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 17-22 and 30-41 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☑ All b) ☐ Some *c) ☐ None of the:

   1. ☑ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file areply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/
Primary Examiner, Art Unit 3661

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/393,646	EDA, Taiki
	Examiner	**Art Unit**
	MASUD AHMED	3661

CPC						
Symbol					**Type**	**Version**
A63F	/	13	/	537	F	2014-09-02
A63F	/	13	/	31	I	2014-09-02

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner, Art Unit 3661	31 March 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/393,646	EDA, Taiki
	Examiner	**Art Unit**
	MASUD AHMED	3661

INTERNATIONAL CLASSIFICATION					
CLAIMED					
A63F	/	9	/	24	
NON-CLAIMED					
	/		/		

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
463	25

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE (Assistant Examiner) (Date)	**Total Claims Allowed:** 18	
/MASUD AHMED/ Primary Examiner, Art Unit 3661 (Primary Examiner) 31 March 2019 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/393,646	EDA, Taiki
	Examiner	**Art Unit**
	MASUD AHMED	3661

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☑ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10	3	19		28	14	37						
	2		11	4	20		29	15	38						
	3		12	5	21	7	30	16	39						
	4		13	6	22	8	31	17	40						
	5		14		23	9	32	18	41						
	6		15		24	10	33								
	7		16		25	11	34								
	8	1	17		26	12	35								
	9	2	18		27	13	36								

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner, Art Unit 3661	31 March 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/393,646	EDA, Taiki
	Examiner	Art Unit
	MASUD AHMED	3661

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
463	29-42	03/30/2019	MA

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	03/30/2019	MA
CONDUCTE NPL SEARCH ON GOOGLE FOR BUILDING GAMES	03/30/2019	MA
VERIFIED THE APPROVAL OF THE TD	03/30/2019	MA

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	TEXT SEARCHED WITHIN ALL THE CLASSES AND THE SUBCLASSES INCLUDING FOREIGN DATABASES ON EAST	03/30/2019	MA
	SEARCHED ALL THE CLASSES AND THE SUBCLASSES LISTED ON ISSUE CLASSIFICATION	03/30/2019	MA

/M.A./ Primary Examiner.Art Unit 3717	

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BIB DATA SHEET

CONFIRMATION NO. 3602

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/393,646	12/29/2016	463	3661	481331US

APPLICANTS
Gree, Inc., Minato-ku, JAPAN;

INVENTORS
Taiki EDA, Tokyo, JAPAN;

**** CONTINUING DATA ***************************
This application is a CON of 14/983,984 12/30/2015 PAT 9597594
which is a CON of PCT/JP2014/075673 09/26/2014

**** FOREIGN APPLICATIONS ***************************
JAPAN 2014-080554 04/09/2014
JAPAN 2013-202721 09/27/2013

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
01/10/2017

Foreign Priority claimed ☑ Yes ☐ No 35 USC 119(a-d) conditions met ☑ Yes ☐ No Verified and Acknowledged /MASUD AHMED/ Examiner's Signature	☐ Met after Allowance MA Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		JAPAN	15	29	4

ADDRESS
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FILING FEE RECEIVED		
2740	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	2009-207624A	09-17-2009	Japan with English Abstract		x
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Chinese Office Action issued February 2, 2019 in Patent Application No. 201480052507.X citing reference AO herewith(with English Translation)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	03/31/2019

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	WO 2011/125265 A1	10/13/2011	WO-Abstract (Corresponds to US 2012/0329557A1)		x
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	European Examination Report Application No. 14 848 832.3 dated January 17, 2019
	AX	Petitioner's Request for Rehearing and Reconsideration PGR2018-00008 dated February 1, 2019
	AY	Japanese Office Action issued February 5, 2019 in Patent Application No. 2016-192989, citing references AO and AX herewith (with English Translation)
	AZ	"armored core" and weekly FAMI -- a connoisseur, an ENTA, Inc. brain, February 9, 2012, and the 27th volume (with partial English Translation) ☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	03/31/2019

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	150	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2012/0090021" | "2013/0217489" | "2013/0288757" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2019/03/31 04:50
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L4	100	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" |	US-PGPUB; USPAT; USOCR	OR	OFF	2019/03/31 04:50

		"20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.				
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L6	17788	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:50
L7	969	L6 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:50
L8	648	L7 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:50
L9	139158	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L10	7191	L9 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L11	4559	L10 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L12	139158	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	OFF	2019/03/31 04:51

			DERWENT; IBM_TDB			
L13	7191	L12 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L14	4559	L13 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L15	4559	L14 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L16	58	L2 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L17	4559	L14 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L18	4411	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2019/03/31 04:51
L19	3793	L18 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L20	58	L2 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L21	139158	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51

L22	7191	L21 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L23	4559	L22 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L24	4559	L23 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L25	4411	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2019/03/31 04:51
L26	3793	L25 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L27	648	L7 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
L28	4559	L14 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2019/03/31 04:51
S1	0	((Taiki) near2 (Eda)).INV.	US-PGPUB; USPAT	OR	OFF	2016/03/18 20:48
S2	4292	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2016/03/18 20:48
S3	3792	S2 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 20:50
S4	128	S3 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	OFF	2016/03/18 20:53

			DERWENT; IBM_TDB			
S5	124	S4 and game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 20:53
S6	949921	game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:08
S7	12304	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
S8	646	S7 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
S9	575	S8 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
S10	8	S9 and (build near (city or building))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:18
S11	36	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/18 22:23

S12	36	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2016/03/18 22:23
S13	35	S12 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 22:23
S14	2	("6454653").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:23
S15	36	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/05 19:28
S16	35	S15 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:28
S17	105171	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:28

S18	4940	S17 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:28
S19	4250	S18 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:31
S20	28	S19 and (building with template)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:39
S21	105171	video near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S22	4940	S21 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S23	4250	S19 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S24	528	S23 and select with template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S25	1	bra with somen	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:48
S26	1158	bra with women	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	OFF	2016/08/05 19:48

			DERWENT; IBM_TDB			
S27	44	S26 and (adjustable with fit)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:48
S28	0	S27 and malik	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:51
S29	27266	malik	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:51
S30	19	S29 and underwear	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:51
S31	46	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2012/0090021" | "2013/0217489" | "2013/0288757" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/05 19:52
S32	56	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:52

		("2012/0090021" | "2013/0217489" | "2013/0288757" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.				
S33	8	(US-20150005051-$ or US-20130217489-$ or US-20120090021-$ or US-20130288757-$).did. or (US-8845423-$ or US-8764534-$ or US-8821260-$ or US-9022869-$).did.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S34	2081	A63F13/00.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S35	6469	A63F13/12.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S36	727	A63F13/69.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S37	1110	A63F2300/556.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:55
S38	956	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:55
S39	50	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/03 16:28
S40	44	S39 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S41	112452	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S42	5367	S41 and template	US-PGPUB; USPAT;	AND	OFF	2017/03/03 16:28

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S43	4354	S42 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S44	4354	S43 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S45	1172	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:28
S46	2	"14983984"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:37
S47	0	"9597594"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:38
S48	0	("9597594").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/03/03 16:38
S49	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/10 02:05

S50	50	S49 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S51	114811	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S52	5536	S51 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S53	4392	S52 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S54	4392	S53 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S55	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2017/05/10 02:05
S56	50	S55 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S57	50	S49 @ad< = "20140409"	US-PGPUB; USPAT; USOCR;	AND	OFF	2017/05/10 02:05

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S58	4390	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/05/10 02:05
S59	3794	S58 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S60	4392	S52 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S61	50	S55 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S62	14273	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S63	776	S62 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S64	616	S63 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S65	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" |	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/10 02:06

		"8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.				
S66	50	S65 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S67	616	S63 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S68	50	S49 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S69	11	(("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/11/12 19:46
S70	6	(("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	OR	OFF	2017/11/12 19:46
S71	33	"1574238"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:27
S72	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58

S73	55	S72 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S74	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
S75	55	S74 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S76	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
S77	55	S76 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S78	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" |	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58

		"20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.				
S79	55	S78 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S80	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S81	838	S80 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S82	634	S81 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S83	4405	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/11/12 20:58
S84	3794	S83 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S85	121453	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S86	5969	S85 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58

S87	4457	S86 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S88	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S89	838	S88 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S90	634	S89 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S91	55	S76 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S92	55	S76 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S93	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/30 19:23
S94	56	S93 @ad< = "20140409"	US-PGPUB; USPAT; USOCR;	AND	OFF	2018/03/30 19:23

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S95	15801	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S96	873	S95 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S97	640	S96 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S98	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/30 19:23
S99	56	S98 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S100	126221	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S101	6280	S100 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2018/03/30 19:23

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S102	4495	S101 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S103	4495	S102 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S104	640	S96 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S105	15801	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S106	873	S105 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S107	640	S106 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S108	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/30 19:23
S109	56	S108 @ad< = "20140409"	US-PGPUB;	AND	OFF	2018/03/30

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S112	56	S111 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:24
S113	56	S93 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:24
S114	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2018/03/30 19:24
S115	56	S114 @ad< = "20140409"	US-PGPUB;	AND	OFF	2018/03/30

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S118	57	S117 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S119	130153	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S120	6537	S119 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S121	4520	S120 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S122	90	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" |	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/21 19:40

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S125	57	S124 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S126	57	S117 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S127	4520	S120 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S128	16338	online near game	US-PGPUB; USPAT; USOCR; FPRS;	AND	OFF	2018/07/21 19:41

			EPO; JPO; DERWENT; IBM_TDB			
S129	903	S128 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S130	642	S129 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S131	16338	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S132	903	S131 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S133	642	S132 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S134	4520	S121 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S135	5	"9597594"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2018/11/11 16:51
S136	133983	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S137	6804	S136 and template	US-PGPUB; USPAT; USOCR;	AND	OFF	2018/11/11 16:51

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S138	4535	S137 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S139	4535	S138 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
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S141	57	S140 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S142	133983	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S143	6804	S142 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S144	4535	S143 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2018/11/11 16:51

			IBM_TDB			
S145	4535	S144 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S146	4535	S143 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S147	17090	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S148	931	S147 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S149	643	S148 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S150	4535	S138 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S151	94	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2018/11/11 16:51
S152	57	S151 @ad< = "20140409"	US-PGPUB;	AND	OFF	2018/11/11

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			16:51
S153	17090	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S154	931	S153 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S155	643	S154 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
S156	4410	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2018/11/11 16:51
S157	3793	S156 @ad< = "20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51

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LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
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	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

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		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
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	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Chinese Office Action issued February 2, 2019 in Patent Application No. 201480052507.X citing reference AO herewith(with English Translation)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached
Examiner		Date considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3661
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Electronic Acknowledgement Receipt

EFS ID:	35383387
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Fumiko Matsui
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	11-MAR-2019
Filing Date:	29-DEC-2016
Time Stamp:	15:23:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331USIDS.pdf	23138332 420bb11932e26c7deb91e750ab65df1e77a9f06a	yes	51

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Foreign Reference	44	51
	Non Patent Literature	3	43
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Transmittal Letter	1	1
Warnings:			
Information:			
	Total Files Size (in bytes):	23138332	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

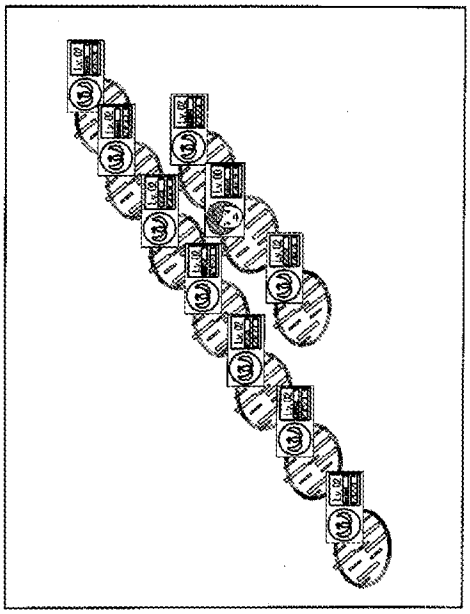
National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

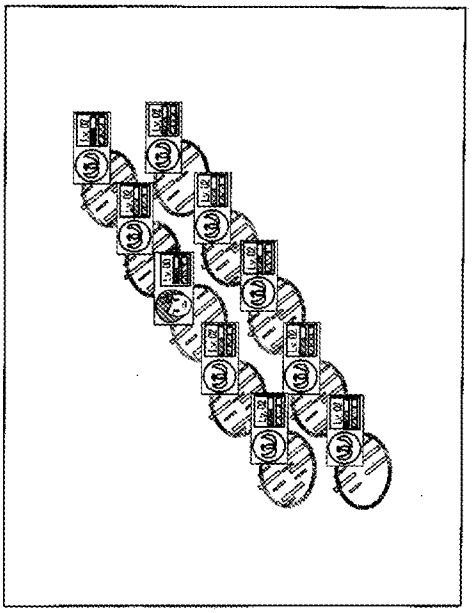
New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

【図5】



【図6】



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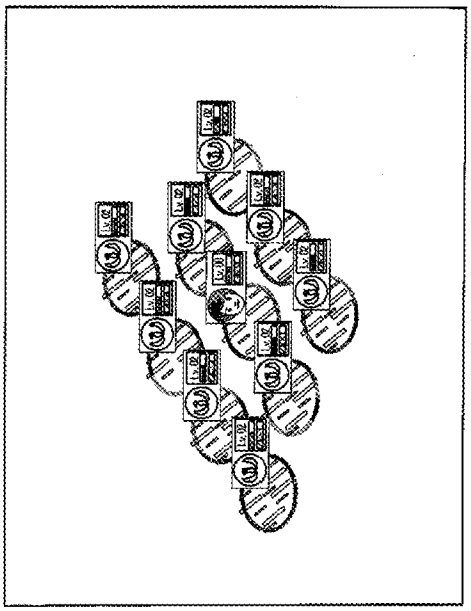

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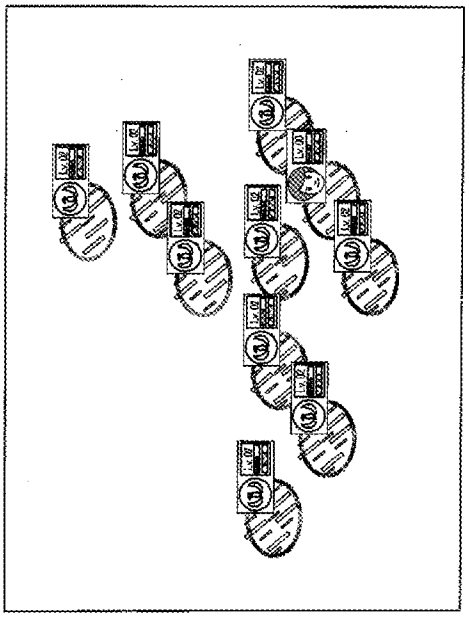

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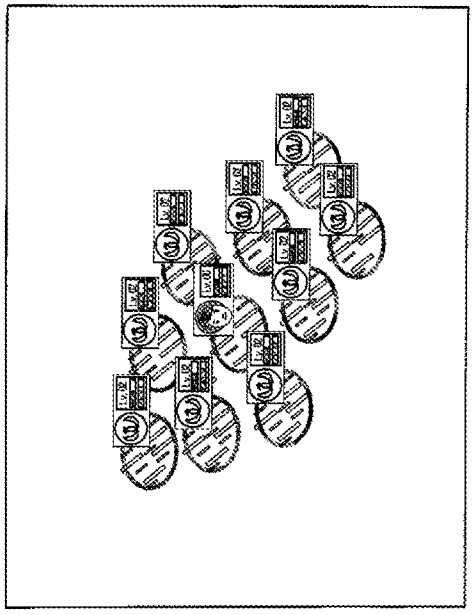
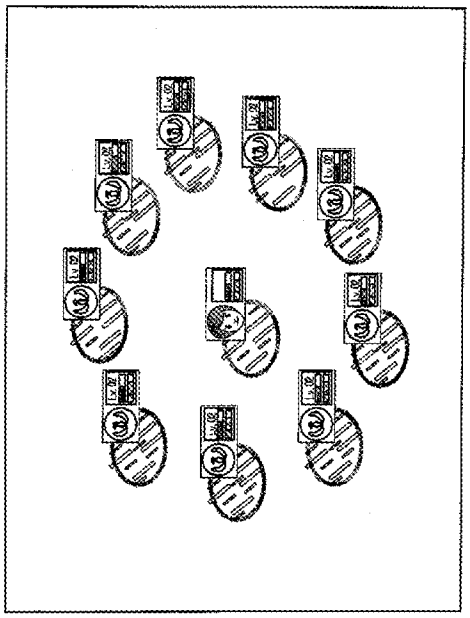


【図10】



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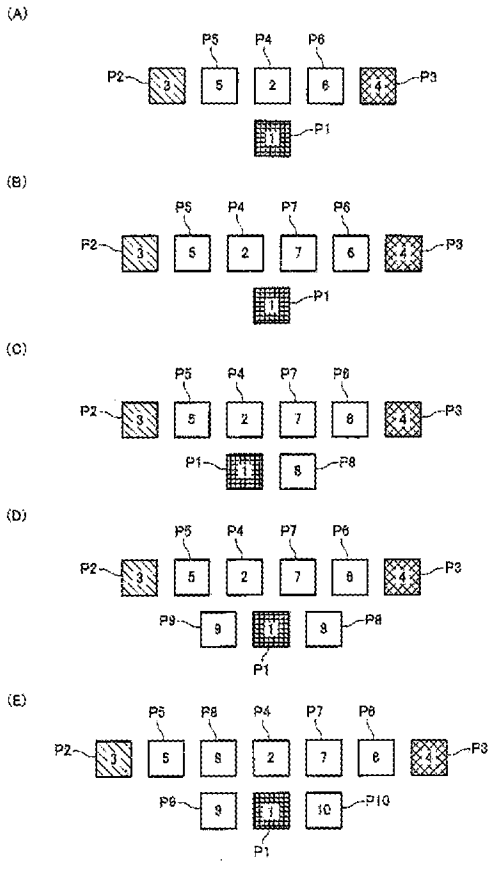

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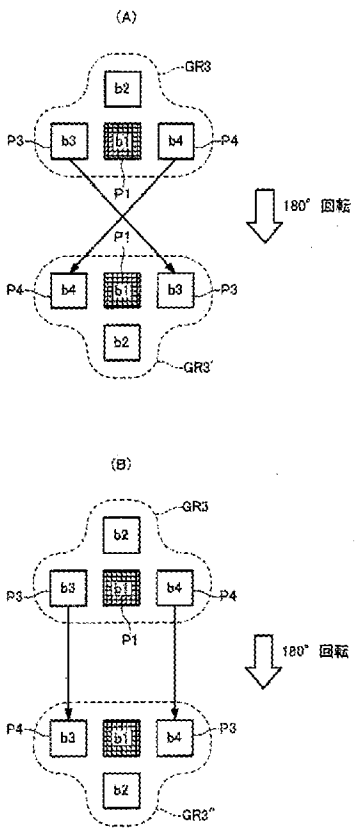

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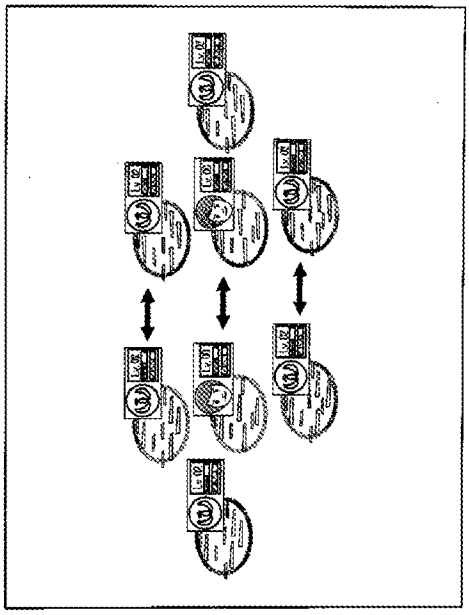
Page 74

【図13】



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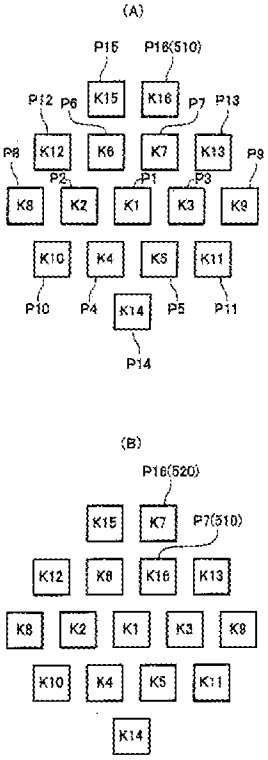

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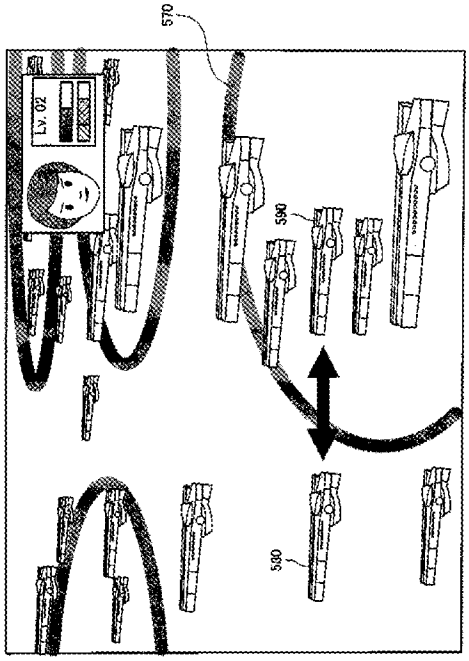

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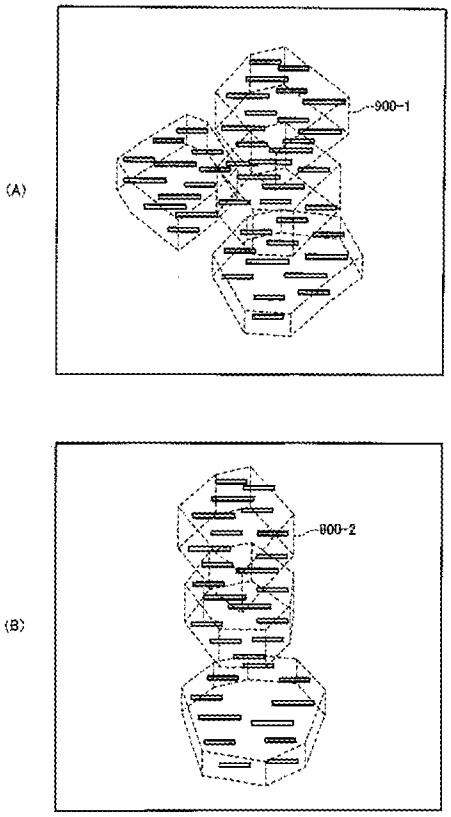

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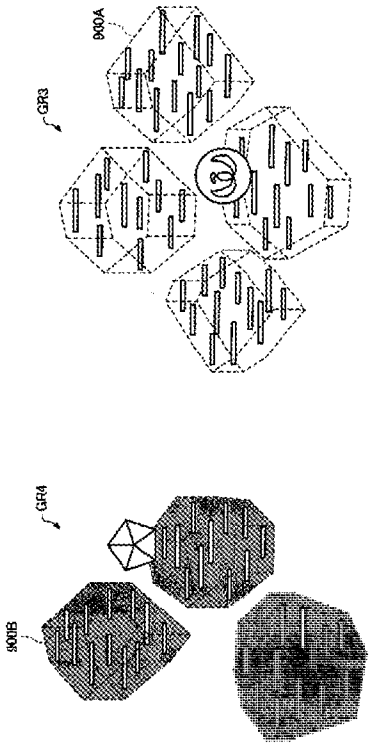
【図17】



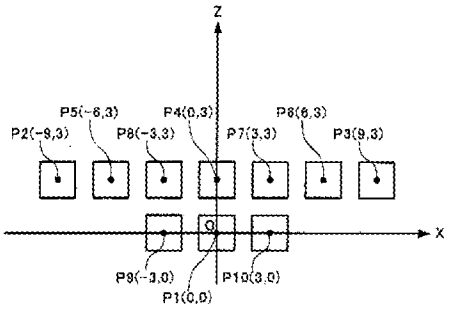
【図18】

350

352 ポジションID	354 X	356 Y	358 Z
P1	x_1	y_1	z_1
P2	x_2	y_2	z_2
⋮	⋮	⋮	⋮
P10	x_{10}	y_{10}	z_{10}

【図19】

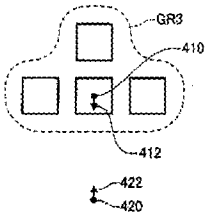
(A)



(B)

310 定義テーブルID	A10	
320 ポジションID	X座標	Z座標
P1	0	0
P2	-9	3
P3	9	3
P4	0	3
P5	-6	3
P6	6	3
P7	3	3
P8	-3	3
P9	-3	0
P10	3	0

【図20】



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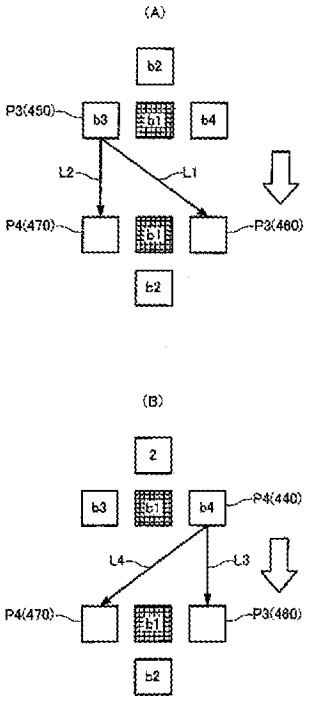
【図21】



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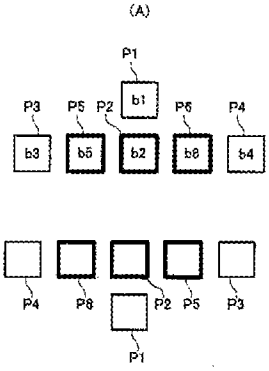
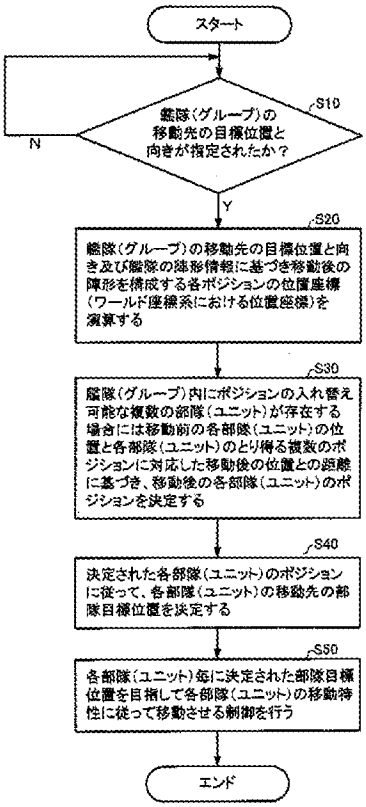


(B)

P5	P2	P6
b5	b2	P6
b5	b6	b2
b2	b5	b6
b2	b6	b5
b6	b5	b2
b6	b2	b5

【図23】



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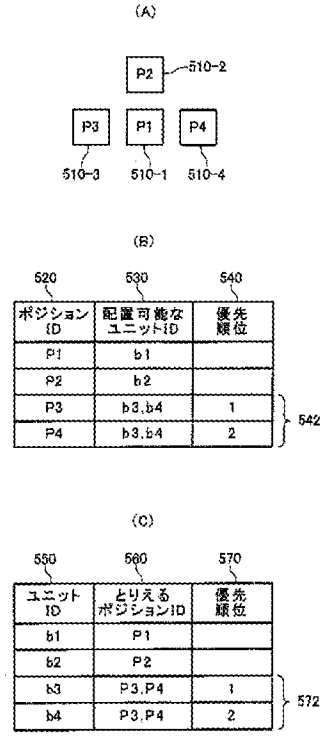

Supercell
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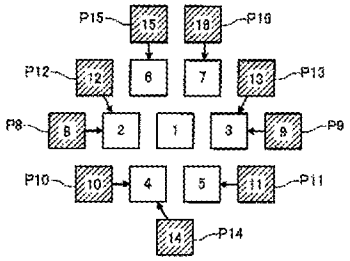
【図25】

(A)



(B)

510

520 ポジションID	530 退避エリア
P16	P7
P15	P6
P14	P4
P13	P3
P12	P2
P11	P5
P10	P4
P9	P3
P8	P2

【図26】

610

620 部隊ID	630 ポジションID
b1	P1
b2	P2
⋮	⋮

【図27】

640

650 艦船ID	660 配置されているポジションID
K1	P1
K2	P2
⋮	⋮

【図28】

(A)

700

710 艦隊ID	720 艦隊に属する部隊ID
G1	b10, b11, ・・・・・ b19
G2	b20, b21, ・・・・・ b29
⋮	⋮

(B)

730

740 部隊ID	750 部隊に属する艦隊ID	782 属性	760 属する艦隊ID
b10	K1001, K1002, ・・・・・	Z1	G1
b11	K1101, K1102, ・・・・・	Z1	G1
⋮	⋮	⋮	⋮

(C)

770

780 艦船ID	790 属する部隊ID
K1001	b1
K1002	b2
⋮	⋮

【図29】

(A)

810

812 艦隊ID	814 現在位置座標	816 艦隊目標位置座標	818 陣形種別	820 司令官情報		
G1	x, y, z	x, y, z	A	R1		
G2	x, y, z	x, y, z	C	R5		
⋮	⋮	⋮	⋮	⋮		

(B)

830

832 部隊ID	834 現在位置座標	836 部隊目標位置座標	838 艦隊内ポジションID	840 部隊耐久力	842 部隊士気		
b10	x, y, z	x, y, z	P1	t1	S10		
b11	x, y, z	x, y, z	P2	t11	S11		
⋮	⋮	⋮	⋮	⋮	⋮		

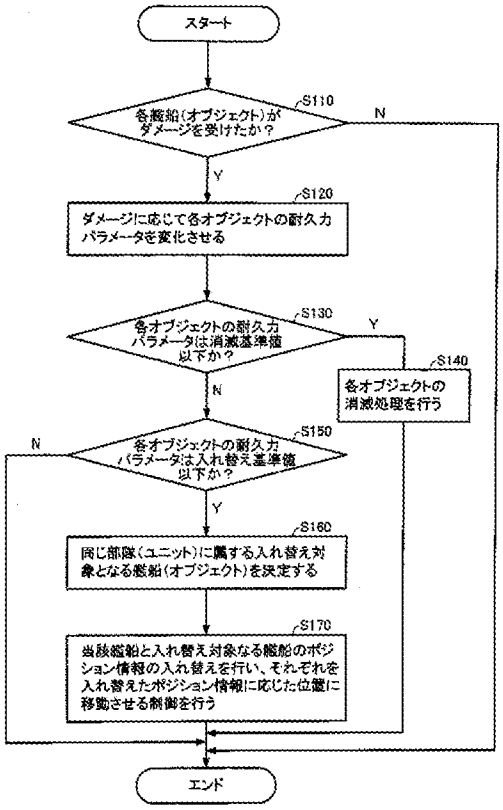
(C)

850

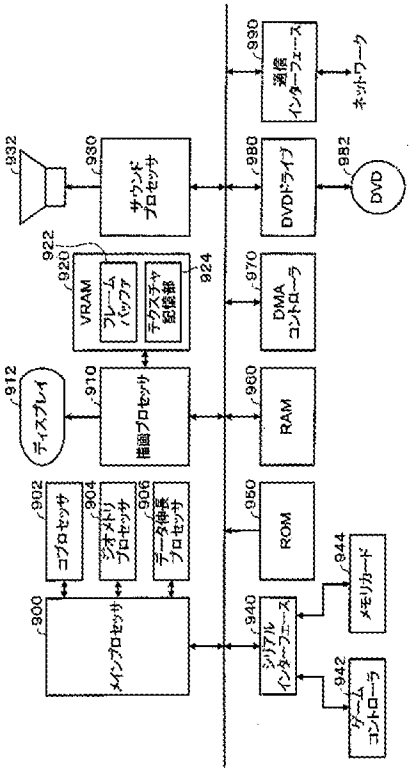
852 艦船ID	854 現在位置座標	856 艦船目標位置座標	858 部隊内ポジションID	860 耐久力	862 消滅フラグ		
K1001	x, y, z	x, y, z	P1	t1001	0		
K1002	x, y, z	x, y, z	P2	t1002	0		
⋮	⋮	⋮	⋮	⋮	⋮		

Supercell
Exhibit 1002
Page 78

【図30】


スタート
各艦船(オブジェクト)が
ダメージを受けたか？
S110
N
Y
S120
ダメージに応じて各オブジェクトの耐久力
パラメータを変化させる
各オブジェクトの耐久力
パラメータは消滅基準値
以下か？
S130
Y
N
S140
各オブジェクトの
消滅処理を行う
各オブジェクトの耐久力
パラメータは入れ替え基準値
以下か？
S150
N
Y
S160
同じ部隊(ユニット)に属する入れ替え対
象となる艦船(オブジェクト)を決定する
S170
当該艦船と入れ替え対象なる艦船のポジ
ション情報の入れ替えを行い、それぞれを
入れ替えたポジション情報に応じた位置に
移動させる制御を行う
エンド

【図31】


930
通信
インターフェース
ネットワーク
932
930
サウンド
プロセッサ
980
DVDドライブ
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922
920
VRAM
フレーム
バッファ
テクスチャ
記憶部
924
970
DMA
コントローラ
912
ディスプレイ
910
描画プロセッサ
960
RAM
902
コプロセッサ
904
ジオメトリ
プロセッサ
906
データ伸張
プロセッサ
950
ROM
944
メモリカード
900
メインプロセッサ
940
シリアル
インターフェース
942
ゲーム
コントローラ

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA VA VIRGINIA 22314

MAILED
MAR 01 2019
OFFICE OF PETITIONS

In re Application of
Taiki Eda
Application No. 15/393,646
Filed: December 29, 2014
Attorney Docket No. 481331US

DECISION GRANTING PETITION
UNDER 37 CFR 1.313(c)(2)

This is a decision on the petition under 37 CFR 1.313(c)(2), filed February 28, 2019, to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED**.

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). *See* 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid on November 23, 2018 cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.[1]

This application is being referred to Technology Center AU 3661 for processing of the request for continued examination under 37 CFR 1.114 and for consideration of the previously filed information disclosure statement (IDS).

Telephone inquiries regarding this decision should be directed to undersigned at (571) 272-1642. All other inquiries regarding the examination of this application should be directed to the Technology Center at their customer service line (571) 272-3600.

/April M. Wise/
April M. Wise
Paralegal Specialist
Office of Petitions

[1] *The request to apply the issue fee to the new Notice may be satisfied by completing and returning the new Part B – Fee(s) Transmittal Form (along with any balance due at the time of submission). Petitioner is advised that the Issue Fee Transmittal Form* ***must*** *be completed and timely submitted to avoid abandonment of the application.*

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Date : March 1, 2019

TO : Director, Office of Data Management

FROM : Office of Petitions

SUBJECT : Withdrawal from Issue of **Application No. 15/393,646**

Applicant(s) : Taiki Eda
Application No. : 15/393,646
Filed : December 29, 2016

The above-identified application has been assigned Patent No. 10,232,263 and an issue date of March 19, 2019.

It is hereby directed that this application be withdrawn from issue at the request of the applicant. Do not refund the issue fee.

The following erratum should be published in the Official Gazette if the above-identified application is published in the OG of March 19, 2019:

"All reference to Patent No. 10,232,263 to Taiki Eda of Japan for COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER in the Official Gazette of March 19, 2019, should be deleted since no patent was granted."

/April M. Wise/
April M. Wise
Paralegal Specialist
Office of Petitions

cc: Paul Harrison
Deneise Boyd
Niomi Farmer
Mary E. Johnson (Cookie)
Bradley Harris
Kimberly House
Lamont Fletcher
DeShawn Durham
Frederick Briscoe
PDCS Weekly Process
Philip Tuazon
Raghu Subedi
Tung-Lin Hsu (Max)
Mary Louis McAskill

Docket No.: 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Taiki EDA

SERIAL NO:	15/393,646	GAU:	3661
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

This is a Request for Continued Examination (RCE) under 37 C.F.R. §1.114 of the above-identified application.

Submission required under 37 C.F.R. §1.114

Previously Submitted:

- ☐ Consider the amendment(s)/reply under 37 C.F.R. §1.116 previously filed on
- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on

Enclosed:

- ☐ Amendment/Reply
- ■ Information Disclosure Statement (IDS)
- ☐ Track 1 Prioritized Examination
- ■ Other: Petition to Withdraw from Issue

FEES	RATE	CALCULATIONS
☐ Suspension of action on the above-identified application is requested under 37 C.F.R. §1.103(c) for a period of months.	$140.00	$0.00
■ RCE Fee required under 37 C.F.R. §1.17(e) - **2nd and subsequent request**	$1,900.00	$1,900.00
☐		$0.00
■ **Petition to Withdraw from Issue**		$140.00
TOTAL OF ABOVE CALCULATIONS:		$2,040.00
☐ REDUCTION BY 50% FOR FILING AS SMALL ENTITY		$0.00
TOTAL:		$2040.00

■ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount of **$2040.00.**

■ Please charge any additional Fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to Deposit Account No. **15-0030**.

■ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 CFR 1.136, and any additional fees required under 37 CFR 1.136 for any necessary extension of time may be charged to Deposit Account No. **15-0030**.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 12/11)

Docket No. 481331US

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IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3661
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
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REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

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CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

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Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

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LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	WO 2011/125265 A1	10/13/2011	WO-Abstract (Corresponds to US 2012/0329557A1)		x
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	European Examination Report Application No. 14 848 832.3 dated January 17, 2019
	AX	Petitioner's Request for Rehearing and Reconsideration PGR2018-00008 dated February 1, 2019
	AY	Japanese Office Action issued February 5, 2019 in Patent Application No. 2016-192989, citing references AO and AX herewith (with English Translation)
	AZ	"armored core" and weekly FAMI -- a connoisseur, an ENTA, Inc. brain, February 9, 2012, and the 27th volume (with partial English Translation) ☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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(71) 出願人 (米国を除く全ての指定国について): 株式会社ソニー・コンピュータエンタテインメント(SONY COMPUTER ENTERTAINMENT INC.) [JP/JP]; 〒1080075 東京都港区港南１丁目７番１号 Tokyo (JP).

(72) 発明者; および

(75) 発明者/出願人 (米国についてのみ): 高村 成一(TAKAMURA, Seiichi) [JP/JP]; 〒1080075 東京都港区港南１丁目７番１号 株式会社ソニー・コンピュータエンタテインメント内 Tokyo (JP). 大原 一輝(OHARA, Kazuki) [JP/JP]; 〒1080075 東京都港区港南１丁目７番１号 株式会社ソニー・コンピュータエンタテインメント内 Tokyo (JP). 渡辺 秀明(WATANABE, Hideaki) [JP/JP]; 〒1080075 東京都港区港南１丁目７番１号 株式会社ソニー・コンピュータエンタテインメント内 Tokyo (JP).

(74) 代理人: 特許業務法人はるか国際特許事務所(HARUKA PATENT & TRADEMARK ATTORNEYS); 〒1510051 東京都渋谷区千駄ヶ谷五丁目２７番７号 日本ブランズウィックビル９階 Tokyo (JP).

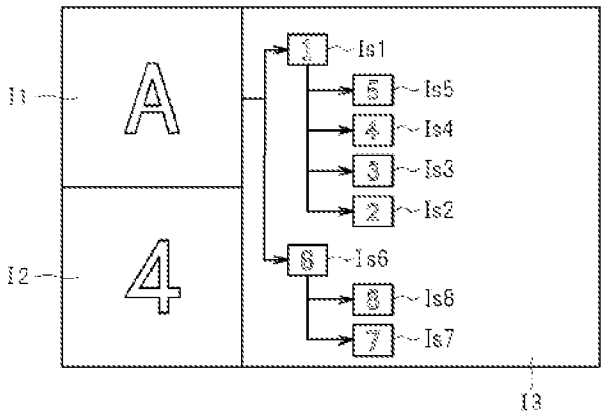
(81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV,

[続葉有]

(54) Title: GAME DEVICE

(54) 発明の名称 : ゲーム装置

[図7]



(57) **Abstract**: Disclosed is a game device capable of displaying a selection screen wherein when presenting a plurality of reconstructed data to a user, relationships between the reconstructed data are easy to understand. A selection screen for causing a user to make a selection presents a plurality of reconstructed data for reconstructing a state at one point in time during execution of a game, wherein the disclosed game device displays upon a display device the selection screen for associating and presenting first reconstructed data which are one of a plurality of reconstructed data, and second reconstructed data for reconstructing a state at one point in time after the game has further progressed from the state that had been reconstructed by way of the first reconstructed data.

(57) 要約: 複数の再現データをユーザに提示する場合に、これらの再現データの関係が把握しやすい選択画面を表示することのできるゲーム装置を提供する。 ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、当該複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を表示装置に表示させるゲーム装置である。

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Exhibit 1002
Page 86

SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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添付公開書類:

— 国際調査報告（条約第 21 条(3)）

明 細 書

発明の名称 ： ゲーム装置

技術分野

[0001] 本発明は、ゲームに関連する画像を表示装置に表示させるゲーム装置、その制御方法、ゲームシステム、及び情報記憶媒体に関する。

背景技術

[0002] コンピュータゲームにおいては、ゲームの実行中における一時点の状態を再現するための再現データ（セーブデータ等）をメモリーカードやハードディスクドライブ等の情報記憶媒体に保存し、この保存した再現データを用いて過去の状態を再現し、その状態からゲームを再開することが行われている。複数の再現データが記録される場合、ゲームシステムは、これら複数の再現データの中からユーザに処理の対象とする再現データを選択させるための選択画面を表示し、当該選択画面においてユーザが選択した再現データを用いて、ゲームの再開を行う。例えば、ユーザによって選択された再現データを用いてゲームの再開を行った際に、再開時点のゲームのストーリーの進行状況に対応するあらすじ情報を表示する技術が、特許文献１に記載されている。

先行技術文献

特許文献

[0003] 特許文献1：欧州特許出願公開第１０４５７２５号明細書

発明の概要

発明が解決しようとする課題

[0004] ゲームシステムに再現データが多数記録されていると、単にこれらの再現データを一覧するだけでは、ユーザはどの再現データを選択すべきか迷うことがある。特に、ある再現データが記録された時点の状態から、さらにゲームが進行した状態で再現データを記録した場合、これらの再現データの関係は容易に把握しにくいため、再現データの選択がしにくくなる。

[0005] 本発明は上記実情を考慮してなされたものであって、その目的の一つは、複数の再現データをユーザに提示する場合に、これらの再現データの関係が把握しやすい選択画面を表示することのできるゲーム装置、その制御方法、ゲームシステム、及び情報記憶媒体を提供することにある。

課題を解決するための手段

[0006] 本発明に係るゲーム装置は、ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を取得する手段と、前記取得した選択画面を表示装置に表示させる表示制御手段と、を含むことを特徴とする。

[0007] 前記ゲーム装置において、前記選択画面は、前記各再現データに対して、当該再現データを保存させたユーザの情報を関連づけて提示する画面であってよい。

[0008] また、前記選択画面は、前記第１の再現データと前記第２の再現データとの関連を、木構造により表現する画面であってよい。

[0009] また、本発明に係るゲームシステムは、ゲーム装置と、ゲーム処理を実行するゲームサーバと、を含むゲームシステムであって、前記ゲームサーバは、ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を生成し、当該生成した選択画面を前記ゲーム装置に対して送信し、前記ゲーム装置は、前記送信される選択画面を受信して、当該受信した選択画面を表示装置に表示させることを特徴とする。

[0010] 前記ゲームシステムにおいて、前記ゲームサーバは、前記選択画面が前記

表示装置に表示された状態において、前記ゲーム装置から再現データを選択する指示を示す操作情報を受信した場合に、当該選択された再現データを識別する情報を記憶する手段と、前記ゲーム装置から再現データを選択する指示を示す操作情報を受信した場合に、当該選択された再現データにより再現される状態から開始して、ゲーム処理を実行する手段と、前記ゲーム処理の実行中に、前記ゲーム装置から再現データの保存指示を示す操作情報を受信した場合に、当該時点の状態を再現するための再現データを保存する手段と、前記保存指示に応じて保存する再現データを前記第２の再現データとして、前記記憶される情報により識別される前記選択された再現データを前記第１の再現データとして、当該第１の再現データと第２の再現データとを関連づける管理情報を記憶する手段と、前記管理情報を用いて、前記第１の再現データと第２の再現データとを関連づける選択画面を生成する手段と、を含むこととしてもよい。

[0011] また、本発明に係るゲーム装置の制御方法は、ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を取得するステップと、前記取得した選択画面を表示装置に表示させるステップと、を含むことを特徴とする。

[0012] また、本発明に係る情報記憶媒体は、ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を取得する手段、及び前記取得した選択画面を表示装置に表示させる表示制御手段、としてコンピュータを機能させるためのプログラムを記憶した、コンピュータ読み取り可能な情報記憶媒体である。

図面の簡単な説明

[0013] [図1]本発明の実施の形態に係るゲームシステムの全体概要図である。

[図2]本発明の実施の形態に係るゲーム装置の構成図である。

[図3]本発明の実施の形態に係るゲームシステムの機能を示す機能ブロック図である。

[図4]再現データの管理情報のデータ構造の一例を示す図である。

[図5]本発明の実施の形態に係るゲームシステムが実行する処理の流れの一例を示す図である。

[図6]ゲーム選択画面の一例を示す図である。

[図7]再現データ選択画面の一例を示す図である。

[図8]ゲームの選択と再現データの選択を同時に行うための選択画面の一例を示す図である。

発明を実施するための形態

[0014] 以下、本発明の実施の形態について、図面に基づき詳細に説明する。

[0015] 図１は、本発明の一実施形態に係るゲームシステム１の全体概要図である。ゲームシステム１は、複数のユーザがゲームを実行するためのものであって、複数のゲーム装置（クライアント装置）１０と、ゲームプログラムを実行するゲームサーバ２０と、を含んで構成される。

[0016] ゲーム装置１０は、ゲームシステム１の各ユーザが使用する情報処理装置であって、家庭用ゲーム機や携帯型ゲーム機、パーソナルコンピュータ等であってよい。図２は、ゲーム装置１０の構成を示す構成ブロック図である。同図に示すように、ゲーム装置１０は、制御部１１と、記憶部１２と、通信部１３と、を含んで構成される。また、ゲーム装置１０は、操作部１４及び表示装置１５と接続される。

[0017] 制御部１１は、ＣＰＵ等のプログラム制御デバイスであって、記憶部１２に記憶されたプログラムに従って各種の情報処理を実行する。記憶部１２は、ＲＡＭやＲＯＭ等のメモリ素子を含んで構成され、制御部１１が実行するプログラムや、このプログラムによる処理の対象となるデータを記憶する。

また、記憶部１２は制御部１１のワークメモリとしても機能する。

[0018] 通信部１３は、通信ネットワーク５０を介して他の装置との間でデータを授受するためのインタフェースであって、ゲーム装置１０は、通信部１３を経由してゲームサーバ２０との間で情報の送受信を行う。なお、ゲーム装置１０は、インターネットやローカルエリアネットワーク、無線通信ネットワークなど、各種の通信ネットワーク経由でゲームサーバ２０と接続されてよい。

[0019] 操作部１４は、ユーザの操作入力を受け付けるデバイスであって、家庭用ゲーム機のコントローラや、キーボード、マウス、タッチパネルなどであってよい。また、ゲーム装置１０の筐体表面に配置された操作ボタンやスイッチ等の操作部材を含んでもよい。さらに、操作部１４は、ユーザの動作などを検出する各種のセンサを含んでもよい。ユーザは、操作部１４に対して操作を行うことで、ゲームサーバ２０によって実行されるゲームをプレイする。

[0020] 表示装置１５は、液晶ディスプレイ等であって、ゲーム装置１０が出力する画像を表示する。具体的に、本実施形態では、表示装置１５は、ゲーム装置１０の制御に基づいて、ゲーム実行中の画面や後述する再開データを選択するための選択画面を表示する。なお、操作部１４と同様に、表示装置１５もゲーム装置１０の筐体と一体的に形成されてもよい。

[0021] ゲームサーバ２０は、ゲームアプリケーションを実行するサーバコンピュータであって、ゲーム装置１０から送信される操作入力情報に基づいてゲーム処理を実行し、その結果を示す動画像を生成して当該ゲーム装置１０に配信する。なお、本実施形態では、ゲームサーバ２０は、複数種類のゲームの処理を実行するものとする。ゲームサーバ２０は、図１に示すように、制御部２１と、記憶部２２と、通信部２３と、を含んで構成される。

[0022] 制御部２１は、ＣＰＵ等のプログラム制御デバイスであって、記憶部２２に記憶されたプログラムに従って各種の情報処理を実行する。記憶部２２は、ＲＡＭやＲＯＭ等のメモリ素子、及びハードディスク等のディスクデバイ

スを含んで構成され、制御部２１が実行するプログラムや、このプログラムによる処理の対象となるデータを記憶する。特に本実施形態では、記憶部２２には、ゲームプログラムが記憶されており、制御部２１がこのゲームプログラムを実行することで、ゲーム処理が実現される。また、記憶部２２には、ゲームの実行中における一時点の状態を再現するために用いる再現データが記憶される。また、記憶部２２は制御部２１のワークメモリとしても機能する。

[0023] 通信部２３は、通信ネットワーク５０を介して他の装置との間でデータを授受するためのインタフェースであって、ゲームサーバ２０は、通信部２３を経由して各ゲーム装置１０との間で情報の送受信を行う。

[0024] 以下、本実施形態に係るゲームシステム１が実現する機能について、説明する。本実施形態においては、前述の通りゲームプログラムはゲームサーバ２０によって実行される。各ゲーム装置１０は、操作部１４に対するユーザの操作内容を示す操作情報をゲームサーバ２０に送信するとともに、当該操作情報を受けてゲームサーバ２０によって実行されるゲーム処理の結果を示すゲーム画面の動画像データをゲームサーバ２０から受信し、表示装置１５に表示する。これにより、ユーザは、ゲーム装置１０を介して、ゲームサーバ２０によって実行されるゲームをプレイできる。

[0025] さらに本実施形態では、ゲームの実行中における一時点の状態を再現するために用いられる再現データが、ゲームサーバ２０内に複数保存される。ユーザは、これら複数の再現データのいずれかを選択することにより、選択された再現データによって再現される状態からゲームを開始することができる。特に本実施形態では、あるユーザは、他のユーザがゲームをプレイした結果生成された再現データを利用して、そのゲームの続きを実行できる。具体的に、あるユーザＵ１が一つのゲームを途中の時点までプレイし、その時点の状態を再現するための再現データ（第１再現データＳＤ１とする）を保存したとする。その後、別のユーザＵ２は、ゲームサーバ２０に保存されている複数の再現データの中からこの第１再現データＳＤ１を選択し、第１再現

データＳＤ１により再現される状態からゲームをプレイすることができる。また、さらにそのゲームのプレイ中の一時点における状態を再現するための再現データ（第２再現データＳＤ２とする）を、新たにゲームサーバ２０に保存させることもできる。このとき、第２再現データＳＤ２は、ある時点まではユーザＵ１がプレイし、その後はユーザＵ２がプレイした結果の状態を示すデータとなる。

[0026] このように、複数ユーザによって再現データが共有されることで、例えばユーザは、あるゲームを最初から連続してプレイせずとも、ゲーム途中の魅力的な場面の少し手前の状態で保存された再現データを選択することで、このような特定の場面だけをプレイすることが可能になる。また、ゲーム途中でどのような選択肢を選ぶかによってその後のゲームの進行が変化するような場合に、自分が選んだ選択肢以外の選択肢が選ばれた状態を再現する再現データを選択することで、自分が選ばなかった選択肢を選んだ場合のゲーム進行を体験することができる。また、ゲーム途中に難易度が高くクリアできない場面がある場合に、このような場面の手前で再現データを保存し、他のユーザにその再現データからプレイして難易度の高い場面をクリアしてもらうことで、特定の場面を自分自身でクリアできなくとも、その場面以降のプレイを進めることができる。さらに、ゲーム内のコンテンツ（キャラクターやステージなど）をユーザが作成、又は編集することが可能なゲームにおいては、他のユーザがコンテンツを作成、編集して保存した再現データを選択することで、他のユーザのコンテンツを利用したゲームのプレイを容易に楽しむことができる。特に、一つの再現データの続きを複数人が独立してプレイできることを利用して、同じ条件から開始して複数のユーザがその続きをいかにうまくプレイできるかを競うなどの遊び方を実現することもできる。具体的に、例えばあるユーザが提供した再現データを用いて、複数のユーザがそれぞれその続きをプレイし、プレイ結果を新たな再現データとして保存する。これらのプレイ結果を示す再現データを比較することで、特定のシチュエーションにおけるプレイ内容としてどのユーザのプレイが優れていたか

を決定するといったコンテストを行うことができる。

[0027] 図３は、ゲームシステム１が実現する機能を示す機能ブロック図である。同図に示すように、ゲーム装置１０は、操作情報送信部３１と、画面表示制御部３２と、を含んで構成される。これらの機能は、制御部１１が記憶部１２に格納されたプログラムを実行することで、実現される。また、ゲームサーバ２は、データ中継部３３と、ゲーム処理実行部３４と、再現データ管理部３５と、を含んで構成される。これらの機能は、制御部２１が記憶部２２に格納されたプログラムを実行することで、実現される。ゲーム装置１０及びゲームサーバ２０それぞれの機能を実現するためのプログラムは、例えば光ディスク等のコンピュータ読み取り可能な各種の情報記憶媒体に格納されてゲーム装置１０やゲームサーバ２０に提供されてよい。また、インターネット等の通信ネットワークを介してゲーム装置１０及びゲームサーバ２０のそれぞれに提供されてもよい。

[0028] ゲーム装置１０の操作情報送信部３１は、ゲーム装置１０のユーザが操作部１４に対して行った操作内容を示す情報（操作情報）を、ゲームサーバ２０に対して送信する。

[0029] ゲーム装置１０の画面表示制御部３２は、ゲームサーバ２０がゲーム装置１０に対して送信する画面情報（表示装置１５に表示すべき画面の内容を表す動画像データ）を受信する。そして、当該受信した画面情報を構成するフレーム画像を順次表示装置１５に対して出力することにより、表示装置１５に表示させる。具体的に、画面表示制御部３２は、後述するゲーム処理実行部３４が生成するゲーム画面や、再現データ管理部３５が生成するゲーム選択画面、再現データ選択画面などの画面情報をゲームサーバ２０から受信することにより取得して、取得した画面の内容を表示装置１５に表示させる。

[0030] ゲームサーバ２０のデータ中継部３３は、クライアントであるゲーム装置１０に対するインタフェースとして機能する。具体的に、データ中継部３３は、ゲーム装置１０の操作情報送信部３１が送信した操作情報を受信して、受信した内容をゲーム処理実行部３４及び再現データ管理部３５のいずれか

に対して出力する。すなわち、ゲーム処理実行部３４によるゲーム処理の実行中には、受信した操作情報をゲーム処理実行部３４に対して出力し、再現データ管理部３５により生成された選択画面が表示装置１５に表示されている場合には、受信した操作情報を再現データ管理部３５に対して出力する。また、データ中継部３３は、再現データ管理部３５が生成した各種の画面を表す画像データを、ゲーム装置１０に対して送信する。さらに、データ中継部３３は、ゲーム処理実行部３４と再現データ管理部３５との間のデータ中継も行う。

[0031] ゲームサーバ２０のゲーム処理実行部３４は、記憶部２２に格納されているゲームプログラムを実行することにより、ゲーム処理を実現する。具体的に、ゲーム処理実行部３４は、データ中継部３３によって受信されたユーザの操作情報をゲームの操作入力として受け付けて、その内容に応じてゲームを進行させるゲーム処理を実行する。そして、その結果を反映したゲームの状況を示すゲーム画面のデータを生成し、ゲーム装置１０に対して送信する。

[0032] さらに、ゲーム処理実行部３４は、ユーザが再現データの保存指示を行ったことを示す操作情報を受け付けた場合、再現データの保存処理を行う。ここで、再現データの保存指示は、操作部１４に対する特定の操作によって行われることとする。この操作は、例えば操作部１４に含まれる複数のボタンを同時に押す操作や、１又は複数のボタンを一定時間以上長押しする操作など、通常のゲーム操作中には実行されない操作であることが望ましい。

[0033] 再現データは、前述の通り、ゲームの実行中における一時点の状態を再現するために用いられるデータであって、当該時点のゲームの実行状態を示す各種の情報を含むデータである。この再現データを読み出すことにより、ゲーム処理実行部３４は、再現データが保存された時点の状態を再現して、その続きからゲーム処理を再開することができる。この再現データは、ゲームキャラクターのパラメータやゲームの進行状況を示す情報などを格納したセーブデータであってもよい。ただし、このようなセーブデータは、ゲームサ

ーバ２０によって実行されるゲームの種類毎に異なるデータ形式のデータとなるため、管理が煩雑になるおそれがある。

[0034] そこで本実施形態では、再現データは、当該再現データを保存する時点でメモリ内に格納されたデータの内容を示すメモリイメージを含んだ、スナップショットデータであることとする。ゲーム処理実行部３４によるゲーム処理の実行中には、記憶部２２内に確保されたメモリ空間に、実行中のゲームプログラムによって生成された一時データが展開され、その内容がゲーム処理実行部３４によって参照される。メモリイメージは、このメモリ空間の内容を示すデータである。例えばゲーム処理実行部３４が他のゲーム機の処理をエミュレーションするエミュレータプログラムによって実現される場合、そのプログラムによってアクセスされるメモリ空間は一定のサイズになるため、メモリイメージも固定サイズのデータとなり、ゲームの種類によらず同じデータ形式のデータとなる。ゲーム実行中のある一時点において、このようなメモリイメージを取得し、再現データとして保存しておけば、ゲーム処理実行部３４は、その内容をメモリ空間に再び展開することによって、メモリイメージが取得された時点の状態からゲーム処理を再開することが可能になる。なお、この再現データには、メモリイメージだけでなく、再現データの保存時点において制御部２１内のレジスタに格納されていたデータなどを含んでもよい。

[0035] また、ゲーム処理実行部３４は、再現データを保存する際には、再現データを保存する時点におけるゲーム画面の静止画像データを併せて保存することとしてもよい。また、ゲーム処理実行部３４は、ゲーム装置１０に送信しているゲーム画面を表す動画像を、過去所定時間分バッファリングしておき、再現データの保存指示を受け付けた場合には、バッファリングされている直近の過去のゲーム画面の動画像データを、再現データとともに保存してもよい。

[0036] ゲームサーバ２０の再現データ管理部３５は、ユーザがゲーム処理実行部３４によって実行されるゲームのプレイを開始する際に、プレイ対象のゲー

ムや、プレイ開始時の状態を再現するために用いる再現データをユーザに選択させるためのユーザインタフェースを提供する。具体的に、再現データ管理部３５は、ゲームや再現データをユーザに選択させる選択画面を生成し、データ中継部３３に対して出力する。これらの選択画面の内容を示す動画像データをデータ中継部３３がゲーム装置１０に送信することにより、ゲーム装置１０の画面表示制御部３２は、再現データ管理部３５が生成した選択画面を表示装置１５に表示させる。さらに、これらの選択画面が表示装置１５に表示された状態において、ユーザが操作部１４に対してゲームや再現データを選択する指示操作を行った場合、再現データ管理部３５は、当該指示操作の内容を示す操作情報をデータ中継部３３経由で受け付けて、ゲームや再現データの選択処理を行う。

[0037] また、再現データ管理部３５は、ゲーム処理実行部３４が保存する再現データのそれぞれについて、当該再現データの管理情報ＭＩを生成して、記憶部２２に記憶する。前述した再現データの選択画面を生成する際には、この管理情報ＭＩを参照することで、複数の再現データ間の関係をユーザにとって分かり易い態様で示す選択画面が生成される。

[0038] 図４は、再現データの管理情報ＭＩに含まれる情報の一例を説明するための図である。同図の例では、再現データの管理情報Ｍ１には、再現データ識別情報ＳＩＤ、ゲーム識別情報ＧＩＤ、親再現データ識別情報ＰＳＩＤ、作成日時ＣＴ、ユーザ識別情報ＵＩＤ、画像ファイルパス情報ＩＦ、動画像ファイルパス情報ＭＦ、再現データファイルパス情報ＳＦ、プレイ回数情報ＰＴ、世代数ＧＮ、プレイ時間情報ＰＭ、及びタグ情報ＴＧが含まれている。

[0039] 再現データ識別情報ＳＩＤは、当該管理情報ＭＩが管理対象とする再現データを識別する情報である。また、ゲーム識別情報ＧＩＤは、当該再現データが再現対象とするゲームを識別する情報である。すなわち、ゲーム識別情報ＧＩＤは、当該再現データがどのゲームの実行中に保存されたものかを示している。

[0040] 親再現データ識別情報ＰＳＩＤは、管理対象となる再現データの親にあた

る再現データを識別する情報である。ここで、再現データの親子関係は、以下のように規定される。すなわち、第１再現データＳＤ１により再現される状態からゲームを開始した後、さらにその実行途中で第２再現データＳＤ２の保存が行われる場合に、第２再現データＳＤ２を第１再現データＳＤ１の子とし、第１再現データＳＤ１を第２再現データＳＤ２の親とする。なお、再現データを利用せずに、ゲームの初期状態（最初のゲームプレイ開始時の状態）からゲーム処理を実行して再現データが保存された場合、この再現データには親の再現データは存在しないことになる。親再現データ識別情報ＰＳＩＤの取得方法については、後述する。

[0041] 作成日時ＣＴは、当該再現データの保存処理が実行された日時を示している。また、ユーザ識別情報ＵＩＤは、当該再現データの保存を指示したユーザ（すなわち、当該再現データにより再現される状態までゲームをプレイしたユーザ）を識別する情報である。例えばゲームサーバ２０は、ゲーム装置１０がゲームサーバ２０に接続してゲームプレイを開始しようとする際に、当該ゲーム装置１０を使用しているユーザの認証を行うことによって、このユーザ識別情報ＵＩＤを取得できる。

[0042] 画像ファイルパス情報ＩＦ、動画像ファイルパス情報ＭＦ、及び再現データファイルパス情報ＳＦは、それぞれゲーム処理実行部３４が再現データの保存処理により保存した静止画像ファイル、動画像ファイル、及び再現データファイルの記憶部２２内における保存場所を特定する情報である。これらのファイルパス情報を参照することで、再現データ管理部３５は、管理情報ＭＩが管理対象とする再現データや、当該再現データとともに保存された静止画像データ、動画像データを記憶部２２から読み出すことができる。なお、この静止画像データは、再現データ保存時点のゲーム画面を表す静止画像である。また、動画像データは、再現データ保存時点から過去所定時間分のゲーム画面を表す動画像である。

[0043] プレイ回数情報ＰＴは、再現データがこれまで何回プレイ対象として選択されたかを示す情報である。このプレイ回数が大きいほど、多くのユーザに

よって選択された人気の高い再現データであると推測される。また、世代数ＧＮは、ゲーム開始時から、何世代の再現データを経て保存されたデータかを示す数値である。具体的に、親の再現データが存在しない再現データの世代数ＧＮは１となり、親の再現データが存在する再現データの世代数ＧＮは、親の再現データの世代数ＧＮに１を加算した値となる。

[0044] プレイ時間情報ＰＭは、再現データが保存された際のゲームのプレイ時間を示す情報である。親の再現データにより示される状態からゲームが開始された場合、プレイ時間情報ＰＭは、当該ゲーム開始時点から子の再現データが保存される時点までの所要時間を示す情報であってよい。あるいは、プレイ時間情報ＰＭは、このような子の再現データを保存する際のプレイ時間に、親の再現データのプレイ時間情報ＰＭを加算した時間（すなわち、ゲームの初期状態からの総プレイ時間）を示す情報であってもよい。

[0045] タグ情報ＴＧは、当該再現データを保存したユーザや、当該再現データを利用してゲームをプレイしたユーザが、再現データを分類、識別するために付与する情報である。タグ情報ＴＧは、これを付与するユーザが任意に設定可能な文字列（コメントなど）であってもよい。

[0046] 次に、ユーザが本実施形態に係るゲームシステム１を利用してゲームをプレイする場合の処理の流れの一例について、図５のフロー図を用いて説明する。具体的に、このフローでは、ユーザがゲーム及び再現データを選択してゲームのプレイを開始し、当該ゲームのプレイ中に、プレイ途中の状態を再現するための再現データを新たに保存する場合における処理の流れが示されている。

[0047] まず、ユーザの操作に応じて、ゲーム装置１０はゲームサーバ２０に対してサービス開始の要求を行う（Ｓ１）。このとき、ユーザは自身のユーザ名やパスワード等を入力することにより、ゲームサーバ２０によるユーザ認証を受けてもよい。

[0048] このＳ１の要求に応じて、ゲームサーバ２０の再現データ管理部３５は、ゲーム選択画面を生成し、データ中継部３３を介してゲーム装置１０に送信

する（Ｓ２）。ここで、ゲーム選択画面は、ゲーム処理実行部３４によって実行可能な複数のゲームのうちのいずれかをユーザに選択させるための選択画面である。Ｓ２で送信されるゲーム選択画面は、ゲーム装置１０の画面表示制御部３２により、表示装置１５に表示される（Ｓ３）。図６は、ゲーム選択画面の一例を示す図である。ユーザは、この状態において操作部１４に対する操作入力を行い、ゲーム選択画面に表示されている複数のゲームの中から、自分がプレイしたいゲームを選択する（Ｓ４）。この操作内容を示す操作情報は、操作情報送信部３１によってゲームサーバ２０に送信される。

[0049] Ｓ４の操作情報は、データ中継部３３によって再現データ管理部３５に入力される。再現データ管理部３５は、この操作情報に基づいてユーザが選択したゲームを特定する。そして、記憶部２２に記憶されている各再現データの管理情報ＭＩの中から、当該特定したゲームのゲーム識別情報ＧＩＤを含む管理情報ＭＩを抽出する。この抽出された管理情報ＭＩにより、Ｓ４で選択されたゲームの実行中に保存された（すなわち、当該ゲームの実行中の状態を再現するための）再現データが特定されることになる。さらに再現データ管理部３５は、抽出された管理情報ＭＩを用いて、再現データ選択画面を生成し、データ中継部３３を介してゲーム装置１０に送信する（Ｓ５）。ここで、再現データ選択画面は、ユーザが選択したゲームの再現データをユーザに提示して、選択させるための選択画面である。ゲーム装置１０の画面表示制御部３２は、Ｓ５で送信される再現データ選択画面を受信して、表示装置１５に表示させる（Ｓ６）。

[0050] ここで、再現データ選択画面の具体例について、説明する。図７は、再現データ選択画面の一例を示す図である。図７の例では、再現データ選択画面の左上にＳ４でユーザが選択したゲームのタイトルを表す画像Ｉ１が、左下に現在フォーカスされている再現データを表す画像Ｉ２が、それぞれ示されている。ここで、画像Ｉ２は、フォーカスされている再現データの管理情報ＭＩに含まれる画像ファイルパス情報ＩＦにより特定される静止画像（すなわち、当該再現データが保存された状態のゲーム画面を表す画像）であって

よい。あるいは、動画像ファイルパス情報ＭＦにより特定される動画像が表示されてもよい。こうすれば、どのようなプレイによってどのような状態になったときに保存された再現データかを、ユーザは容易に把握することができる。

[0051] また、再現データ選択画面の右側には、ユーザが選択したゲームの実行状態を再現する複数の再現データの一覧を示す画像Ｉ３が表示されている。特に本実施形態では、この画像Ｉ３内において、複数の再現データは、その親子関係が分かり易い態様でユーザに提示される。すなわち、親の再現データと、子の再現データと、が再現データ選択画面内において互いに関連づけられている。例えば図７では、再現データ同士の親子関係は、木構造で表されている。具体的に、再現データ選択画面内において、各再現データは、当該再現データが保存された時点のゲーム画面を表す縮小画像によって表されている。そして、この縮小画像が互いに矢印で接続された再現データ同士は、親子関係にあり、矢印で指し示されている側の再現データが子の再現データであることを示している。この矢印をたどっていくことで、ユーザは、初期状態から開始して、どのようなプレイがなされて再現データが保存されたのかの概略を把握できる。図７では、縮小画像Ｉｓ１及びＩｓ６が、初期状態から開始して生成された世代数ＧＮ＝１の再現データを示している。また、縮小画像Ｉｓ２～Ｉｓ５は、縮小画像Ｉｓ１で示される再現データを親とする世代数ＧＮ＝２の再現データをそれぞれ示しており、縮小画像Ｉｓ７及びＩｓ８は、縮小画像Ｉｓ６で示される再現データを親とする世代数ＧＮ＝２の再現データをそれぞれ示している。なお、このような再現データ同士の階層的な関係は、各再現データの管理情報ＭＩに含まれる親再現データ識別情報ＰＳＩＤを参照することにより、生成することができる。

[0052] 図７では明示されていないが、再現データ選択画面においては、各再現データに関連づけて、静止画像や動画像だけでなく、当該再現データを保存したユーザの情報（ユーザ名等）や、再現データの作成日時ＣＴ、プレイ回数情報ＰＴ、世代数ＧＮ、プレイ時間情報ＰＭ、タグ情報ＴＧなどの情報が表

示されてもよい。ここで、ユーザの情報は、ユーザ識別情報ＵＩＤそのものであってもよいし、ユーザ識別情報ＵＩＤを元にユーザデータベース等を参照して得られるユーザ名やユーザのアイコン等であってもよい。また、これらの情報は、各再現データについて常に再生データ選択画面内に表示されてもよいし、現在フォーカスされている再現データの情報のみ表示されてもよい。また、再現データ管理部３５は、これらの情報に応じて、各再現データを表す画像の表示態様を変化させてもよい。具体的には、例えばプレイ回数情報ＰＴが所定回数以上の再現データを示す画像については、色を変化させたり、点滅させたりして強調表示してもよい。

[0053] ユーザは、この再現データ選択画面が表示された状態において操作部１４に対する操作入力を行い、再現データ選択画面に表示されている複数の再現データの中から、自分がプレイしたい状態を再現する再現データを選択する（Ｓ７）。具体的に、ユーザは、方向を指示する操作入力を行うことで、再現データのフォーカスを移動させ、所望の再現データにフォーカスが移動した状態で、決定を示すボタンを操作する。この操作内容を示す操作情報は、操作情報送信部３１によってゲームサーバ２０に送信される。

[0054] この操作情報を受け付けた再現データ管理部３５は、ユーザが選択した再現データを特定し、特定した再現データの再現データファイルパス情報ＳＦとともに、Ｓ４で選択されたゲームの実行開始指示を出力する（Ｓ８）。このとき、再現データ管理部３５は、ユーザにより選択された再現データの再現データ識別情報ＳＩＤを、一時的に記憶部２２に記憶しておくこととする。この情報は、後に新たな再現データが保存される際に親再現データ識別情報ＰＳＩＤとして参照される。

[0055] Ｓ８で出力されたゲーム開始指示は、データ中継部３３を介してゲーム処理実行部３４に入力され、ゲーム処理実行部３４は、この指示に応じてＳ４で選択されたゲームの処理を開始する（Ｓ９）。さらに、ゲーム処理実行部３４は、Ｓ８で再現データ管理部３５から出力された再現データ識別情報ＳＩＤにより識別される再現データ（すなわち、Ｓ７でユーザにより選択され

た再現データ）を記憶部２２から読み出して、その内容に応じたゲームの実行状態を再現する（Ｓ１０）。これにより、ユーザは、選択したゲームを選択した再現データにより再現される状態からプレイできる。これ以降、ユーザが操作部１４に対して操作入力した内容はゲーム処理実行部３４に入力され、ゲーム処理実行部３４はこの操作内容に応じてゲーム処理を実行する。そして、そのゲームの状況を示すゲーム画面を生成し、ゲーム装置１０に送信する。

[0056] この状態において、ユーザが操作部１４に対して再現データの保存指示を行う（Ｓ１１）と、その操作内容を示す操作情報がゲームサーバ２０に送信される。データ中継部３３は、通常、ゲーム処理実行中に受信した操作情報をゲーム処理実行部３４のみに転送している。しかしながら、入力された操作情報が再現データの保存指示があったことを示すものである場合、データ中継部３３は、その操作情報をゲーム処理実行部３４だけでなく、再現データ管理部３５にも転送する。

[0057] この操作情報を受け付けたゲーム処理実行部３４は、当該時点の状態を再現する再現データを生成し、記憶部２２に保存する（Ｓ１２）。一方、再現データ管理部３５は、Ｓ８の処理が実行された時点で一時的に記憶された、当該ゲーム処理の開始時に用いた再現データの再現データ識別情報ＳＩＤを読み出す。そして、この情報を親再現データ識別情報ＰＳＩＤとして含んだ管理情報ＭＩを生成し、Ｓ１２で保存された再現データの管理情報ＭＩとして記憶部２２に保存する（Ｓ１３）。この場合において、Ｓ１２で保存された再現データの再現データファイルパス情報ＳＦは、予め定められたルールにより決定されることとする。ゲーム処理実行部３４も、同じルールで決定されるファイルパスに基づき、再現データの保存を行うことで、後に管理情報ＭＩを参照して再現データにアクセスすることができる。

[0058] その後、ユーザは、ゲームのプレイを終了する操作を行う（Ｓ１４）。このとき、例えば再現データ管理部３５は、ゲーム選択画面や再現データ選択画面を再度生成してゲーム装置１０に送信してもよい。以上の処理により、

Ｓ７でユーザが選択した再現データを親とする新たな再現データが記憶部２２内に保存される。次回にいずれかのユーザが同じゲームをプレイ対象として選択した場合には、Ｓ５の処理において、この新たに保存された再現データを含んだ再現データ選択画面が生成されることになる。

[0059] なお、以上の処理フローでは、ユーザは再現データの保存指示を行った後、別途ゲームの終了操作を行うこととしたが、これに限らず、例えばゲーム処理実行部３４は、ゲームを終了させる指示操作を受け付けた場合に、再現データの保存処理を実行してゲーム処理を終了することとしてもよい。この場合、再現データ管理部３５は、このゲーム終了の指示操作を受けて、再現データの管理情報ＭＩを生成することになる。

[0060] また、以上の説明において管理情報ＭＩに含まれるとした情報は、例示であって、管理情報ＭＩにはその他の情報が含まれてもよい。例えば、本実施形態ではユーザの操作入力の内容を示す操作情報は、直接ゲーム処理実行部３４に入力されるのではなく、データ中継部３３を中継してゲーム処理実行部３４に入力されている。そこで、データ中継部３３は、この操作情報をゲーム処理実行部３４に対して出力するだけでなく、記憶部２２内にバッファリングしておくこととしてもよい。この場合、再現データ管理部３５は、再現データの保存指示が行われた場合には、当該バッファリングされた操作情報を再現データの管理情報ＭＩに含めることとする。この操作情報と、当該再現データの親の再現データと、を用いると、親の再現データにより示される状態からゲームを開始した後の、ユーザのプレイ内容を再現することができる。そのため、例えば動画像データを別に記録しなくとも、プレイ内容を示す動画像を後に再作成することができる。

[0061] また、このようにして記録された操作情報を比較することで、再現データ同士の類似性を判定することもできる。例えば、同じ親の再現データを持つ再現データ同士であって、操作情報も所定の条件により類似すると判定される再現データは、比較的近いプレイが行われ、その結果比較的近い状態を再現するデータとなっている可能性がある。特に選択肢を選択してゲームを進

行させていくアドベンチャーゲームやパズルゲーム、ボードゲームなど、比較的操作内容が単純化されているゲームについては、操作情報を比較することでプレイの類似性を判断することができる。そこで、再現データ管理部３５は、近い状態を再現すると判断された再現データ同士は、例えば再現データ選択画面内において近い位置に表示したり、あるいはこれら複数の再現データをまとめていることを示す一つの代表画像を表示したりしてもよい。再現データ選択画面に代表画像を表示する場合、例えばユーザがこの代表画像を選択すると、その画像によって代表される複数の再現データがさらに表示されることとしてもよい。なお、上記の例では操作情報を用いて再現データの類似性を判断することとしたが、再現データの内容そのものを比較することで、再現データ同士の類似性を判断してもよい。

[0062] また、ある再現データにより再現される状態からゲームを開始した後、ゲーム処理実行部３４が実行する処理内容によっては、再現データ管理部３５は、後に保存される再現データを元の再現データと関連づけずに、独立した再現データ（すなわち、世代数ＧＮ＝１のデータ）となるように当該再現データの管理情報ＭＩを生成してもよい。例えばゲームプレイ中に、ユーザはそれまで継続していたゲームのプレイを中断し、初期状態に戻ってゲームをやり直す場合がある。このような場合、その後に保存される再現データは、ゲーム開始時に使用された再現データにより再現される状態とは直接関係のない状態を再現するものになっている。そこで、このような事象が発生したと判断される場合、再現データ管理部３５は、再現データを元の再現データと関連づけないこととする。具体的に、例えば再現データ管理部３５は、データの初期化を行うなどの所定のシステムコールの呼び出しや、ゲーム処理実行部３４が使用するプログラムカウンタの値が予め定められた初期値に更新される事象などを検知した場合に、再現データの関連づけの制限を行う。なお、この場合の判定条件は、ゲームの種類によらず共通の条件であってもよいし、ゲームの種類ごとに定められた条件であってもよい。

[0063] 以上説明した本実施形態に係るゲームシステム１によれば、複数の再現デ

ータをユーザに選択させるための再現データ選択画面として、親の再現データと子の再現データとを関連づけてユーザに提示する画面を生成するので、ユーザは、各再現データの関係を容易に把握することができ、多数の再現データの中から所望の再現データを見つけやすくなる。

[0064] また、このような再現データの関係を木構造で表す場合、木構造の長さ（階層の深さ）や広がり（各再現データに平均何個の再現データが子として関連づけられているか）などを視覚的に把握できる。そのため、ゲームの遊ばれ方の傾向を把握することもできる。例えば一貫したストーリーがあって長時間にわたってプレイされるゲームでは、再現データ選択画面において各再現データの関係性は比較的長い木構造によって表現されると考えられる。一方、一つの場面からユーザの選択によって多様にシチュエーションが変化し、その後の展開が変わっていくようなゲームでは、各再現データの関係性は比較的放射状に広がって表現されると考えられる。そのため、ユーザは、このような木構造の形状を視覚的に確認することで、自分が好みのタイプのゲームを見つけることができる。

[0065] なお、本発明の実施の形態は、以上説明したものに限られない。例えば図６及び図７に示した各選択画面は例示であって、再現データ管理部３５はこれ以外の態様で選択画面を生成してもよい。例えば、以上の説明では木構造により再現データの親子関係を表現することとしたが、再現データをリスト表示し、各再現データに対してその親の再現データを特定する情報を並べて表示するなどの方法で、親の再現データと子の再現データとを関連づけた表示を行ってもよい。

[0066] また、再現データ管理部３５は、ゲームの選択と再現データの選択を同時に行えるような選択画面を生成してもよい。図８は、このような選択画面の一例を示す図である。この図では、矩形のアイコンによって複数のゲームが表現されており、このアイコンに関連づけられた人型のアイコンが、再現データを示している。このような選択画面を生成する場合、木構造の特徴が近いゲームのアイコンほど、互いに近い位置に配置されるように各アイコンの

配置位置を決定してもよい。なお、この図８においてゲームに関連づけられていない人型のアイコンは、まだ再現データの保存を行っていないユーザを示している。このようなユーザについては、例えば再現データ管理部３５は、当該ユーザが過去に実行したゲームや所有しているゲームの情報を用いて、ゲームシステム１が実行対象とするゲームの中から推奨するゲームを特定する。そして、このような推奨ゲームに近い位置に、当該ユーザを表すアイコンを配置する。こうすれば、まだ再現データを用いたゲームを実行していないユーザも、自分の嗜好に合ったゲームを容易に見つけることができる。また、図中の吹き出しは、各再現データを保存した、又はプレイしたユーザが付与したコメント等のタグ情報の内容を示している。このような情報を表示することで、ユーザはより再現データを探しやすくなる。

[0067] なお、この図８の例において、人型のアイコンは必ずしも再現データと１対１で対応する必要はなく、複数の再現データを代表するものであってもよい。この場合、所定の条件に基づいて、比較的類似性が高いと推定される再現データ同士がまとめられて、一つのアイコンとして表現されることになる。このアイコンが選択されると、当該アイコンによって代表されている複数の再現データが選択画面内に表示され、ユーザは個々の再現データを選択できるようになる。

[0068] また、以上の説明では、ゲームサーバ２０とゲーム装置１０とで処理が分担されることとしたが、以上の説明においてゲームサーバ２０が実行することとした処理の少なくとも一部は、ゲーム装置１０で実現されてもよい。例えばゲームサーバ２０は再現データの管理のみを行い、ゲームアプリケーションはゲーム装置１０で実行されてもよい。この場合、ゲーム装置１０は、ユーザの指示に応じて生成した再現データをゲームサーバ２０に送信し、記憶させる。また、ゲームサーバ２０から提供される選択画面を用いてユーザがいずれかの再現データを選択した場合、ゲーム装置１０はその再現データをゲームサーバ２０からダウンロードして、ゲーム処理の実行を開始する。あるいは、ゲーム装置１０はローカルで再現データの保存、管理情報ＭＩの

生成、選択画面の生成といった処理を全て実行してもよい。この場合、ゲームサーバ２０は必要なくなる。そして、ゲーム装置１０は、必ずしも複数のユーザに再現データを共有させる必要もなく、一人のユーザが保存した複数の再現データを、その親子関係に従って関連づけてユーザに提示する選択画面を生成し、表示装置１５に表示させてもよい。

[0069] また、以上の説明では再現データはメモリイメージを含むスナップショットデータであることとしたが、既に述べたように、再現データはゲーム固有のセーブデータであってもよい。この場合、例えばゲームアプリケーション自身が、親のセーブデータと子のセーブデータとを関連づける管理情報を生成し、その情報に基づいて、ゲームの実行中に親のセーブデータと子のセーブデータとを関連づける再現データ選択画面を生成し、ユーザに提示する機能を備えてもよい。また、セーブデータの管理はゲームアプリケーションとは別のシステムプロセスによって行われ、ゲームアプリケーションは、システムプロセスに対して当該ゲームのセーブデータのリストを要求する場合もある。この場合、ゲームアプリケーションは、要求に応じてシステムプロセスから提供されたリストに含まれるセーブデータを、ユーザに選択肢として提示する。そのため、ゲームアプリケーション自身は、親のセーブデータと子のセーブデータとを関連づけて管理する機能を持っていない。この場合でも、システムプロセスが、親のセーブデータと子のセーブデータとを関連づけて管理し、ユーザの要求に応じて親のセーブデータと子のセーブデータとを関連づける再現データ選択画面を生成し、ユーザに提示してもよい。この例では、システムプロセスは、再現データ選択画面をユーザに提示した状態でユーザが選択したセーブデータを特定する情報を記憶しておき、ゲームアプリケーションからセーブデータのリストを要求された場合には、このユーザが選択したセーブデータだけを含んだリストをゲームアプリケーションに提供する。こうすれば、ゲームアプリケーションがセーブデータの親子関係を管理する機能を持たない場合でも、セーブデータの親子関係を示す再現データ選択画面をユーザに提示し、その中からユーザにセーブデータを選択さ

せることができる。

請求の範囲

[請求項1] ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を取得する手段と、

前記取得した選択画面を表示装置に表示させる表示制御手段と、

を含むことを特徴とするゲーム装置。

[請求項2] 請求項１に記載のゲーム装置において、

前記選択画面は、前記各再現データに対して、当該再現データを保存させたユーザの情報を関連づけて提示する画面である

ことを特徴とするゲーム装置。

[請求項3] 請求項１に記載のゲーム装置において、

前記選択画面は、前記第１の再現データと前記第２の再現データとの関連を、木構造により表現する画面である

ことを特徴とするゲーム装置。

[請求項4] ゲーム装置と、ゲーム処理を実行するゲームサーバと、を含むゲームシステムであって、

前記ゲームサーバは、ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を生成し、当該生成した選択画面を前記ゲーム装置に対して送信し、

前記ゲーム装置は、前記送信される選択画面を受信して、当該受信した選択画面を表示装置に表示させる

ことを特徴とするゲームシステム。

[請求項5] 請求項４に記載のゲームシステムにおいて、

前記ゲームサーバは、

前記選択画面が前記表示装置に表示された状態において、前記ゲーム装置から再現データを選択する指示を示す操作情報を受信した場合に、当該選択された再現データを識別する情報を記憶する手段と、

前記ゲーム装置から再現データを選択する指示を示す操作情報を受信した場合に、当該選択された再現データにより再現される状態から開始して、ゲーム処理を実行する手段と、

前記ゲーム処理の実行中に、前記ゲーム装置から再現データの保存指示を示す操作情報を受信した場合に、当該時点の状態を再現するための再現データを保存する手段と、

前記保存指示に応じて保存する再現データを前記第２の再現データとして、前記記憶される情報により識別される前記選択された再現データを前記第１の再現データとして、当該第１の再現データと第２の再現データとを関連づける管理情報を記憶する手段と、

前記管理情報を用いて、前記第１の再現データと第２の再現データとを関連づける選択画面を生成する手段と、

を含むことを特徴とするゲームシステム。

[請求項6] ゲームの実行中における一時点の状態を再現するための再現データを複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を取得するステップと、

前記取得した選択画面を表示装置に表示させるステップと、

を含むことを特徴とするゲーム装置の制御方法。

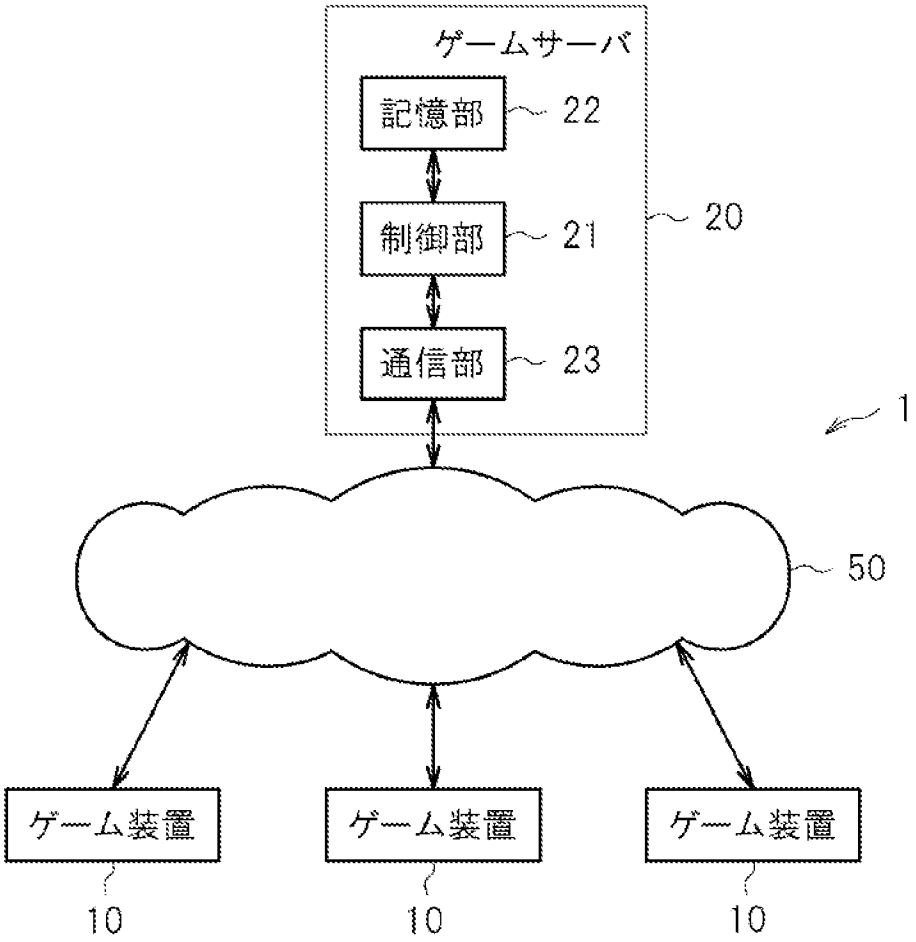
[請求項7] ゲームの実行中における一時点の状態を再現するための再現データ

を複数提示し、ユーザに選択させるための選択画面であって、前記複数の再現データの一つである第１の再現データと、当該第１の再現データにより再現される状態からさらにゲームが進行した後の一時点の状態を再現するための第２の再現データと、を関連づけて提示する選択画面を取得する手段、及び

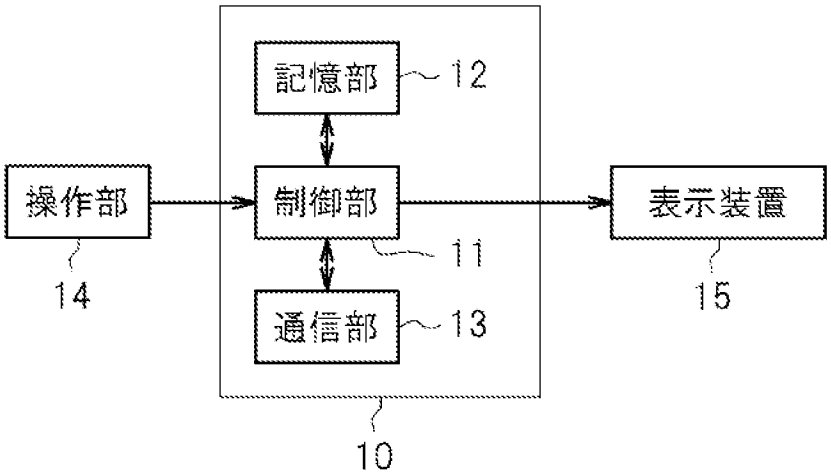
前記取得した選択画面を表示装置に表示させる表示制御手段、

としてコンピュータを機能させるためのプログラムを記憶した、コンピュータ読み取り可能な情報記憶媒体。

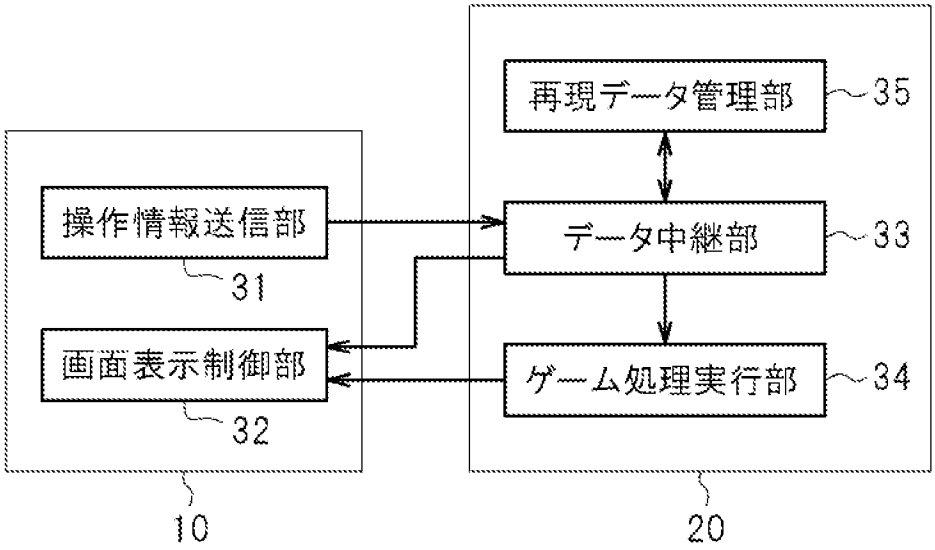
[図1]


ゲームサーバ
記憶部
22
制御部
21
20
通信部
23
1
50
ゲーム装置
ゲーム装置
ゲーム装置
10
10
10

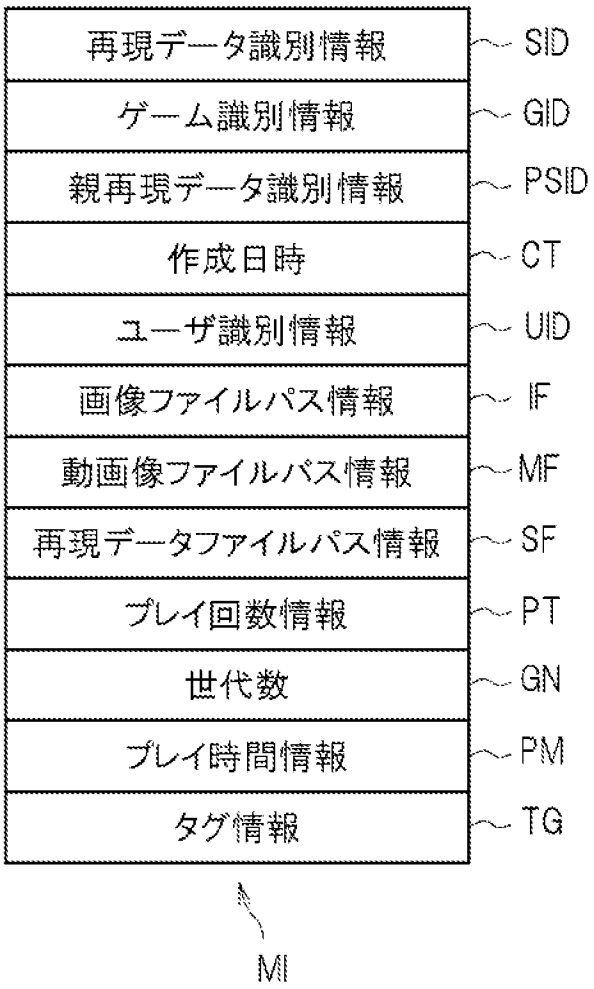
[図2]


記憶部
12
操作部
制御部
表示装置
11
14
15
通信部
13
10

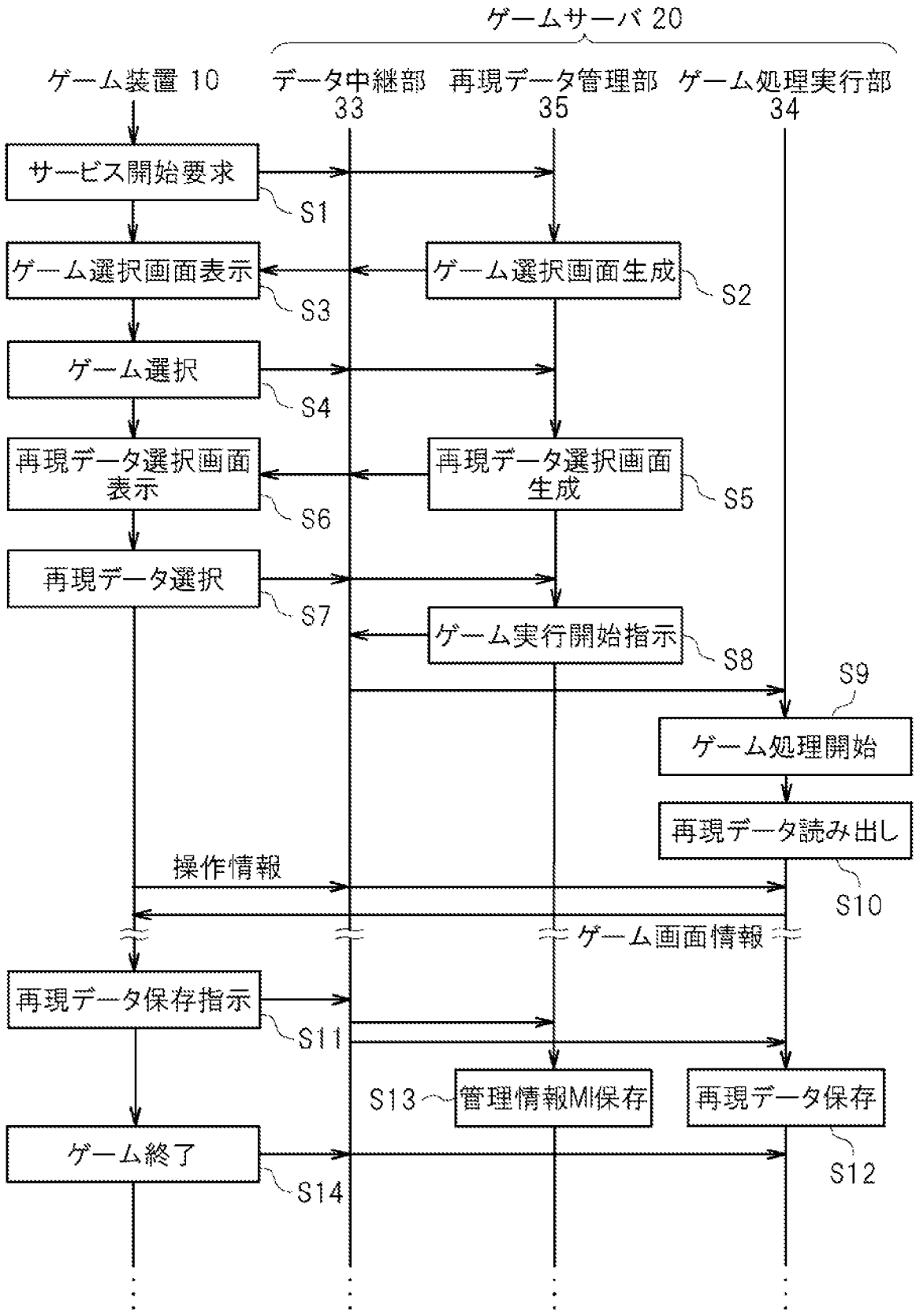
[図3]


再現データ管理部
35
操作情報送信部
31
データ中継部
33
画面表示制御部
32
ゲーム処理実行部
34
10
20

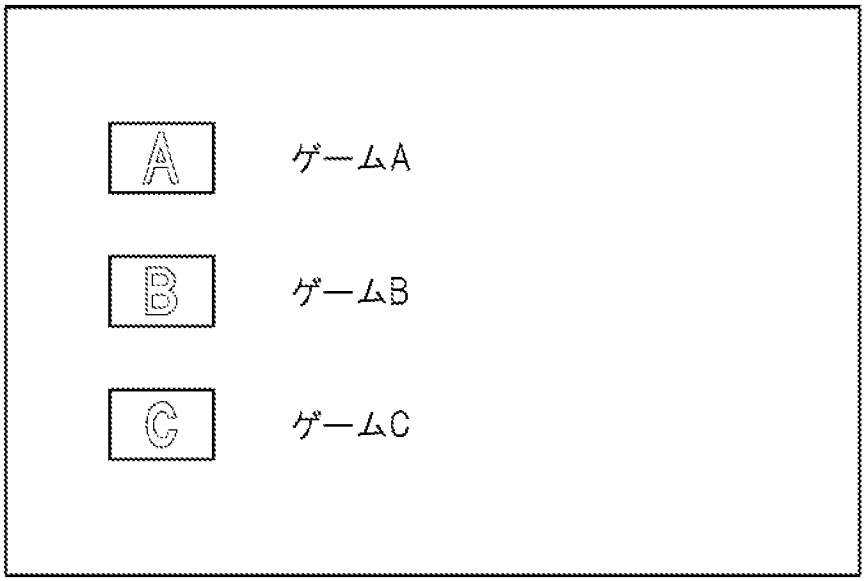
[図4]


再現データ識別情報
SID
ゲーム識別情報
GID
親再現データ識別情報
PSID
作成日時
CT
ユーザ識別情報
UID
画像ファイルパス情報
IF
動画像ファイルパス情報
MF
再現データファイルパス情報
SF
プレイ回数情報
PT
世代数
GN
プレイ時間情報
PM
タグ情報
TG
MI

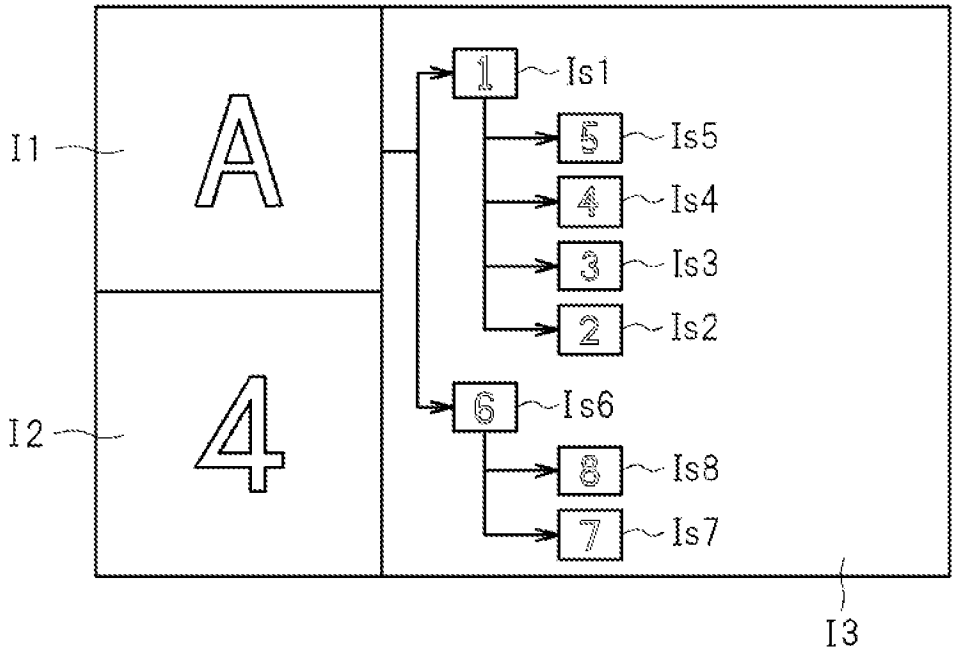
[図5]


ゲームサーバ 20
ゲーム装置 10
データ中継部 33
再現データ管理部 35
ゲーム処理実行部 34
サービス開始要求
S1
ゲーム選択画面表示
ゲーム選択画面生成
S2
S3
ゲーム選択
S4
再現データ選択画面表示
再現データ選択画面生成
S5
S6
再現データ選択
S7
ゲーム実行開始指示
S8
S9
ゲーム処理開始
再現データ読み出し
操作情報
S10
ゲーム画面情報
再現データ保存指示
S11
S13
管理情報MI保存
再現データ保存
ゲーム終了
S12
S14

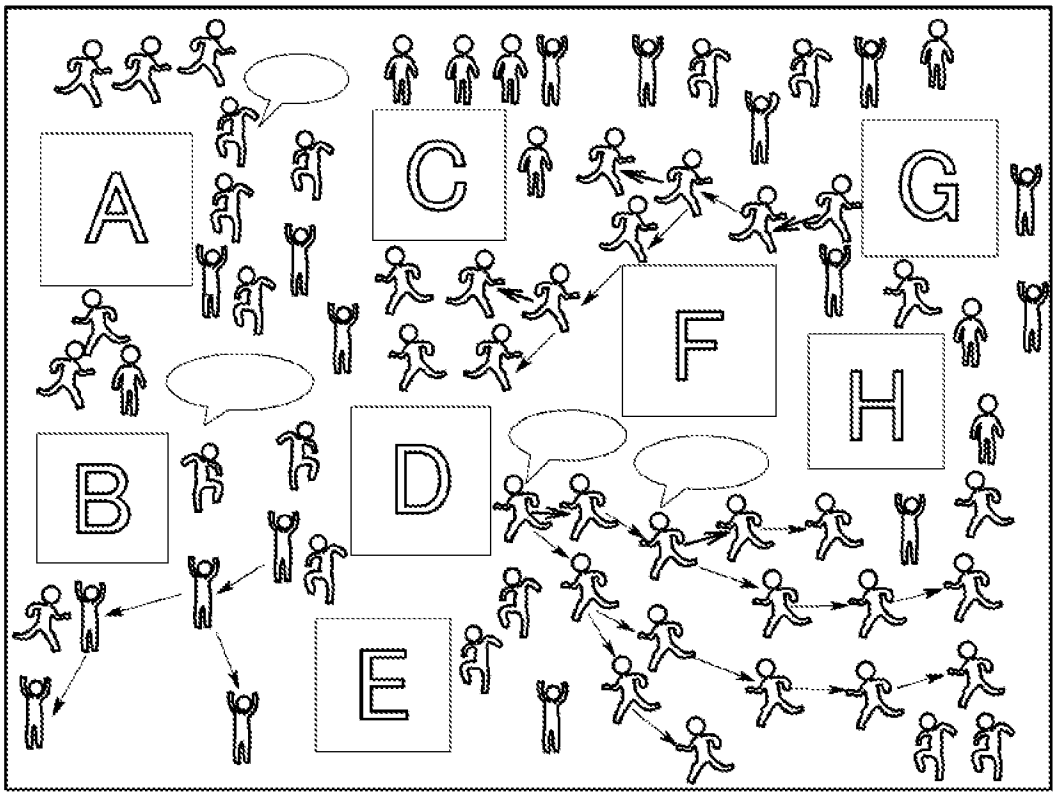
[図6]


A
ゲームA
B
ゲームB
C
ゲームC

[図7]


I1
A
I2
4
1
Is1
5
Is5
4
Is4
3
Is3
2
Is2
6
Is6
8
Is8
7
Is7
I3

[図8]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2010/073578

A. CLASSIFICATION OF SUBJECT MATTER
A63F13/00(2006.01)i, *A63F13/10*(2006.01)i, *A63F13/12*(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A63F13/00-13/12, 9/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2011
Kokai Jitsuyo Shinan Koho	1971-2011	Toroku Jitsuyo Shinan Koho	1994-2011

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 2009-11569 A (Nintendo Co., Ltd.), 22 January 2009 (22.01.2009), paragraphs [0077], [0079] to [0080], [0133]; fig. 15 to 16 & US 2009/0011838 A1 & EP 2014342 A1	1,3-4,6-7 2,5
Y A	"Imabikiso", 'DENGEKI PlayStation vol.401', Media Works Inc., 09 November 2007 (09.11.2007), vol.13, no.39, pages 76 to 79 (particularly, page 78, '2 Flow Chart')	1,3-4,6-7 2,5
A	JP 2002-78956 A (Sony Communication Network Corp.), 19 March 2002 (19.03.2002), entire text; all drawings (Family: none)	1-7

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search 14 February, 2011 (14.02.11)	Date of mailing of the international search report 22 February, 2011 (22.02.11)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (July 2009)

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-149657 A (Namco Ltd.), 05 June 2001 (05.06.2001), abstract; paragraphs [0079] to [0082]; fig. 2 & US 6749514 B1 & WO 2004/103092 A1	1-7
A	JP 2000-126452 A (Sony Computer Entertainment Inc.), 09 May 2000 (09.05.2000), abstract & EP 1045725 A & WO 2000/025878 A1 & AU 6367799 A & BR 9907059 A & CA 2316373 A & TW 503119 B & CN 1287501 A	1-7
A	JP 2009-247457 A (Namco Bandai Games Inc.), 29 October 2009 (29.10.2009), paragraphs [0098] to [0099], [0106] (Family: none)	2

国際調査報告

国際出願番号　ＰＣＴ／ＪＰ２０１０／０７３５７８

Ａ．　発明の属する分野の分類（国際特許分類（ＩＰＣ））

Int.Cl.　A63F13/00(2006.01)i，A63F13/10(2006.01)i，A63F13/12(2006.01)i

Ｂ．　調査を行った分野

調査を行った最小限資料（国際特許分類（ＩＰＣ））

Int.Cl.　A63F13/00-13/12，9/24

最小限資料以外の資料で調査を行った分野に含まれるもの

日本国実用新案公報	１９２２－１９９６年
日本国公開実用新案公報	１９７１－２０１１年
日本国実用新案登録公報	１９９６－２０１１年
日本国登録実用新案公報	１９９４－２０１１年

国際調査で使用した電子データベース（データベースの名称、調査に使用した用語）

Ｃ．　関連すると認められる文献

引用文献のカテゴリー＊	引用文献名　及び一部の箇所が関連するときは、その関連する箇所の表示	関連する請求項の番号
Y A	JP 2009-11569 A（任天堂株式会社）２００９．０１．２２，段落００７７，００７９－００８０，０１３３，図１５－１６　& US 2009/0011838 A1 & EP 2014342 A1	1，3-4，6-7 2，5
Y A	"忘火起草"，「電撃ＰｌａｙＳｔａｔｉｏｎ　Ｖｏｌ．４０１」，株式会社メディアワークス，２００７．１１．０９，第１３巻，第３９号，ｐ．７６－７９（特に、ｐ．７８の「２　フローチャート」の項）	1，3-4，6-7 2，5
A	JP 2002-78956 A（ソニーコミュニケーションネットワーク株式会社）２００２．０３．１９，全文，全図（ファミリーなし）	1-7

☑　Ｃ欄の続きにも文献が列挙されている。

☐　パテントファミリーに関する別紙を参照。

＊　引用文献のカテゴリー
「Ａ」特に関連のある文献ではなく、一般的技術水準を示すもの
「Ｅ」国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの
「Ｌ」優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献（理由を付す）
「Ｏ」口頭による開示、使用、展示等に言及する文献
「Ｐ」国際出願日前で、かつ優先権の主張の基礎となる出願の日の後に公表された文献
「Ｔ」国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの
「Ｘ」特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの
「Ｙ」特に関連のある文献であって、当該文献と他の１以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの
「＆」同一パテントファミリー文献

国際調査を完了した日 １４．０２．２０１１	国際調査報告の発送日 ２２．０２．２０１１
国際調査機関の名称及びあて先 日本国特許庁（ＩＳＡ／ＪＰ） 郵便番号１００－８９１５ 東京都千代田区霞が関三丁目４番３号	特許庁審査官（権限のある職員）　２Ｂ　４０９６ 宇佐田　健二 電話番号　０３－３５８１－１１０１　内線　３２３７

様式ＰＣＴ／ＩＳＡ／２１０（第２ページ）（２００９年７月）

Supercell
Exhibit 1002
Page 121

Ｃ（続き）．　関連すると認められる文献

引用文献のカテゴリー＊	引用文献名　及び一部の箇所が関連するときは、その関連する箇所の表示	関連する請求項の番号
A	JP 2001-149657 A（株式会社ナムコ）２００１．０６．０５，要約，段落００７９－００８２，図２　& US 6749514 B1 & WO 2004/101092 A1	1-7
A	JP 2000-126452 A（株式会社ソニー・コンピュータエンタテインメント）２０００．０５．０９）要約　& EP 1045725 A & WO 2000/025878 A1 & AU 6367799 A & BR 9907059 A & CA 2316373 A & TW 503119 B & CN 1287501 A	1-7
A	JP 2009-247457 A（株式会社バンダイナムコゲームス）２００９．１０．２９，段落００９８－００９９，０１０６（ファミリーなし）	2

Supercell
Exhibit 1002
Page 122

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
RCE- 2ND AND SUBSEQUENT REQUEST	1820	1	1900	1900
		Total in USD ($)		**2040**

Electronic Acknowledgement Receipt

EFS ID:	35283255
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	28-FEB-2019
Filing Date:	29-DEC-2016
Time Stamp:	13:42:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$2040
RAM confirmation Number	022819INTEFSW13433800
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_PETWITHDRAW_RCE.pdf	10450018 e8dc062d0c74a05aa2f24818168b157aa0b65cbf	yes	83

Multipart Description/PDF files in .zip description

Document Description	Start	End
Petition to Withdraw from Issue	1	2
Request for Continued Examination (RCE)	3	3
Transmittal Letter	4	4
Information Disclosure Statement (IDS) Form (SB08)	5	5
Non Patent Literature	6	11
Non Patent Literature	12	26
Non Patent Literature	27	37
Foreign Reference	38	74
Non Patent Literature	75	83

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	32406 ac1ba49d311392e11aaad81644f8cad6511fa1a8	no	2

Warnings:

Information:

Total Files Size (in bytes):	10482424

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

DOCKET NO.: 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:
Taiki EDA

GROUP: 3661

SERIAL NO: 15/393,646

EXAMINER: AHMED, MASUD

FILED: December 29, 2016

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

PETITION FOR WITHDRAWAL OF
APPLICATION FROM ISSUE UNDER 37 C.F.R. 1.313(c)(2)

BOX: DAC
COMMISSIONER FOR PATENTS
ALEXANDRIA, VA 22313-1450

Commissioner:

Applicants hereby petition the Commissioner to withdraw the above-identified application from issue under the provisions of 37 C.F.R. § 1.313(c)(2) in order to permit consideration of an Information Disclosure Statement under 37 C.F.R. § 1.97 and a Request for Continued Examination filed in compliance with 37 C.F.R. § 1.114. The Issue Fee was paid in this application on November 23, 2018, as evidenced by the enclosed electronic filing receipt.

Petitioners have electronically filed concurrently herewith: (A) the fee set forth in 37 C.F.R. § 1.17(h) as required for filing this petition under 37 C.F.R. § 1.313(c)(2); (B) a request for continued examination (RCE) under 37 C.F.R. § 1.114(c); (C) the fee set forth in 37 C.F.R. § 1.17(e) as required for filing the RCE; and (D) an information disclosure statement (IDS) and a copy of all the cited references.

Favorable consideration of this petition is respectfully requested.

Confirmation of the timely granting of this Petition is respectfully requested by facsimile to the undersigned Petitioners at (703) 413-2220.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

If required, any further charges may be made against the Attorney of Record's Deposit Account No. 15-0030.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	03/19/2019	10232263	481331US	3602

22850 7590 02/27/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Taiki EDA, Tokyo, JAPAN;
Gree, Inc., Minato-ku, JAPAN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Electronic Acknowledgement Receipt

EFS ID:	34875332
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Fumiko Matsui
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	16-JAN-2019
Filing Date:	29-DEC-2016
Time Stamp:	16:16:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$240
RAM confirmation Number	011719INTEFSW00002987150030
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

United States Patent and Trademark Office

- Sales Receipt -

Adjustment date: 02/21/2019 SDIRETA1

01/17/2019 INTEFSW 00002947 150030 15393646

02 FC:1820 1900.00 CR

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 02/13/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	

ART UNIT	PAPER NUMBER
3661	

NOTIFICATION DATE	DELIVERY MODE
02/13/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OBLONPAT@OBLON.COM
iahmadi@oblon.com
patentdocket@oblon.com

Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, Taiki	
	Examiner MASUD AHMED	Art Unit 3661	AIA Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 11/15/18.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 17-22 and 30-41 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file areply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/
Primary Examiner, Art Unit 3661

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3661

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Final Written Decision entered January 2, 2019 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	02/09/2019

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	15/393,646	Filing Date	2016-12-29	Docket Number (if applicable)	481331US	Art Unit	3661
First Named Inventor	TAIKI EDA			Examiner Name	AHMED, MASUD		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☐ Amendment/Reply
- ☒ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☒ Other PTO-1449, Reference (1)

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 150030

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/James Love/	Date (YYYY-MM-DD)	2019-01-16
Name	James Love	Registration Number	58421

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Fumiko Matsui
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
RCE- 2ND AND SUBSEQUENT REQUEST	1820	1	1900	1900
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**2040**

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Decision Date : January 16, 2019

In re Application of :

Taiki EDA

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

Application No : 15393646

Filed : 29-Dec-2016

Attorney Docket No : 481331US

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed January 16, 2019 , to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED.**

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 3661 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt

EFS ID:	34874713
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Fumiko Matsui
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	16-JAN-2019
Filing Date:	29-DEC-2016
Time Stamp:	16:14:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$2040
RAM confirmation Number	011719INTEFSW00002947150030
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition automatically granted by EFS	petition-request.pdf	31505 721b59604f1bda17baeca7c66c17d7320eed9f7b	no	2
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	RCEweb-form481331US.pdf	697624 ae25eae9997f1547dcdc432ecfbd26e34a34430c	no	3
Warnings:					
Information:					
3	Quick Path Information Disclosure Statement	QPcertificate481331US.pdf	204210 518be3184fb2f5c4bd63efc02406c91ab2626508	no	2
Warnings:					
Information:					
4		481331USQPIDS-O.pdf	16686933 275e0b90c156f4893c3a3019ebbe5785ce12e126	yes	61

Multipart Description/PDF files in .zip description

Document Description	Start	End
Quick Path Information Disclosure Statement	1	1
Quick Path Information Disclosure Statement	2	2
Other Reference-Patent/App/Search documents	3	61

Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	32396 592d901b9adb71666ab71ed2d850503a26256200	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	17652668

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web	PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)**
Application Number	15393646
Filing Date	29-Dec-2016
First Named Inventor	Taiki EDA
Art Unit	3661
Examiner Name	MASUD AHMED
Attorney Docket Number	481331US
Title	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary.

APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c).

A grantable petition requires the following items:
(1) Petition fee; and
(2) One of the following reasons:
(a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable;
(b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or
(c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).

Petition Fee

○	Small Entity
○	Micro Entity
◉	Regular Undiscounted

Reason for withdrawal from issue

◯ One or more claims are unpatentable ◉ Consideration of a request for continued examination (RCE) (List of Required Documents and Fees) ◯ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).
RCE request,submission, and fee. ☐ I certify, in accordance with 37 CFR 1.4(d)(4) that : The RCE request ,submission, and fee have already been filed in the above-identified application on ☒ Are attached.
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ◉ An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application. ◯ An attorney or agent registered to practice before the Patent and Trademark Office, acting in a representative capacity. ◯ A sole inventor ◯ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ◯ A joint inventor; all of whom are signing this e-petition

Signature	/James Love/
Name	James Love
Registration Number	58421

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Fumiko Matsui
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	240	240
		Total in USD ($)		**240**

Electronic Acknowledgement Receipt

EFS ID:	34875332
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Fumiko Matsui
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	16-JAN-2019
Filing Date:	29-DEC-2016
Time Stamp:	16:16:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$240
RAM confirmation Number	011719INTEFSW00002987150030
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30648 ae7818b1b2965c0f960817ae9d8958508178567d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	30648		

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	34591313
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Teresa Cole
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	14-DEC-2018
Filing Date:	29-DEC-2016
Time Stamp:	14:54:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$2040
RAM confirmation Number	121718INTEFSW00001190150030
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

United States Patent and Trademark Office

- Sales Receipt -

Adjustment date: 01/10/2019 SDIRETA1

12/17/2018 INTEFSW 00001190 150030 15393646

02 FC:1820 1900.00 CR

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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 01/09/2019

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3661	

NOTIFICATION DATE	DELIVERY MODE
01/09/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OBLONPAT@OBLON.COM
iahmadi@oblon.com
patentdocket@oblon.com

Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, Taiki	
	Examiner MASUD AHMED	Art Unit 3661	AIA Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 11/15/18.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 17-22 and 30-41 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file areply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/ Primary Examiner, Art Unit 3661	/MASUD AHMED/ Primary Examiner, Art Unit 3661

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	"Wikia, Clash of Clans WiKi Navigation", captured by Wayback Machine, submitted July 27, 2017, 4 pages
	AX	Declaration of Tommi Suvinen, submitted September 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 56 pages
	AY	Declaration of Marika Appel, submitted September 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 41 pages
	AZ	"Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, printed September 11, 2017, https://web.archive.org/web/20130915081112/http://forum.supercell.net:80/showthread.php/149687-Mastermind-s-In-Game-Builder-Idea-(with-LOADS-of-picutres!), 16 pages

[redacted] Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	12/13/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT Taiki EDA	
	FILING DATE December 29, 2016	GROUP 3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	"Thread: Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, submitted September 15, 2017, http://forum.supercell.net:80/showthread.php/149687-Mastermind-s-In-Game-Builder-Idea-(with-LOADS-of-picutres!), 13 pages
	AAB	"Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, printed September 12, 2017, https://forum.supercell.com/showthread.php/149687-Mastermind-s-In-Game-Builder-Ideas-(with-LOADS-of-picutres!), 13 pages
	AAC	Takeo Nasu, A Report on Operation Check of Hotel Giants 2, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 6 pages
	AAD	Shinya Kamata, A Report on Operation Check of Winning Eleven 2011, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 7 pages
	AAE	Declaration of Sean Oiesiuk, submitted December 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 63 pages
	AAF	Takeo Nasu, A Report on Operation Check of Hotel Giants 2 ver.2, submitted January 26, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 4 pages
	AAG	"StarCraft II: Wings of Liberty, Overview", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Overview, 2 pages
	AAH	"StarCraft II: Wings of Liberty, Gameplay", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Gameplay, 2 pages
	AAI	"StarCraft II: Wings of Liberty, Marine", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Units/Terran/Marine, 3 pages
	AAJ	"StarCraft II: Wings of Liberty, Structures", captured by Wayback Machine, submitted September 15, 2017, https://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures, 2 pages
	AAK	"StarCraft II: Wings of Liberty, Terran", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures/Terran, 2 pages
	AAL	"StarCraft II: Wings of Liberty, Missile Turret", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures/Terran/Missile Turret, 2 pages
	AAM	"StarCraft II: Arcade", captured by Wayback Machine, submitted September 15, 2017, us.battle.net/sc2/en/game/maps-and-mods/, 3 pages
	AAN	"StarCraft II: Map Making Tutorials, Terrain Module, Introduction", captured by Wayback Machine, submitted September 15, 2017, http://us.battle.net/sc2/en/game/maps-and-mods/tutorials/terrain/1, 3 pages
	AAO	"StarCraft II: Map Making Tutorials, Terrain Module, Place some units", captured by Wayback Machine, submitted September 15, 2017, http://us.battle.net/sc2/en/game/maps-and-mods/tutorials/terrain/3, 2 pages
	AAP	"StarCraft II: Map Making Tutorials, Terrain Module, Publishing", captured by Wayback Machine, submitted September 15, 2017, http://us.battle.net/sc2/en/game/maps-and-mods/tutorials/publishing, 6 pages
	AAQ	Takeo Nasu, A Report on Operation Check of StarCraft II, ver. 1, submitted December 21, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 6 pages

Examiner /MASUD AHMED/	Date Considered 12/13/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
	481331US	15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT	
	Taiki EDA	
	FILING DATE	GROUP
	December 29, 2016	3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAR	"StarCraft II: Wings of Liberty, Map Making Tutorials, Terrain Module, Publishing", captured by Wayback Machine, submitted January 9, 2018, http://us.battle.net:80/sc2/en/game/maps-and-mods/tutorials/publishing, 5 pages
	AAS	"StarCraft II: Wings of Liberty, Map Making Tutorials, Terrain Module, Map Properties", captured by Wayback Machine, submitted January 9, 2018, http://us.battle.net:80/sc2/en/game/maps-and-mods/tutorials/terrain/5, 5 pages
	AAT	"Play Station 3 System Software 4.00, User's Guide, Save Data", captured by Wayback Machine, submitted October 17, 2017, http://manuals.playstation.net/document/jp/ps3/current/game/3savedata.html, 2 pages
	AAU	Declaration of Eric Gray submitted November 8, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 3 pages
	AAV	Declaration of Antti Takala submitted November 9, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 19 pages
	AAW	Takeo Nasu, A Report of Operation Check of Clash of Clans ver. 5.2 on Actual Device, submitted November 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 6 pages
	AAX	Takeo Nasu, A Report on Operation Check of StarCraft II, submitted October 20, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 3 pages
	AAY	"StarCraft 2 Beta: Battle.Net Impressions", printed September 28, 2017, https://gamerant.com/starcraft-2-beta-battlenet-impressions-paul-11666/3/, 5 pages
	AAZ	"StarCraft II, Map Making Tutorials, Terrain Module, Map Properties", captured by Wayback Machine, submitted December 26, 2017, http://us.battle.net:80/sc2/en/game/maps-and-mods/tutorials/terrain/5, 7 pages
	ABA	Nobuhiko Suzuki, A Report on Operation Check of Civilization IV, submitted May 8, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 4 pages
	ABB	"Civilization IV, weekly article, "Bummeido, the snack at 3AM" vol. 1", printed September 21, 2017, http://www.4gamer.net/weekly/civ4_001.shtml, 6 pages
	ABC	"Tips of Backup Technics for Saved Data of Popular Game Applications, before Purchasing New iPhone", September 16, 2013, http://www.appbank.net/2013/09/16/iphone-news/66683.php, 12 pages
	ABD	"How to migrate Data of Clash of Clans from iPhone5 to iPad mini", July 25, 2013, https://blogs.yahoo.co.jp/syuel1009/68066740.html, 4 pages
	ABE	"Clash of Clans, Playing it lightly with iPhone Outside, Playing it deliberately with iPad at Home, and Setting of Notification", July 5, 2013, http://kitchencompany.jp/post-3464/, 3 pages
	ABF	Supercell's First Brief, submitted July 6, 2018 in Case No. H30 WA 10447 of JP Patent No. 5676032, 87 pages
	ABG	Nobuhiko Suzuki, A Report of Operation Check of Hotel Giants 2 on Actual Device, submitted July 6, 2018 in Case No. H30 WA 10447 of JP Patent No. 5676032, 7 pages
	ABH	Supercell's First Brief, submitted July 20, 2018 in Case No. H30 WA 10446 of JP Patent No. 5903517, 78 pages

Examiner	/MASUD AHMED/	Date Considered	12/13/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT Taiki EDA	
	FILING DATE December 29, 2016	GROUP 3717

		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	ABI	Supercell's First Brief, submitted January 26, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 45 pages
	ABJ	Gree's First Brief, submitted February 5, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 112 pages
	ABK	Supercell's Third Brief, submitted March 16, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 18 pages
	ABL	Gree's Second Brief, submitted May 16, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 16 pages
	ABM	Supercell's Fourth Brief, submitted May 8, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 72 pages
	ABN	Supercell's First Brief, submitted February 6, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 60 pages
	ABO	Gree's First Brief, submitted February 16, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 37 pages
	ABP	Supercell's Third Brief, submitted March 23, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 26 pages
	ABQ	Supercell's First Brief, submitted June 25, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 72 pages
	ABR	Supercell's Third Brief, submitted July 18, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 45 pages
	ABS	Gree's Second Brief, submitted September 4, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 8 pages
	ABT	Motion for Preliminary Injunction, submitted March 29, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 31 pages
	ABU	"Internet Archive's Terms of Use, Privacy policy and copyright policy", Archive.org, December 31, 2014, https://archive.org/about/terms.php, 3 pages
	ABV	"Internet News of Stock, Nikkei.com", captured by Wayback Machine, printed October 20, 2017, https://web.archive.org/web/20171017091811/https://nikkei.com/markets/kabu/, 1 page
	ABW	"Internet News of Stock, Nikkei.com", October 17, 2017, https://www.nikkei.com/article/DGXLAS3LTSEC1_X11C17A0000000/, 1 page
	ABX	"Wayback Machine PlayBack... now with Timestamps!", Internet Archive Blogs, October 5, 2017, 1 page
	ABY	"Function of Presenting Elements configuring Web Pages with Timestamps in List added to Wayback Machine, the Internet Archive", Current Awareness Portal by the National Diet Library, October 5, 2017, http://current.ndl.go.jp/node/34792, 2 pages

Examiner	/MASUD AHMED/	Date Considered	12/13/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT Taiki EDA	
	FILING DATE December 29, 2016	GROUP 3717

		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	ABZ	Hirofumi Tada, Search Report of Wayback Machine, submitted October 20, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 9 pages
	ACA	Ada Lerner et al., Rewriting History: Changing the Archived Web from the Present, published at the 22nd ACM Conference on Computer and Communications Security, printed October 30, 2017, 15 pages
	ACB	Supercell's Second Brief, submitted June 1, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 86 pages
	ACC	Gree's First Brief, submitted June 26, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 21 pages
	ACD	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22016 of JP Patent No. 5903517, 24 pages
	ACE	Search Result of "Image File, Meta Data, Edit", Google.co.jp, printed December 28, 2017, 2 pages
	ACF	"Information Requests, The Internet Archive's Policy for Responding to Information Requests", Archive.org, printed December 28, 2017, https://archive.org/legal/, 2 pages
	ACG	"Standard Affidavit", Archive.org, printed December 28, 2017, https://archive.org/legal/affidavit.php, 1 page
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	APPLICANT: Taiki EDA	
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	AB						
	AC						
	AD						
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		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
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[redacted] Additional References sheet(s) attached

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	ABO	Gree's First Brief, submitted February 16, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 37 pages
	ABP	Supercell's Third Brief, submitted March 23, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 26 pages
	ABQ	Supercell's First Brief, submitted June 25, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 72 pages
	ABR	Supercell's Third Brief, submitted July 18, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 45 pages
	ABS	Gree's Second Brief, submitted September 4, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 8 pages
	ABT	Motion for Preliminary Injunction, submitted March 29, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 31 pages
	ABU	"Internet Archive's Terms of Use, Privacy policy and copyright policy", Archive.org, December 31, 2014, https://archive.org/about/terms.php, 3 pages
	ABV	"Internet News of Stock, Nikkei.com", captured by Wayback Machine, printed October 20, 2017, https://web.archive.org/web/20171017091811/https://nikkei.com/markets/kabu/, 1 page
	ABW	"Internet News of Stock, Nikkei.com", October 17, 2017, https://www.nikkei.com/article/DGXLAS3LTSEC1_X11C17A0000000/, 1 page
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Examiner /MASUD AHMED/	Date Considered

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
LIST OF REFERENCES CITED BY APPLICANT	481331US	15/393,646
	APPLICANT: Taiki EDA	
	FILING DATE: December 29, 2016	GROUP: 3717

		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	ABZ	Hirofumi Tada, Search Report of Wayback Machine, submitted October 20, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 9 pages
	ACA	Ada Lerner et al., Rewriting History: Changing the Archived Web from the Present, published at the 22nd ACM Conference on Computer and Communications Security, printed October 30, 2017, 15 pages
	ACB	Supercell's Second Brief, submitted June 1, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 86 pages
	ACC	Gree's First Brief, submitted June 26, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 21 pages
	ACD	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22016 of JP Patent No. 5903517, 24 pages
	ACE	Search Result of "Image File, Meta Data, Edit", Google.co.jp, printed December 28, 2017, 2 pages
	ACF	"Information Requests, The Internet Archive's Policy for Responding to Information Requests", Archive.org, printed December 28, 2017, https://archive.org/legal/, 2 pages
	ACG	"Standard Affidavit", Archive.org, printed December 28, 2017, https://archive.org/legal/affidavit.php, 1 page
	ACH	"App Statuses", Apple .com, printed October 23, 2017, 3 pages
	ACI	Supercell's Second Brief, submitted June 1, 2018 in Case No. H30 YO 22016 of JP Patent No. 5903517, 78 pages
	ACJ	Gree's First Brief, submitted June 18, 2018 in Case No. H30 YO 22016 of JP Patent No. 5903517, 19 pages
	ACK	Motion for Preliminary Injunction, submitted March 2, 2018 in Case No. H30 YO 22019 of JP Patent No. 5911992, 31 pages
	ACL	Supercell's Second Brief, submitted May 31, 2018 in Case No. H30 YO 22019 of JP Patent No. 5911992, 77 pages
	ACM	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22017 of JP Patent No. 5952946, 23 pages
	ACN	Supercell's First Brief, submitted May 15, 2018 in Case No. H30 YO 22017 of JP Patent No. 5952946, 18 pages
	ACO	Gree's First Brief, submitted July 6, 2018 in Case No. H30 YO 22017 of JP Patent No. 5952946, 27 pages
	ACP	Motion for Preliminary Injunction, submitted April 6, 2018 in Case No. H30 YO 22042 of JP Patent No. 5952947, 31 pages

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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	ACQ	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 22 pages
	ACR	Supercell's Second Brief, submitted May 31, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 74 pages
	ACS	Supercell's Fourth Brief, submitted July 31, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 10 pages
	ACT	Nobuhiko Suzuki, A Report on Operation Check of Clash of Clans as of the Filing Date of the Original Application, submitted July 30, 2018, 9 pages
	ACU	Naoki Okumura, A Report on Operation Check of Clash of Clans, submitted July 31, 2018, 4 pages
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	ACW	"Registration Reopened: Clash of Clans Fan Meet Up #1 - San Francisco", printed July 19, 2018, https://forum.supercell.com/showthread.php/150023-Registration-Reopend-Clash-of-Clans-Fan-Meet-Up-1-San-Francisco, 2 pages
	ACX	"Clash of Clans Meet Up: September 25th!", printed July 19, 2018, https://forum.supercell.com/showthread.php/149458-Clash-of-Clans-Meet-Up-September-25th%21, 4 pages
	ACY	"Clash of Clans: Perfect Translation of Tutorial! Let's get started!", APPBANK.net, June 5, 2013, 19 pages
	ACZ	"Surging Players! Lecture of How to Play "Clash of Clans"", Famitsu.com, June 4, 2013, https://app.famitsu.com/20130604_173029/, 11 pages
	ADA	"Village Edit Mode of Clash of Clans", printed July 5, 2018, http://clashofclans.wikia.com/wiki/Village_Edit_Mode, 4 pages
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	ADC	Supercell's Answer, submitted March 15, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 3 pages
	ADD	Kengo Nakajima, Technology for Online Game, Gijutsu-Hyohron Co., Ltd., ISBN978-4-7741-4580-6 C3055, April 25, 2011, 7 pages (p79-83, cover page, and back cover page)
	ADE	Supercell's Fourth Brief, submitted June 19, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 5 pages
	ADF	Gree's Second Brief, submitted June 29, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 20 pages
	ADG	Supercell's Fifth Brief, submitted July 20, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 45 pages

Examiner /MASUD AHMED/	Date Considered

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Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT Taiki EDA	
	FILING DATE December 29, 2016	GROUP 3717

		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	ADH	Supercell's Petition, submitted July 6, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 5 pages
	ADI	Supercell's First Brief, submitted August 22, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 36 pages
	ADJ	Supercell's Third Brief, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 59 pages
	ADK	Gree's Second Brief, submitted November 8, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 40 pages
	ADL	Supercell's Fourth Brief, submitted November 30, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 8 pages
	ADM	Gree's Third Brief, submitted December 20, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 12 pages
	ADN	Gree's Fourth Brief, submitted February 6, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 11 pages
	ADO	Supercell's Fifth Brief, submitted January 26, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 28 pages
	ADP	Affidavit of Christopher Butler, submitted December 11, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 21 pages
	ADQ	Supercell's Answer, submitted September 7, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 35 pages
	ADR	Supercell's First Brief, submitted October 11, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 44 pages
	ADS	Supercell's Second Brief, submitted November 27, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 18 pages
	ADT	"Executive Profile: Lassi Leppinen", Bloomberg.com, printed October 26, 2017, 2 pages
	ADU	Supercell's Third Brief, submitted January 9, 2018 in Case No. H29 YO 22172 of JP Patent No. 5903518, 28 pages
	ADV	Gree's Seventh Brief, submitted February 16, 2018 in Case No. H29 YO 22172 of JP Patent No. 5903518, 22 pages
	ADW	Supercell's First Brief, submitted August 22, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 35 pages
	ADX	Supercell's Third Brief, submitted October 17, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 49 pages

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		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	ADY	Gree's Second Brief, submitted November 8, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 31 pages
	ADZ	Supercell's Fourth Brief, submitted December 22, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 22 pages
	AEA	Jun Wun Chul, Online Game Programming, Software Publishing Co., ISBN4-7973-2847-9, March 3, 2005, 12 pages (p iii, p iv, p v, p 1-7, cover page and back cover page)
	AEB	Yuichiroh Ohtsuki, Online Programming Class with C: Starting from Fourteen, Rutles Inc., ISBN978-4-89977-240-8, April 10, 2009, 15 pages (p 144-156, cover page and back cover page)
	AEC	Gree's Third Brief, submitted January 19, 2018 in Case No. H29 YO 22043 of JP Patent No. 5953448, 17 pages
	AED	Supercell's First Brief, submitted August 25, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 28 pages
	AEE	Supercell's First Brief, submitted October 13, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 58 pages
	AEF	Gree's Second Brief, submitted November 9, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 26 pages
	AEG	Supercell's Fourth Brief, submitted December 21, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 26 pages
	AEH	Gree's Third Brief, submitted January 22, 2018 in Case No. H29 YO 22042 of JP Patent No. 5903517, 15 pages
	AEI	Supercell's Seventh Brief, submitted February 9, 2018 in Case No. H29 YO 22042 of JP Patent No. 5903517, 15 pages
	AEJ	Supercell's First Brief, submitted July 27, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 29 pages
	AEK	Supercell's Second Brief, submitted September 15, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 54 pages
	AEL	Gree's Third Brief, submitted October 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 26 pages
	AEM	Supercell's Third Brief, submitted October 3, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 14 pages
	AEN	"Wikipedia: Soccer", Wikipedia.org, printed September 25, 2017, https://ja.wikipedia.org/wiki/%E3%82%B5%E3%83%83%E3%82%AB%E3%83%BC, 14 pages
	AEO	Supercell's Fourth Brief, submitted October 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 2 pages

Examiner /MASUD AHMED/	Date Considered

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	FILING DATE: December 29, 2016	GROUP: 3717

		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	AEP	Supercell's Fifth Brief, submitted November 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 21 pages
	AEQ	Gree's Fourth Brief, submitted November 17, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 17 pages
	AER	Supercell's Seventh Brief, submitted December 27, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 17 pages
	AES	Gree's Fifth Brief, submitted February 9, 2018 in Case No. H29 YO 22041 of JP Patent No. 5911992, 19 pages
	AET	Supercell's Answer, submitted September 13, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 33 pages
	AEU	Supercell's First Brief, submitted October 20, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 40 pages
	AEV	Gree's Second Brief, submitted November 17, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 13 pages
	AEW	Supercell's Third Brief, submitted December 26, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 24 pages
	AEX	Gree's Second Brief, submitted February 5, 2018 in Case No. H29 YO 22163 of JP Patent No. 5952946, 25 pages
	AEY	"Terran - StarCraft II: Wings of Liberty Structures", Gamewise, printed January 19, 2018, 2 pages
	AEZ	"Structures - StarCraft II: Wings of Liberty Structures", Gamewise, printed January 19, 2018, https://web.archive.org/web/20130908134452/http://gamewise.co/games/36254/StarCraft-II-Wings-of-Liberty/Structures, 1 page
	AFA	Supercell's Answer, submitted August 30, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 38 pages
	AFB	Supercell's First Brief, submitted October 17, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 52 pages
	AFC	Gree's Second Brief, submitted November 8, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 16 pages
	AFD	Supercell's Fourth Brief, submitted December 26, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 21 pages
	AFE	Gree's Fourth Brief, submitted August 23, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 6 pages
	AFF	Gree's First Brief, submitted September 4, 2018 in Case No. H30 WA 10447 of JP Patent No. 5676032, 11 pages

Examiner /MASUD AHMED/	Date Considered 11/11/2018

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	APPLICANT: Taiki EDA	
	FILING DATE: December 29, 2016	GROUP: 3717

		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	AFG	Japanese Office Action mailed August 21, 2018 in Japanese Patent Application No. 2015-248965 with translation, 6 pages
	AFH	"Shin-Tenmakai - GOC IV, another side -", Dengeki Play Station, Media Works Corporation, number 11, Vol. 10, p196-199, March 11, 2005, section "Point: Make more advantageous Battle Situation, Formation" in p199 with partial English translation, 5 pages
	AFI	Deposition of David Crane, submitted September 4, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594, 162 pages
	AFJ	"Exeter Chess Club, A place to enjoy and learn about chess", printed September 4, 2018, http://exeterchessclub.org.uk/content/new-starting-formations-tabiat, 9 pages
	AFK	"Chess History 1: Shatranj", printed September 4, 2018, https://www.chess.com/clubs/forum/view/chess-history-1-shatranj, 5 pages
	AFL	Petitioner's Reply to Patent Owner's Response, submitted September 4, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594, 32 pages
	AFM	
	AFN	
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	AFP	
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	AFU	
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	AFW	

Examiner /MASUD AHMED/	Date Considered 12/13/2018

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LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Patent Owner's Sur-Reply submitted October 24, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594
	AX	
	AY	
	AZ	

Examiner	/MASUD AHMED/	Date considered	01/06/2019

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		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

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	AA						
	AB						
	AC						
	AD						
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	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

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		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP2012-065831	04/05/2012	Japan (Corresponds to US 2013/0172086)		X
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	AR					
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	AT					
	AU					
	AV					

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	AW	Japanese Office Action issued October 30, 2018 in Patent Application No. 2018-192989, citing references AO and AX herewith (with English Translation)
	AX	"How to Create StarCraft 2 Custom Map", captured by Wayback Machine, printed October 18, 2018, https://web.archive.org/web/20130307210601/http://segmentnext.com:80/2010/10/14/how-to-create-starcraft-2-custom-map/, 5 pages
	AY	
	AZ	

Examiner	/MASUD AHMED/	Date considered	01/06/2019

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Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Teresa Cole
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	240	240
		Total in USD ($)		**240**

Electronic Acknowledgement Receipt

EFS ID:	34592039
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Teresa Cole
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	14-DEC-2018
Filing Date:	29-DEC-2016
Time Stamp:	14:56:08
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$240
RAM confirmation Number	121718INTEFSW00001228150030
Deposit Account	
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New Applications Under 35 U.S.C. 111
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National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-14)
Approved for use through 07/31/2016. OMB 0651-0031
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	15/393,646	Filing Date	2016-12-29	Docket Number (if applicable)	481331US	Art Unit	3717
First Named Inventor	Taiki EDA			Examiner Name	AHMED, MASUD		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, to any international application that does not comply with the requirements of 35 U.S.C. 371, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV.

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☐ Amendment/Reply
- ☒ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☒ Other 2 PTO Forms 1449 citing 4 references.

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FEES

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Signature	/Noah K. Flaks/	Date (YYYY-MM-DD)	2018-12-14
Name	Noah K. Flaks	Registration Number	69541

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(71)出願人　310021766
株式会社ソニー・コンピュータエンタテインメント
東京都港区港南１丁目７番１号
(74)代理人　110000154
特許業務法人はるか国際特許事務所
(72)発明者　池長　俊哉
東京都港区港南一丁目７番１号　株式会社ソニー・コンピュータエンタテインメント内

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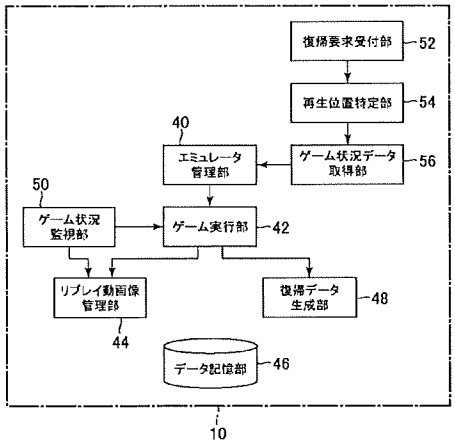
(54)【発明の名称】情報処理システム、情報処理方法、プログラム及び情報記憶媒体

(57)【要約】
【課題】ゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる情報処理システムを提供する。
【解決手段】復帰要求受付部５２が、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、ゲームの実行要求を受け付ける。ゲーム状況データ取得部５６が、動画像の再生位置に関連付けられた、ゲームの状況を示すゲーム状況データを記憶するデータ記憶部４６から、実行要求に対応付けられる再生位置に基づいて特定されるゲーム状況データを取得する。ゲーム実行部４２が、ゲーム状況データ取得部５６が取得するゲーム状況データが示す状況からゲームを実行する。
【選択図】図５



【特許請求の範囲】
【請求項１】
ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段と、
前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に基づいて特定されるゲーム状況データを取得するゲーム状況データ取得手段と、
前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段と、
を含むことを特徴とする情報処理システム。
【請求項２】
前記実行要求受付手段が、既にプレイされたゲームのプレイ内容を表す動画像の再生中に、当該動画像の再生位置に対応付けられる、ゲームの実行要求を受け付ける、
ことを特徴とする請求項１に記載の情報処理システム。
【請求項３】
前記ゲーム状況データ取得手段が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に基づいて特定されるゲーム状況データを取得する、
ことを特徴とする請求項２に記載の情報処理システム。
【請求項４】
前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データの少なくとも一部のうちの、関連付けられている再生位置が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に最も近いゲーム状況データを取得する、
ことを特徴とする請求項３に記載の情報処理システム。
【請求項５】
前記ゲーム状況データ取得手段が、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置が示すタイミング以前である前記記憶手段に記憶されているゲーム状況データのうちのいずれかを取得する、
ことを特徴とする請求項４に記載の情報処理システム。
【請求項６】
前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データのうちの、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていた前記動画像に含まれるフレーム画像の再生位置が示すタイミングから所定の時間だけ遡ったタイミングに最も近いゲーム状況データを取得する、
ことを特徴とする請求項３に記載の情報処理システム。
【請求項７】
前記記憶手段が、前記ゲームの進行段階に対応するゲームステージの開始時におけるゲーム状況データを含んでおり、
前記ゲーム状況データ取得手段が、前記実行要求に対応付けられる再生位置に対応するゲームステージの開始時におけるゲーム状況データを取得する、
ことを特徴とする請求項１から６のいずれか一項に記載の情報処理システム。
【請求項８】
前記ゲームの実行中に、当該実行中のゲームの現況を示す前記ゲーム状況データを生成するゲーム状況データ生成手段、をさらに含む、
ことを特徴とする請求項１から７のいずれか一項に記載の情報処理システム。
【請求項９】
ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付ステップと、

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前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得ステップと、
前記ゲーム状況データ取得ステップにより取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行ステップと、
を含むことを特徴とする情報処理方法。
【請求項１０】
ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段、
前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得手段、
前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段、
としてコンピュータを機能させることを特徴とするプログラム。
【請求項１１】
請求項１０に記載のプログラムを記憶したコンピュータ読み取り可能な情報記憶媒体。
【発明の詳細な説明】
【技術分野】
【０００１】
本発明は、情報処理システム、情報処理方法、プログラム及び情報記憶媒体に関する。
【背景技術】
【０００２】
ユーザにより登録された動画像を配信する動画像配信サイトが存在する（例えば、特許文献１参照）。そして、動画像配信サイトには、テレビゲームをユーザがプレイした内容を表す動画像が数多く登録されているものがある。
【０００３】
そして、テレビゲームをなかなかクリアできないユーザが、動画像配信サイトに登録されている、他のユーザによるプレイが示された動画像を閲覧することにより、そのゲームをクリアするためのヒントを得ることができることがある。また、ユーザが、動画像配信サイトに登録されている動画像に示されているゲームに興味を持ち、そのゲームを購入するということがある。
【先行技術文献】
【特許文献】
【０００４】
【特許文献１】米国特許出願公開第２００８／０２７６２７２号明細書
【発明の概要】
【発明が解決しようとする課題】
【０００５】
ユーザが、動画像配信サイトに登録されている、他のユーザがゲームをプレイした内容を表す動画像を閲覧していると、そのゲームをプレイしてみたくなるということがあり得る。ここで、例えば、ユーザが、閲覧している動画像の再生位置を指定した際に、その再生位置に応じたゲームの状況からそのゲームをプレイすることができるとなると、ユーザはそのゲームをより楽しむことができるようになると思われる。このことは、動画像配信サイトに登録されている動画像に限らず、テレビゲームをユーザがプレイした内容を表す動画像においてあてはまる。
【０００６】
本発明は上記課題に鑑みてなされたものであって、ゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる情報処理システム、情報処理方法、プログラム及び情報記憶媒体を提供することを目的とする。

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【課題を解決するための手段】

【０００７】

上記課題を解決するために、本発明に係る情報処理システムは、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段と、前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に基づいて特定されるゲーム状況データを取得するゲーム状況データ取得手段と、前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段と、を含むことを特徴とする。

【０００８】

また、本発明に係る情報処理方法は、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付ステップと、前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得ステップと、前記ゲーム状況データ取得ステップにより取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行ステップと、を含むことを特徴とする。

【０００９】

また、本発明に係るプログラムは、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段、前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得手段、前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段、としてコンピュータを機能させることを特徴とする。

【００１０】

また、上記のプログラムはコンピュータ読み取り可能な情報記憶媒体に記憶することもできる。

【００１１】

本発明によると、ゲームの実行要求に対応付けられる動画像の再生位置に基づいて特定されるゲーム状況データが示す状況からゲームが実行されるので、ゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる。

【００１２】

本発明の一態様では、前記実行要求受付手段が、既にプレイされたゲームのプレイ内容を表す動画像の再生中に、当該動画像の再生位置に対応付けられる、ゲームの実行要求を受け付けることを特徴とする。こうすれば、既にプレイされたゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる。

【００１３】

また、本発明の一態様では、前記ゲーム状況データ取得手段が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に基づいて特定されるゲーム状況データを取得することを特徴とする。こうすれば、ゲームの実行要求の際に再生されていた場面に応じたゲームの状況からユーザがゲームをプレイすることができる。

【００１４】

この態様では、前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データの少なくとも一部のうちの、関連付けられている再生位置が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に最も近いゲーム状況データを取得してもよい。こうすれば、記憶手段に記憶されているゲーム状況データの少なくとも一部それぞれが示すゲームの状況のうちの、ゲームの実行要求の際に再生されていた場面での状況に最も近い状況からユーザがゲームをプレイすることができる

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【００１５】
また、この態様では、前記ゲーム状況データ取得手段が、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置が示すタイミング以前である前記記憶手段に記憶されているゲーム状況データのうちのいずれかを取得してもよい。こうすれば、ゲームの実行要求の際に再生されていた場面以前のゲームの状況のうちの、ゲームの実行要求の際に再生されていた場面での状況に最も近い状況からユーザがゲームをプレイすることができる。
【００１６】
また、本発明の一態様では、前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データのうちの、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていた前記動画像に含まれるフレーム画像の再生位置が示すタイミングから所定の時間だけ遡ったタイミングに最も近いゲーム状況データを取得することを特徴とする。こうすれば、ゲームの実行要求の際に再生されていた場面から所定の時間だけ遡った場面でのゲームの状況に最も近い状況からユーザがゲームをプレイすることができる。
【００１７】
また、本発明の一態様では、前記記憶手段が、前記ゲームの進行段階に対応するゲームステージの開始時におけるゲーム状況データを含んでおり、前記ゲーム状況データ取得手段が、前記実行要求に対応付けられる再生位置に対応するゲームステージの開始時におけるゲーム状況データを取得することを特徴とする。こうすれば、ゲームの実行要求に対応付けられる再生位置に対応するゲームステージのはじめからユーザがゲームをプレイすることができる。
【００１８】
また、本発明の一態様では、前記ゲームの実行中に、当該実行中のゲームの現況を示す前記ゲーム状況データを生成するゲーム状況データ生成手段、をさらに含むことを特徴とする。こうすれば、実行中のゲームの現況を示すゲーム状況データが生成される。
【図面の簡単な説明】
【００１９】
【図１】本実施形態に係るコンピュータネットワークの全体構成の一例を示す図である。
【図２】ゲーム画面の一例を示す図である。
【図３】リプレイ動画像表示画面の一例を示す図である。
【図４】本実施形態に係るクラウドサービスとクライアントとの関係の一例を示す概念図である。
【図５】本実施形態に係るクラウドサービスで実現される機能の一例を示す機能ブロック図である。
【図６】復帰データの一例を示す図である。
【発明を実施するための形態】
【００２０】
以下、本発明の一実施形態について図面に基づき詳細に説明する。
【００２１】
図１は、本発明の一実施形態に係るコンピュータネットワークの全体構成の一例を示す図である。図１に示すように、インターネットなどのコンピュータネットワーク１６には、いずれもコンピュータを中心に構成されたクラウドサービス１０、動画像管理システム１２、クライアント１４（１４－１～１４－ｎ）、が接続されている。そして、クラウドサービス１０、動画像管理システム１２、クライアント１４は、互いに通信可能になっている。
【００２２】
クライアント１４は、クラウドサービス１０や動画像管理システム１２のユーザが利用するコンピュータであり、例えば、パーソナルコンピュータ、ゲームコンソール、テレビ

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受像器、携帯型ゲーム装置、携帯情報端末、などである。そして、クライアント１４は、例えば、ＣＰＵ等の制御装置、ＲＯＭやＲＡＭ等の記憶素子やハードディスクドライブ等の記憶装置、ディスプレイ、スピーカ等の出力装置、ゲームコントローラ、タッチパッド、マウス、キーボード、マイク等の入力装置、ネットワークボード等の通信装置、ＤＶＤ－ＲＯＭやＢｌｕ－ｒａｙ（登録商標）ディスクなどの光ディスク（コンピュータ読み取り可能な情報記憶媒体）を読み取る光ディスクドライブ、等を備えている。

【００２３】

また、本実施形態に係るクライアント１４は、ウェブブラウザ及びクラウドサービス１０用のプラグインプログラムが予めインストールされており、これらのアプリケーションプログラムが実行される。クライアント１４は、ウェブブラウザを通じてクラウドサービス１０や動画像管理システム１２が提供する各種サービスを受ける。クラウドサービス用プラグインプログラムの詳細については後述する。

【００２４】

動画像管理システム１２は、例えば、クライアント１４やクラウドサービス１０から受け付ける動画像を登録したり、クライアント１４からの要求に応じてクライアント１４に動画像の配信を行ったりするコンピュータシステムである。

【００２５】

クラウドサービス１０は、例えば、本発明の一実施形態に係る情報処理システムとして機能する分散コンピューティング環境であり、互いに通信可能に接続されている複数台のＷｅｂアプリケーションサーバ、複数台のデータベースサーバ、複数台のストレージデバイス、などを含んで構成されている。クラウドサービス１０に含まれるサーバは、例えば、ＣＰＵ等の制御部、ＲＯＭやＲＡＭ等の記憶素子やハードディスクドライブなどである記憶部、ネットワークボードなどの通信インタフェースである通信部、を含んで構成されている。これらの要素は、バスを介して接続される。

【００２６】

クラウドサービス１０を利用するクライアント１４は、クラウドサービス１０内に存在するサーバやストレージデバイスなどのリソースの所在を特に意識することなく、クラウドサービス１０が提供する各種サービスを利用することができる。

【００２７】

本実施形態では、クライアント１４が、ウェブブラウザを通じてクラウドサービス１０にアクセスし、ユーザＩＤ及びパスワードを入力してから、その後に所定のＵＲＬにアクセスすると、クライアント１４のディスプレイに所定のＵＲＬに対応する画面が表示される。なお、ユーザＩＤ及びパスワードを入力した後は、クラウドサービス１０は、例えば、クッキーを参照することによりクライアント１４を利用するユーザのユーザＩＤを特定することができるようになっている。

【００２８】

本実施形態では、例えば、あるユーザ（ユーザＡ）がクライアント１４からシューティングゲームの開始要求をクラウドサービス１０に送信すると、クラウドサービス１０はそのゲームの実行を開始する。そして、このゲームが実行されている間、クラウドサービス１０は、このゲームのプレイ内容を表すフレーム画像を、順次、ユーザＡのクライアント１４にストリーミング配信する。そして、ユーザＡのクライアント１４のディスプレイにはブラウザを介してこのフレーム画像が順次表示される。以下、このようにして順次ストリーミング配信されるフレーム画像群から構成される動画像を実況動画像と呼ぶこととする。ユーザＡは、実況動画像を見ながら、ゲームコントローラのボタンを押下するなどしてゲームを楽しむことができる。

【００２９】

図２に、ユーザＡのクライアント１４のディスプレイに表示されるゲーム画面２０の一例を示す。ゲーム画面２０には、上述の実況動画像が表示される。本実施形態では、ゲーム画面２０に、シューティングゲームにおいてプレイヤが操作する戦闘機等を表すプレイヤオブジェクト２２、プレイヤオブジェクト２２から発射される弾丸を表す弾丸オブジェ

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クト２４、プレイヤオブジェクト２２が倒すべき敵を表す敵オブジェクト２６が含まれている。ユーザＡは、ゲームコントローラのボタンを押下するなどの、キー入力を行うことにより、シューティングゲームにおけるプレイヤオブジェクト２２の移動や弾丸オブジェクト２４の発射等の操作を行うことができる。ユーザＡは、迫り来る敵オブジェクト２６をかわしながら、敵オブジェクト２６に向けて弾丸オブジェクト２４を発射して、敵オブジェクト２６を倒していく。

【００３０】

本実施形態では、上述のシューティングゲームは、ゲームの進行段階に対応する複数のゲームステージから構成されている。そして、ユーザＡがゲームステージをクリアする、あるいは、ゲームオーバーとなる、などのイベントが発生した際に、クラウドサービス１０は、そのゲームステージの開始時点からイベント発生時点までのゲームのプレイ内容を表す動画像（以下、この動画像をリプレイ動画像と呼ぶこととする。）を動画像管理システム１２に登録する。このようにして、本実施形態では、既にユーザＡによりプレイされたシューティングゲームのプレイ内容を表すリプレイ動画像が動画像管理システム１２に登録される。そして、別のユーザ（ユーザＢ）がクライアント１４から動画像管理システム１２にこのリプレイ動画像の再生要求を送信すると、動画像管理システム１２は、このリプレイ動画像をユーザＢのクライアント１４にストリーミング配信する。

【００３１】

図３に、ユーザＢのクライアント１４のディスプレイに表示されるリプレイ動画像表示画面２８の一例を示す。リプレイ動画像表示画面２８には、上述のリプレイ動画像が表示される。また、リプレイ動画像表示画面２８には、リプレイ動画像の再生位置に応じた状況への復帰（リプレイ動画像の再生位置に応じた状況からのゲームの実行）を要求するための復帰リンク３０が含まれている。また、リプレイ動画像表示画面２８には、動画像の再生を制御するための各種ボタン及び動画像が再生されるに従って左から右へ移動するノブ３２が配置されている。リプレイ動画像の再生中にユーザＢが復帰リンク３０をクリックすると、クライアント１４は、この再生位置に応じた状況からのゲームの実行要求をクラウドサービス１０に送信する。すると、クラウドサービス１０は、この状況からのゲームの実行を開始する。そして、このゲームが実行されている間、クラウドサービス１０は、このゲームのプレイ内容を表す実況動画像をユーザＢのクライアント１４にストリーミング配信する。そして、ユーザＢのクライアント１４では、図２と同様のゲーム画面２０が表示されることとなる。そして、ユーザＢは、このゲームを、ユーザＢが指定した再生位置に応じた状況から楽しむことができる。

【００３２】

図４は、本実施形態に係るクラウドサービス１０とクライアント１４との関係の一例を示す概念図である。本実施形態に係るクラウドサービス１０では、例えば、管理プロセス３４、サービス提供プロセス３６、エミュレータ３８が実行される。また、クラウドサービス１０に含まれるストレージデバイス等の記憶装置には、予め、各種ゲームプログラムのイメージファイルが記憶されている。ゲームプログラムには、ゲームの識別子であるゲームＩＤが関連付けられている。

【００３３】

サービス提供プロセス３６は、例えば、クラウドサービス１０に含まれるサーバが、ショッピングサイトやＳＮＳ（Social Networking Service）等、クラウドサービス１０が提供する種々のサービスを実現するプログラムを起動することで生成されるプロセスである。

【００３４】

管理プロセス３４は、例えば、クラウドサービス１０に含まれるサーバが、クラウドサービス１０に含まれるサーバやストレージデバイスにインストールされている管理プログラムを起動することで生成されるプロセスであり、エミュレータ３８の所在管理処理、エミュレータ３８の起動処理及び停止処理、クライアント１４からの要求に応じたクライアント１４とエミュレータ３８との接続処理及び切断処理、などを実行する。

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【００３５】
エミュレータ３８は、例えば、クラウドサービス１０に含まれるサーバやストレージデバイスに記憶されているゲームプログラムを実行するための仮想マシンとして機能するプロセスである。エミュレータ３８は、管理プロセス３４が、クライアント１４からの要求に応じて、クラウドサービス１０に含まれるサーバやストレージデバイスにインストールされているエミュレータプログラムを起動することにより生成される。そして、管理プロセス３４は、クライアント１４からの要求に応じて、クライアント１４により指定されたゲームプログラムのイメージファイルを読み込み、エミュレータ３８にロードする。このことによって、エミュレータ３８上でゲームプログラムが実行されることとなる。なお、エミュレータ３８が、クライアント１４により指定されたゲームプログラムを自プロセスにロードするようにしてもよい。
【００３６】
また、エミュレータ３８は、例えば、クライアント１４や管理プロセス３４からの要求に応じて、エミュレータ３８が管理しているエミュレートされたメモリイメージやレジスタ（例えば、プログラムカウンタ等）、エミュレータ３８上で動作するゲームプログラムによる入出力アクセスログ、エミュレータ３８上で実行されるＣＰＵ命令やＧＰＵ命令のログなどを出力する。
【００３７】
本実施形態では、図４に示すように、１つのエミュレータ３８を１つのクライアント１４が専有することができる（ゲームプログラムＰ１参照）。また、１つのエミュレータ３８に対して複数のクライアント１４が接続可能となっている（ゲームプログラムＰ２参照）。また、１つのエミュレータ３８上で複数のゲームプログラムが実行可能となっている（ゲームプログラムＰ３、Ｐ４参照）。
【００３８】
また、本実施形態では、図４に示すように、クライアント１４にエミュレータプログラムがインストールされている場合は、管理プロセス３４は、クライアント１４からの要求に応じて、クライアント１４にエミュレータ３８の起動指示や停止指示を出力する。クライアント１４は、管理プロセス３４から受け付ける起動指示に応じて、クライアント１４にインストールされているエミュレータプログラムを起動する。また、クライアント１４は、管理プロセス３４から受け付ける停止指示に応じて、実行中のエミュレータ３８を停止する。そして、クライアント１４に記憶されているゲームプログラムをクライアント１４で実行されているエミュレータ３８で実行することもできるようになっている（ゲームプログラムＰ５参照）。また、クライアント１４で実行されているエミュレータ３８に対して他のクライアント１４から接続できるようになっている（ゲームプログラムＰ６参照）。
【００３９】
図５は、本実施形態に係るクラウドサービス１０で実現される機能の一例を示す機能ブロック図である。なお、図５には、以下の説明と特に関係がある機能が示されているにすぎず、本実施形態に係るクラウドサービス１０では、図５に示す機能以外の機能も実現されている。図５に示すように、本実施形態に係るクラウドサービス１０は、機能的には、例えば、エミュレータ管理部４０、ゲーム実行部４２、リプレイ動画像管理部４４、データ記憶部４６、復帰データ生成部４８、ゲーム状況監視部５０、復帰要求受付部５２、再生位置特定部５４、ゲーム状況データ取得部５６、を含んで構成される。データ記憶部４６は、例えば、クラウドサービス１０に含まれるサーバに含まれるメモリやハードディスクドライブ、ストレージデバイス、などといった記憶装置を主として実現される。また、ゲーム実行部４２は、例えば、エミュレータ３８で実現される機能に対応する。その他の要素は、例えば、管理プロセス３４で実現される機能に対応する。
【００４０】
クラウドサービス１０は、上述のようにコンピュータを中心に構成されており、プログラムを実行することにより、図５に示す各機能要素が実現されるようになっている。また

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、このプログラムは、例えば、ＣＤ－ＲＯＭ、ＤＶＤ－ＲＯＭなどのコンピュータ読み取り可能な情報記憶媒体を介して、あるいは、インターネットなどの通信ネットワークを介してクラウドサービス１０に供給される。

【００４１】

エミュレータ管理部４０は、本実施形態では、例えば、クライアント１４からの要求に応じてエミュレータ３８を起動したり停止したりする。また、エミュレータ管理部４０は、クライアント１４からの要求に応じた、クライアント１４とエミュレータ３８との接続処理及び切断処理を実行する。また、エミュレータ管理部４０は、起動したエミュレータ３８へのゲームプログラムのイメージファイルのロードも行う。また、エミュレータ管理部４０は、エミュレータ３８の所在管理処理も実行する。

【００４２】

ゲーム実行部４２は、本実施形態では、例えば、エミュレータ３８にロードされたゲームプログラムを実行する。

【００４３】

本実施形態では、例えば、ユーザＡがクライアント１４からシューティングゲームの開始要求をクラウドサービス１０に送信すると、クラウドサービス１０のエミュレータ管理部４０が、この開始要求に応じて、エミュレータ３８を起動し、起動したエミュレータ３８にシューティングゲームのイメージファイルをロードする。そして、ゲーム実行部４２が、ロードされたシューティングゲームを開始する。

【００４４】

ゲーム実行部４２は、本実施形態では、シューティングゲームの開始以降、所定のゲーム更新時間（例えば、１／６０秒）毎に、ゲームの状況を示すゲーム状況データを更新するゲーム状況データ更新処理、更新後のゲーム状況データに基づいてゲームのプレイ内容を表すフレーム画像を生成するフレーム画像生成処理、生成されたフレーム画像をクライアント１４に送信するフレーム画像送信処理、の順に、これら３つの処理を実行する。すなわち、ゲーム実行部４２は、ゲーム更新時間間隔で、上述の３つの処理を順次実行するという処理を繰り返し実行する。

【００４５】

本実施形態では、ゲーム実行部４２は、ゲーム状況更新処理において、例えば、プレイヤオブジェクト２２、弾丸オブジェクト２４、敵オブジェクト２６、それぞれの位置や向きを示すゲーム状況データを更新する処理を実行する。また、本実施形態では、ゲーム実行部４２は、ゲーム状況更新処理において、更新後のオブジェクト間の衝突判定処理や、衝突判定結果に基づく、ゲームステージクリア判定処理、ミス判定処理なども併せて実行する。

【００４６】

また、本実施形態では、ゲーム実行部４２は、フレーム画像生成処理において、例えば、更新後のオブジェクト群の位置や向きを示すゲーム状況データに基づいてフレーム画像を生成する処理を実行する。また、本実施形態では、ゲーム実行部４２は、フレーム画像送信処理において、例えば、生成されたフレーム画像を生成時刻順に順序付けられているフレーム画像の識別子であるフレームＩＤに関連付けてクライアント１４に送信する。

【００４７】

本実施形態では、クライアント１４は、クラウドサービス１０から順次送信されるフレーム画像を受信する。そして、クライアント１４は、受信したフレーム画像が含まれるゲーム画面２０をディスプレイに表示出力する。本実施形態では、クライアント１４は、関連付けられているフレームＩＤ順にフレーム画像を表示出力する。そして、表示出力されるフレーム画像は、順次更新される。このようにして、実況動画像がクラウドサービス１０からクライアント１４へストリーミング配信される。

【００４８】

また、本実施形態では、ゲームの実行中に、クライアント１４が、ユーザによるボタンの押下などのキー入力を受け付けた際に、入力に応じたキー情報（例えば、押下されたボ

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タンの種別を示す信号）を、クラウドサービス１０に送信する。そして、クラウドサービス１０のゲーム実行部４２は、このキー情報に応じたゲーム状況データの更新（例えば、押下されたボタンが示す方向へのプレイヤオブジェクト２２の移動、プレイヤオブジェクト２２からの弾丸オブジェクト２４の発射等）を実行する。

【００４９】

リプレイ動画像管理部４４は、本実施形態では、例えば、ゲーム実行部４２がフレーム画像を生成した際に、そのフレーム画像を、生成時刻順に順序付けられているフレーム画像の識別子であるフレームＩＤに関連付けてデータ記憶部４６に出力する。

【００５０】

復帰データ生成部４８は、本実施形態では、例えば、所定の復帰データ生成間隔（例えば、５秒間隔）で、リプレイ動画像の再生位置に応じた状況への復帰（リプレイ動画像の再生位置に応じた状況からのゲームの実行）に用いられる復帰データ５８を生成して、データ記憶部４６に出力する（図６参照）。図６は、復帰データ５８の一例を示す図である。本実施形態では、復帰データ生成部４８は、ゲームステージが開始される際に、そのゲームステージの開始時点の復帰データ５８を生成して、データ記憶部４６に出力する。そのため、データ記憶部４６には、ゲームステージの開始時における復帰データ５８が記憶されることとなる。図６に示すように、復帰データ５８は、例えば、上述のリプレイ動画像の識別子である動画像ＩＤと、プレイされているゲームの識別子であるゲームＩＤと、ゲームステージの開始時点からの経過時間を示す経過時間データと、そのときのゲームの状況を示すゲーム状況データ（図６には、本実施形態におけるゲーム状況データの一例として、経過時間データに対応する時点における、シューティングゲームを実行しているエミュレータ３８が管理しているメモリイメージの内容やレジスタの値を示すスナップショットデータが示されている。）と、を含んでいる。復帰データ５８に含まれる経過時間データによって、復帰データ５８とリプレイ動画像に含まれるフレーム画像とは関連付けられていることとなる。

【００５１】

本実施形態では、復帰データ生成部４８は、復帰データの生成タイミングが到来した際に、その時点におけるエミュレータ３８のメモリイメージの内容やレジスタの値を取得する。そして、復帰データ生成部４８は、リプレイ動画像の識別子である動画像ＩＤと、プレイされているゲームの識別子であるゲームＩＤと、ゲームステージの開始時点から復帰データの生成タイミングまでの時間を示す経過時間データと、取得した内容に対応するスナップショットデータと、を含む復帰データ５８を生成する。

【００５２】

このようにして、本実施形態では、ゲーム実行部４２が実況動画像をクライアント１４にストリーミング配信している際に、同時進行で、リプレイ動画像管理部４４によるフレーム画像のデータ記憶部４６への出力、及び、復帰データ生成部４８による復帰データ５８の生成出力が行われることとなる。また、本実施形態では、ゲームの実行中に、その実行中のゲームの現況を示すスナップショットデータが順次生成されることとなる。

【００５３】

ゲーム状況監視部５０は、例えば、ゲーム実行部４２が実行しているシューティングゲームのゲーム処理の進行状況を監視する。本実施形態では、予め、各ゲームステージの終了時点のフレーム画像、及び、ゲームオーバー時点のフレーム画像がデータ記憶部４６に記憶されている。以下、これらのフレーム画像を判定画像と呼ぶこととする。本実施形態では、ゲーム状況監視部５０は、例えば、ゲーム実行部４２により生成されるフレーム画像を監視する。そして、ゲーム状況監視部５０は、公知の画像処理技術を用いて、監視されたフレーム画像と、データ記憶部４６に記憶されているいずれかの判定画像とが一致していることを確認した際に、ゲームステージが終了した、又は、ゲームオーバーとなったということを判定する。このようにして、本実施形態では、ゲームステージの終了時点やゲームオーバー時点を検出することができるようになっている。

【００５４】

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そして、本実施形態では、ゲーム状況監視部５０は、ゲームステージが終了した際、及び、ゲームオーバーとなった際に、リプレイ動画像管理部４４にその旨を通知する。すると、リプレイ動画像管理部４４は、この通知を受け付けた際に、それまでにデータ記憶部４６に出力された、そのゲームステージの開始時点から上述の通知を受け付けた時点までの１又は複数のフレーム画像、及び、上述の動画像ＩＤが含まれるリプレイ動画像を生成する。このリプレイ動画像に含まれるフレーム画像はフレームＩＤに関連付けられている。

【００５５】

そして、リプレイ動画像管理部４４は、リプレイ動画像を動画像管理システム１２に送信する。すると、動画像管理システム１２はこのリプレイ動画像を受信して、動画像管理システム１２に含まれるハードディスクドライブ等の記憶装置に出力する。このようにして、リプレイ動画像が動画像管理システム１２に登録される。

【００５６】

本実施形態では、動画像管理システム１２は、ユーザＢのクライアント１４から、検索条件となる文字列を受け付けた際に、その検索条件に合致するリプレイ動画像の概要の一覧画面（図示せず）を生成して、ユーザＢのクライアント１４に送信する。そして、ユーザＢのクライアント１４は、この一覧画面を受信して、ディスプレイに表示出力する。そして、ユーザＢが一覧画面のうちから上述のリプレイ動画像の概要が示されている部分をクリックすると、ユーザＢのクライアント１４は、このリプレイ動画像の再生要求を動画像管理システム１２に送信する。そして、動画像管理システム１２は、この再生要求を受信する。そして、動画像管理システム１２は、この再生要求に応じて、対応するリプレイ動画像に対応するリプレイ動画像表示画面２８を生成して、ユーザＢのクライアント１４に送信するとともに、リプレイ動画像のストリーミング配信を開始する。

【００５７】

本実施形態では、ユーザＢのクライアント１４は、リプレイ動画像表示画面２８を動画像管理システム１２から受信した際に、ユーザＢのクライアント１４にインストールされているクラウドサービス１０用のプラグインプログラムがクラウドサービス１０に対して、受信したリプレイ動画像の動画像ＩＤを送信して、受信したリプレイ動画像に対応する復帰データ５８が存在するか否かを問い合わせる。そして、復帰データ５８が存在する旨をクラウドサービス１０から受信すると、プラグインプログラムが、図３に示すように、リプレイ動画像表示画面２８内に、復帰リンク３０を埋め込む。

【００５８】

ユーザＢが、リプレイ動画像表示画面２８に配置されている、再生、スロー再生、早送り、巻き戻し、一時停止、等の、動画像の再生を制御するためのボタンをクリックすると、クライアント１４は、対応する信号を動画像管理システム１２に送信する。すると、動画像管理システム１２は、この信号を受信して、信号に応じた動画像の再生制御を行う。また、ユーザＢが、マウス等を用いてノブ３２を移動する操作を実行すると、クライアント１４は、移動後の位置に対応する再生位置を示す信号を動画像管理システム１２に送信する。そして、動画像管理システム１２は、この信号が示す再生位置からのリプレイ動画像の再生を行う。

【００５９】

ここで、リプレイ動画像の再生中に、ユーザＢが復帰リンク３０をクリックすると、クライアント１４は、再生されているリプレイ動画像の動画像ＩＤと再生時点のフレーム画像のフレームＩＤとの組合せに関連付けられた、そのフレーム画像に対応する状況への復帰要求（すなわち、そのフレーム画像に対応する状況からのゲームの実行要求）であるゲーム復帰要求をクラウドサービス１０に送信する。すると、クラウドサービス１０の復帰要求受付部５２が、このゲーム復帰要求を受け付ける。

【００６０】

そして、再生位置特定部５４は、受け付けた動画像ＩＤ、及び、フレームＩＤに基づいて、復帰リンク３０がクリックされた時点におけるそのリプレイ動画像の再生位置（例え

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ば、ゲームステージの開始時点からの経過時間やフレーム数等）を特定する。そして、再生位置特定部５４は、このゲーム復帰要求に関連付けられている動画像ＩＤに基づいて、プレイされているゲームを特定する。また、再生位置特定部５４は、ゲームステージの開始時点から、復帰要求受付部５２が受け付けたゲーム復帰要求に関連付けられているフレームＩＤのフレーム画像が再生されたタイミングまでの時間（以下、復帰時経過時間と呼ぶ。）もしくは復帰時経過時間よりも短い時間を示し、かつ、復帰時経過時間に最も近い時間を示す経過時間データに関連付けられているスナップショットデータを特定する。

【００６１】

そして、ゲーム状況データ取得部５６が、本実施形態では、例えば、再生位置特定部５４により特定されたスナップショットデータを取得する。そして、エミュレータ管理部４０が、新規のエミュレータ３８を起動するとともに、ユーザＢのクライアント１４とこのエミュレータ３８との接続処理を実行する。そして、エミュレータ管理部４０が、再生位置特定部５４により特定されたゲームのイメージファイルをこのエミュレータ３８にロードする。そして、ゲーム実行部４２が、スナップショットデータが示す状況からのシューティングゲームの実行を開始する。ゲーム実行部４２は、具体的には、例えば、ゲーム状況データ取得部５６が取得したスナップショットデータに応じた、シューティングゲームを実行しているエミュレータ３８が管理しているメモリイメージの内容やレジスタの値の設定を行った上で、上述のシューティングゲームの実行を開始する。このようにして、そして、ユーザＢは、ユーザＢのクライアント１４で、復帰リンク３０がクリックされたタイミングでのリプレイ動画像の再生位置に応じた状況から開始されるシューティングゲームを楽しむことができる。

【００６２】

なお、本発明は上述の実施形態に限定されるものではない。

【００６３】

例えば、ゲーム状況データ取得部５６が、復帰時経過時間から、所定の時間（例えば、１分）だけ遡った時間に最も近い時間を示す経過時間データに関連付けられているスナップショットデータを取得するようにしてもよい。こうすれば、例えば、復帰リンク３０をクリックしたタイミングから少し遡ったタイミングにおける状況からゲームを開始するということができることとなる。

【００６４】

また、例えば、復帰要求受付部５２がゲーム復帰要求を受け付けた際に、ゲームステージの最初からゲームを開始したいか、ゲーム復帰要求を受け付けた際に再生されていたフレーム画像により表されている場面付近からゲームを開始したいかの選択を促す選択画面（図示せず）を出力してもよい。そして、クライアント１４が、後者の選択肢をクラウドサービス１０に送信した際には、再生位置特定部５４が、復帰時経過時間以下の時間を示し、かつ、復帰時経過時間に最も近い時間を示す経過時間データに関連付けられているスナップショットデータを特定し、前者の選択肢をクラウドサービス１０に送信した際には、ゲーム復帰要求に対応するゲームステージの開始時点のスナップショットデータを特定するようにしてもよい。

【００６５】

また、例えば、再生位置特定部５４は、受け付けたゲーム復帰要求に関連付けられているフレームＩＤのフレーム画像が示すタイミング以前、以後に関わらず、復帰時経過時間に最も近い経過時間を示す経過時間データに関連付けられているスナップショットデータを特定するようにしてもよい。

【００６６】

また、例えば、クラウドサービス１０が、受け付けたゲーム復帰要求に応じて、プレイされているゲーム、及び、スナップショットデータを特定した後で、このゲームのゲームＩＤ及びスナップショットデータに関連付けられたエミュレータ３８の起動指示をクライアント１４に送信してもよい。そして、クライアント１４がこの起動指示を受信して、エミュレータ３８を起動してもよい。そして、クライアント１４が、クライアント１４のハ

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ードディスクドライブ等に記憶されている、受信したゲームＩＤに対応するゲームプログラムのイメージファイルをエミュレータ３８にロードしてもよい。そして、クライアント１４が、受信したスナップショットデータに応じたエミュレータの設定を行って、エミュレートされたゲームを開始してもよい。なお、クライアント１４は、ハードディスクドライブ等に記憶されているイメージファイルの代わりに、光ディスクに記録されたゲームプログラムを光ディスクドライブから読み込んでエミュレータ３８にロードしてもよい。

【００６７】

また、例えば、クラウドサービス１０が、ユーザＢのクライアント１４から、ユーザＡの実況動画像の配信要求を受け付けた際に、ユーザＢのクライアント１４とユーザＡがプレイしているゲームがロードされているエミュレータ３８とを接続するようにしてもよい。そして、クラウドサービス１０が、ユーザＡのクライアント１４にストリーミング配信している実況動画像をユーザＢのクライアント１４にも配信するようにしてもよい。その後、クラウドサービス１０が、ユーザＢのクライアント１４から、ゲーム復帰要求を受け付けた際に、その時点における実況動画像の再生位置に基づいて復帰データ５８を特定してもよい。そして、クラウドサービス１０が、新規のエミュレータ３８を起動して、起動したエミュレータ３８に、特定された復帰データ５８に含まれるゲームＩＤに対応するゲームプログラムをロードしてもよい。そして、クラウドサービス１０が、ユーザＢのクライアント１４とユーザＡがプレイしているゲームがロードされているエミュレータ３８との接続を切断して、ユーザＢのクライアント１４とこの新規のエミュレータ３８とを接続してもよい。そして、ゲーム実行部４２が、特定された復帰データ５８に含まれるスナップショットデータに応じたエミュレータ３８の設定を行った上で、ゲームの実行を開始してもよい。

【００６８】

また、例えば、クライアント１４による、クラウドサービス１０から配信されている実況動画像、又は、リプレイ動画像の再生中に、クライアント１４が、再生されている動画像の動画像ＩＤと再生時点のフレーム画像のフレームＩＤとの組合せに関連付けられた、ブックマーク要求をクラウドサービス１０に送信してもよい。そして、クラウドサービス１０が、このブックマーク要求を受け付けた際に、動画像の配信を中止せず、受け付けたブックマーク要求に関連付けられている、動画像ＩＤとフレームＩＤとの組合せをブックマークデータとしてデータ記憶部４６に出力するようにしてもよい。そして、クラウドサービス１０が、クライアント１４からの要求に応じて、ブックマークデータの一覧をクライアント１４に送信するようにしてもよい。そして、クライアント１４がブックマークデータの一覧をディスプレイに表示出力してもよい。ここで、クライアント１４が、ユーザにより一覧の中から選択されたブックマークデータをクラウドサービス１０に送信したら、クラウドサービス１０が、このブックマークデータに対応するゲーム及びスナップショットデータを特定して、特定された状況からのシューティングゲームの実行を開始するようにしてもよい。なお、クラウドサービス１０は、ブックマーク要求を受け付けた際には要求元のユーザに対する課金処理を実行せずに、シューティングゲームの実行要求を受け付けた際に要求元のユーザに対する課金処理を実行するようにしてもよい。

【００６９】

また、この場合において、クライアント１４が実況動画像を再生している際には、クラウドサービス１０が、ブックマーク要求の受付をトリガとして、リプレイ動画像管理部４４によるフレーム画像のデータ記憶部４６への出力、及び、復帰データ生成部４８による復帰データの生成・出力を開始するようにしてもよい。

【００７０】

また、例えば、復帰要求受付部５２がゲーム復帰要求を受け付けた際に、ゲームの実行を開始するか否かを確認する画面をクライアント１４に送信してもよい。そして、復帰要求受付部５２がゲームの実行を開始する旨をクライアント１４から受け付けてはじめて、再生位置特定部５４が、復帰リンク３０がクリックされた時点におけるそのリプレイ動画像の再生位置を特定するようにしてもよい。

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【００７１】
また、例えば、クラウドサービス１０が、上述の動画像管理システム１２が提供するサービスを提供するようにしてもよい。また、クラウドサービス１０が、クライアント１４から受け付けるキー情報をその受け付けたタイミングを示すデータと関連付けてキーログとしてデータ記憶部４６に出力してもよい。そして、リプレイ動画像管理部４４が、キーログに基づいてリプレイ動画像に含まれる各フレーム画像を生成して、クライアント１４にストリーミング配信するようにしてもよい。
【００７２】
また、例えば、データ記憶部４６には、予め、判定画像の代わりに、ゲームステージの終了時点や、ゲームオーバー時点における、エミュレータ３８が管理しているエミュレートされたメモリイメージの内容やレジスタの値が記憶されていてもよい。そして、ゲーム状況監視部５０が、エミュレータ３８が管理しているエミュレートされたメモリイメージの内容やレジスタの値を監視して、その監視結果とデータ記憶部４６に記憶されている上述のデータとの比較結果に基づいて、ゲームステージの終了時点やゲームオーバー時点を検出するようにしてもよい。
【００７３】
また、例えば、リプレイ動画像管理部４４が、リプレイ動画像を生成する際に、ユーザＡのクライアント１４から、リプレイ動画像を生成するフレーム画像の範囲を指定する情報を受け付けてもよい。そして、リプレイ動画像管理部４４は、指定された範囲のフレーム画像を含んで構成されるリプレイ動画像を生成してもよい。そして、リプレイ動画像管理部４４は、指定された範囲外のフレーム画像に対応する復帰データ５８をデータ記憶部４６から削除するようにしてもよい。
【００７４】
また、例えば、動画像ＩＤが、復帰データ５８が存在するか否かを示す情報を含んでいてもよい。そして、ユーザＢのクライアント１４が、リプレイ動画像表示画面２８を動画像管理システム１２から受信した際に、ユーザＢのクライアント１４にインストールされているクラウドサービス１０用のプラグインプログラムが、受信したリプレイ動画像の動画像ＩＤに基づいて、このリプレイ動画像に対応する復帰データ５８が存在するか否かを判定してもよい。そして、プラグインプログラムは、リプレイ動画像に対応する復帰データ５８が存在すると判定した場合に、リプレイ動画像表示画面２８内に、復帰リンク３０を埋め込むようにしてもよい。
【００７５】
また、リプレイ動画像の再生中に、ユーザＢが復帰リンク３０をクリックし、クライアント１４がゲーム復帰要求をクラウドサービス１０に送信した際に、クラウドサービス１０が、このリプレイ動画像に対応する復帰データ５８が存在するか否かを確認してもよい。そして、復帰データ５８が存在する場合に、上述のように、再生位置特定部５４が、プレイされているゲームの特定、及び、スナップショットデータの特定を行ってもよい。
【００７６】
また、例えば、ユーザＡが、自らがプレイしたプレイ内容を表すリプレイ動画像が再生されているリプレイ動画像表示画面２８の閲覧中に、ユーザＡが復帰リンク３０をクリックしてもよい。この場合、ユーザＡのクライアント１４は、この再生位置に対応するゲーム復帰要求をクラウドサービス１０に送信する。そして、クラウドサービス１０は、ゲーム復帰要求に応じた状況からのゲームの実行を開始して、そのゲームのプレイ内容を表す実況動画像をユーザＡのクライアント１４にストリーミング配信する。こうすれば、例えば、ユーザＡが、自らがプレイした内容を表すリプレイ動画像を見ていて、再度そのゲームを楽しみたくなったときなどに、自らが指定した再生位置に応じた状況からそのゲームを楽しむことができる。
【００７７】
また、例えば、ゲーム状況データは、例えば、ゲームにおけるパラメータやステータスを示すデータでもよい。また、動画像ＩＤが、上述のようなリプレイ動画像に含まれるメ

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タ情報ではなく、リプレイ動画像に関連付けられている属性データであってもよい。また、例えば、クラウドサービス１０で実現されている機能が単一のサーバにより実現されていてもよい。

【００７８】

また、ゲームプログラムはエミュレータ３８上で実行される必要はなく、例えば、クラウドサービス１０やクライアント１４のシステムソフトウェア（オペレーティングシステム等）上で実行されてもよい。また、例えば、クライアント１４がゲーム装置である場合において、リプレイ動画像の再生中に、ユーザＢが復帰リンク３０をクリックした際に、クライアント１４が、再生されているリプレイ動画像の動画像ＩＤと再生時点のフレーム画像のフレームＩＤとの組合せに対応する、オブジェクト群の位置や向きを示すゲーム状況データを生成するようにしてもよい。そして、ゲーム装置であるクライアント１４が、生成されたゲーム状況データが示す状況からリプレイ動画像に対応するゲームを実行するようにしてもよい。

【００７９】

また、動画像管理システム１２は、クラウドサービス１０を提供する事業者とは異なる事業者によって動画像配信サービスが提供されている一般的なサーバであっても構わない。

【００８０】

また、上記の具体的な数値や文字列や図面中の具体的な数値や文字列は例示であり、これらの数値や文字列には限定されない。

【符号の説明】

【００８１】

１０　クラウドサービス、１２　動画像管理システム、１４　クライアント、１６　コンピュータネットワーク、２０　ゲーム画面、２２　プレイヤオブジェクト、２４　弾丸オブジェクト、２６　敵オブジェクト、２８　リプレイ動画像表示画面、３０　復帰リンク、３２　ノブ、３４　管理プロセス、３６　サービス提供プロセス、３８　エミュレータ、４０　エミュレータ管理部、４２　ゲーム実行部、４４　リプレイ動画像管理部、４６　データ記憶部、４８　復帰データ生成部、５０　ゲーム状況監視部、５２　復帰要求受付部、５４　再生位置特定部、５６　ゲーム状況データ取得部、５８　復帰データ。

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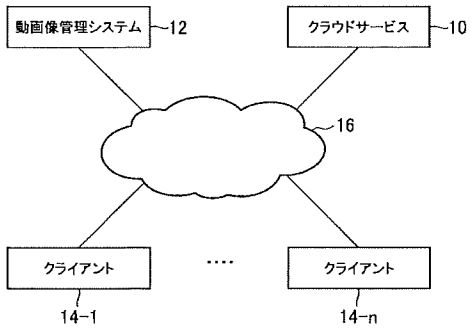
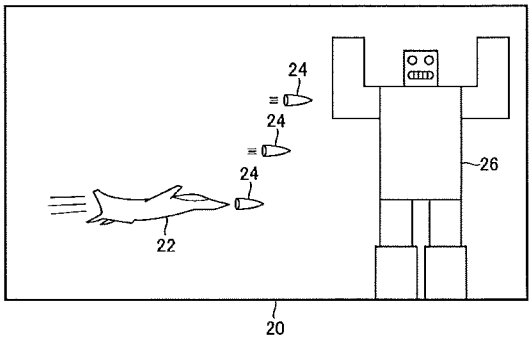
Page 198

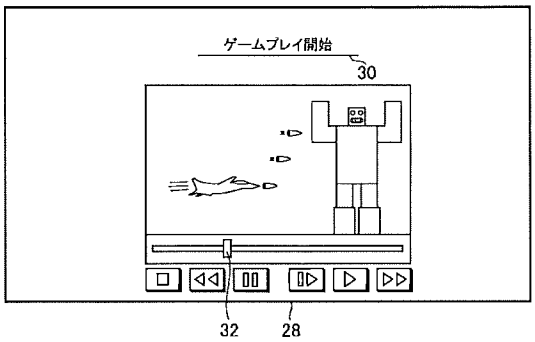
【図１】



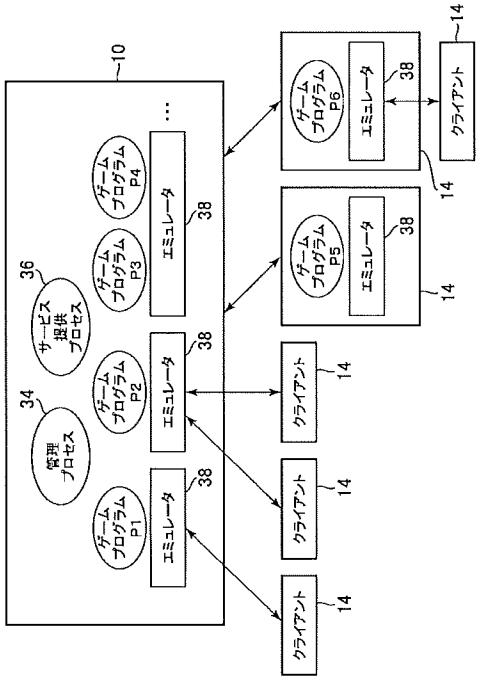
【図２】



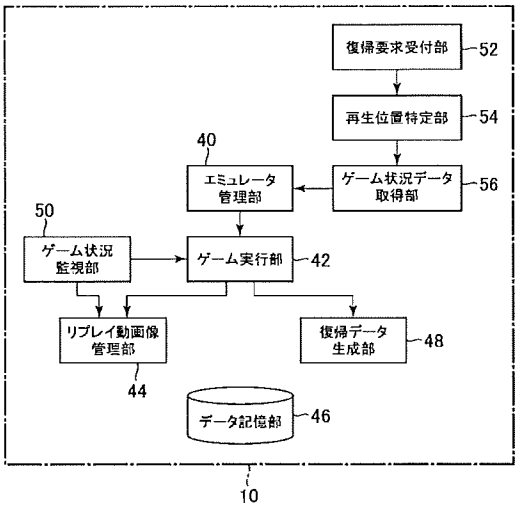
【図３】



【図４】



【図５】



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【図６】

動画像ID	ゲームID	経過時間データ	スナップショットデータ
0001	001	00:00:00	・・・・
0001	001	00:00:05	・・・・
0001	001	00:00:10	・・・・
0001	001	00:00:15	・・・・

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Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP2012-065831	04/05/2012	Japan (Corresponds to US 2013/0172086)		X
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Japanese Office Action issued October 30, 2018 in Patent Application No. 2018-192989, citing references AO and AX herewith (with English Translation)
	AX	"How to Create StarCraft 2 Custom Map", captured by Wayback Machine, printed October 18, 2018, https://web.archive.org/web/20130307210601/http://segmentnext.com:80/2010/10/14/how-to-create-starcraft-2-custom-map/, 5 pages
	AY	
	AZ	

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

■ The amount required under 37 CFR §1.17(p) will be paid by our deposit account number 15-0030.

CERTIFICATION

■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Noah K. Flaks
Registration No. 69,541

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Patent Owner's Sur-Reply submitted October 24, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594
	AX	
	AY	
	AZ	

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

■ The amount required under 37 CFR §1.17(p) will be paid by our deposit account number 15-0030.

CERTIFICATION

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■ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Noah K. Flaks
Registration No. 69,541

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Teresa Cole
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
RCE- 2ND AND SUBSEQUENT REQUEST	1820	1	1900	1900
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**2040**

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Decision Date : December 14, 2018

In re Application of :

Taiki EDA

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

Application No : 15393646

Filed : 29-Dec-2016

Attorney Docket No : 481331US

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed December 14, 2018to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED.**

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 3717 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt

EFS ID:	34591313
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Teresa Cole
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	14-DEC-2018
Filing Date:	29-DEC-2016
Time Stamp:	14:54:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$2040
RAM confirmation Number	121718INTEFSW00001190150030
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition automatically granted by EFS	petition-request.pdf	31507 a053424c1682817a6a16f1c0e6fbe7067cabb874	no	2
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	RCE-Fillable-Form.pdf	1349895 1cd6bb5a462e65fd77027d474fcfcea2ae3fa0c2	no	3
Warnings:					
Information:					
3	Quick Path Information Disclosure Statement	QPIDSForm1.pdf	186409 48f54ac65b9dde535500fb546058d61ddbc99e5c	no	2
Warnings:					
Information:					
4		481331US_IDS1.PDF	2663015 ffdd3530e7ff232fbcc9d7448be4b86261645bc8	yes	34

Multipart Description/PDF files in .zip description

Document Description	Start	End
Non Patent Literature	30	34
Non Patent Literature	20	29
Foreign Reference	3	19
Information Disclosure Statement (IDS) Form (SB08)	2	2
Transmittal Letter	1	1

Warnings:

Information:

5	Quick Path Information Disclosure Statement	QPIDSForm2.pdf	186411 acbc32d01742877bdcf28b5637356e956f66fedd	no	2
Warnings:					
Information:					
6		481331US_IDS2.PDF	1442205 e9bf4e157814d8b0a5f80ce7b20268bd27f0a930	yes	30

Multipart Description/PDF files in .zip description

Document Description	Start	End
Non Patent Literature	3	30
Information Disclosure Statement (IDS) Form (SB08)	2	2
Transmittal Letter	1	1

Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	32287 cfd421a041857118c3b62a593a8c9a7f7a8acee8	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	5891729		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web	PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)**
Application Number	15393646
Filing Date	29-Dec-2016
First Named Inventor	Taiki EDA
Art Unit	3717
Examiner Name	MASUD AHMED
Attorney Docket Number	481331US
Title	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary.

APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c).

A grantable petition requires the following items:
(1) Petition fee; and
(2) One of the following reasons:
(a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable;
(b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or
(c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).

Petition Fee

- ◯ Small Entity
- ◯ Micro Entity
- ◉ Regular Undiscounted

Reason for withdrawal from issue

◯ One or more claims are unpatentable ◉ Consideration of a request for continued examination (RCE) (List of Required Documents and Fees) ◯ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).
RCE request,submission, and fee. ☐ I certify, in accordance with 37 CFR 1.4(d)(4) that : The RCE request ,submission, and fee have already been filed in the above-identified application on ☒ Are attached.
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ◉ An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application. ◯ An attorney or agent registered to practice before the Patent and Trademark Office, acting in a representative capacity. ◯ A sole inventor ◯ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ◯ A joint inventor; all of whom are signing this e-petition

Signature	/Noah K. Flaks/
Name	Noah K. Flaks
Registration Number	69541

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LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

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		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
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	AV					

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[redacted] Additional References sheet(s) attached

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	ABL	Gree's Second Brief, submitted May 16, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 16 pages
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	ABR	Supercell's Third Brief, submitted July 18, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 45 pages
	ABS	Gree's Second Brief, submitted September 4, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 8 pages
	ABT	Motion for Preliminary Injunction, submitted March 29, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 31 pages
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	AEY	"Terran - StarCraft II: Wings of Liberty Structures", Gamewise, printed January 19, 2018, 2 pages
	AEZ	"Structures - StarCraft II: Wings of Liberty Structures", Gamewise, printed January 19, 2018, https://web.archive.org/web/20130908134452/http://gamewise.co/games/36254/StarCraft-II-Wings-of-Liberty/Structures, 1 page
	AFA	Supercell's Answer, submitted August 30, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 38 pages
	AFB	Supercell's First Brief, submitted October 17, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 52 pages
	AFC	Gree's Second Brief, submitted November 8, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 16 pages
	AFD	Supercell's Fourth Brief, submitted December 26, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 21 pages
	AFE	Gree's Fourth Brief, submitted August 23, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 6 pages
	AFF	Gree's First Brief, submitted September 4, 2018 in Case No. H30 WA 10447 of JP Patent No. 5676032, 11 pages

Examiner /MASUD AHMED/	Date Considered 12/13/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
LIST OF REFERENCES CITED BY APPLICANT	481331US	15/393,646
	APPLICANT: Taiki EDA	
	FILING DATE: December 29, 2016	GROUP: 3717

		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	AFG	Japanese Office Action mailed August 21, 2018 in Japanese Patent Application No. 2015-248965 with translation, 6 pages
	AFH	"Shin-Tenmakai - GOC IV, another side -", Dengeki Play Station, Media Works Corporation, number 11, Vol. 10, p196-199, March 11, 2005, section "Point: Make more advantageous Battle Situation, Formation" in p199 with partial English translation, 5 pages
	AFI	Deposition of David Crane, submitted September 4, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594, 162 pages
	AFJ	"Exeter Chess Club, A place to enjoy and learn about chess", printed September 4, 2018, http://exeterchessclub.org.uk/content/new-starting-formations-tabiat, 9 pages
	AFK	"Chess History 1: Shatranj", printed September 4, 2018, https://www.chess.com/clubs/forum/view/chess-history-1-shatranj, 5 pages
	AFL	Petitioner's Reply to Patent Owner's Response, submitted September 4, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594, 32 pages
	AFM	
	AFN	
	AFO	
	AFP	
	AFQ	
	AFR	
	AFS	
	AFT	
	AFU	
	AFV	
	AFW	

Examiner /MASUD AHMED/	Date Considered 12/13/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 12/03/2018

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

NOTIFICATION DATE	DELIVERY MODE
12/03/2018	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
OBLONPAT@OBLON.COM
iahmadi@oblon.com

Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, TAIKI	
	Examiner MASUD AHMED	Art Unit 3717	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *10/10/18*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *17-22, 30-41*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☒ All b) ☐ Some *c) ☐ None of the:
   1. ☒ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

CPC						
Symbol					**Type**	**Version**
A63F		13	/	537	F	2014-09-02
A63F		13	/	31	I	2014-09-02
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CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	11/27/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
463	25	A	6	3	F	9 / 24 (2006.0)						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											

NONE (Assistant Examiner) (Date)	Total Claims Allowed: 18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717 11/27/18 (Primary Examiner) (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 3A-3D

Supercell
Exhibit 1002
Page 226

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	1	17	10	33										
	2	2	18	11	34										
	3	3	19	12	35										
	4	4	20	13	36										
	5	5	21	14	37										
	6	6	22	15	38										
	7		23	16	39										
	8		24	17	40										
	9		25	18	41										
	10		26												
	11		27												
	12		28												
	13		29												
	14	7	30												
	15	8	31												
	16	9	32												

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717 (Primary Examiner)	11/27/18 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 3A-3D

Supercell
Exhibit 1002
Page 227

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP2012-065831	04/05/2012	Japan (Corresponds to US 2013/0172068)		X
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Japanese Office Action issued October 30, 2018 in Patent Application No. 2018-182989 (with English Translation)
	AX	"How to Create StarCraft 2 Custom Map", captured by Wayback Machine, printed October 18, 2018, https://web.archive.org/web/20130307210601/http://segmentnext.com:80/2010/10/14/how-to-create-starcraft-2-custom-map/, 5 pages
	AY	Patent Owner's Sur-Reply submitted October 24, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594
	AZ	

Examiner	/MASUD AHMED/	Date considered	11/27/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	Art Unit
	MASUD AHMED	3717

CPC- SEARCHED

Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED

Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner
463	29-42	11/11/2018	MA

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES

Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	11/11/2018	MA
CONDUCTE NPL SEARCH ON GOOGLE FOR BUILDING GAMES	11/11/2018	MA
VERIFIED THE APPROVAL OF THE TD	11/11/2018	MA

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	TEXT SEARCHED WITHIN ALL THE CLASSES AND THE SUBCLASSES INCLUDING FOREIGN DATABASES ON EAST	11/11/2018	MA
	SEARCHED ALL THE CLASSES AND THE SUBCLASSES LISTED ON ISSUE CLASSIFICATION	11/11/2018	MA

Docket No.: 481331US/ssr

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Taiki EDA

SERIAL NUMBER: 15/393,646 GROUP: 3717

FILED: December 29, 2016 EXAMINER: AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

REQUEST TO CORRECT ALLOWED CLAIMS

MAIL STOP ISSUE FEE
COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

In the matter of the above-identified application for patent, we hereby request correction of your records to reflect the correct allowed claims.

The allowed claims should be: **17-22 and 30-41**.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Maki Saitoh/

James Love
Registration No. 58,421

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

Maki Saitoh
Registration No.: 72,208

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) Taiki EDA

SERIAL NO: 15/393,646

FILING DATE: December 29, 2016

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FEE TRANSMITTAL - ISSUE FEE BALANCE DUE

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

FOR	AMOUNT
ISSUE FEE BALANCE	$40.00

■ Please charge Deposit Account No. 15-0030 in the amount of **$40.00**.

■ The Director is hereby authorized to charge any additional fees which may be required for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to Deposit Account No. 15-0030.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P..

/Maki Saitoh/

Date: 11/23/2018

James Love
Registration No. 58,421

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)
CC: Accounting

Maki Saitoh
Registration No.: 72,208

DOCKET NO.: 481331US/ssr

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: GROUP: 3717

Taiki EDA

SERIAL NO: 15/393,646 EXAMINER:

FILED: December 29, 2016

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

MISCELLANEOUS LETTER
REGARDING APPLICATION OF PREVIOUSLY PAID ISSUE FEE

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

This application was previously withdrawn from issue after payment of the Issue Fee. Applicant requests that the previously paid Issue Fee be applied to the pending Notice of Allowance.

If there is a discrepancy between the amount of the previously paid Issue Fee and the amount indicated as due in the pending Notice of Allowance, the Commissioner is authorized to charge or to credit only the amount of the discrepancy to Deposit Account No. 15-0030.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Maki Saitoh/

James Love
Registration No. 58,421

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 12/16)

Maki Saitoh
Registration No.: 72,208

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

CUSTOMER NUMBER
22850

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date indicated below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	02/15/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3717	463-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Oblon, McClelland,
2 Maier & Neustadt, L.L.P.
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE	(B) RESIDENCE: (CITY and STATE OR COUNTRY)
GREE, INC.	Minato-ku, JAPAN

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 15-0030

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Maki Saitoh/ Date 11/23/2018

Typed or printed name Maki Saitoh Registration No. 72,208

Supercell
Exhibit 1002
Page 233

Electronic Acknowledgement Receipt

EFS ID:	34383157
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Suntra Srisuchart
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	23-NOV-2018
Filing Date:	29-DEC-2016
Time Stamp:	15:45:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331us.pdf	3681871 4dd18967878f8dd08ae0851c24e1dd001dc61626	yes	6

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	6	6
	Petition for review by the Technology Center SPRE	4	5
	Miscellaneous Incoming Letter	3	3
	Miscellaneous Incoming Letter	2	2
	Issue Fee Payment (PTO-85B)	1	1

Warnings:	
Information:	
Total Files Size (in bytes):	3681871

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

DOCKET NO: 481331US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:	
TAIKI EDA	:	EXAMINER: AHMED, MASUD
SERIAL NO: 15/393,646	:	
FILED: DECEMBER 29, 2016	:	GROUP ART UNIT: 3717
FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	:	

PETITION UNDER 37 C.F.R. §1.181(A)(3)

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

Applicant herein petitions the Commissioner to invoke his supervisory authority to compel the Examiner to consider the Documents (AA) – (AE) and (AW) listed in the Information Disclosure Statement (IDS) filed on August 24, 2017, and Documents (AO), (AW), (AX), (AY) and (AZ) listed in the Information Disclosure Statement (IDS) filed on November 9, 2017.

The Information Disclosure Statements, in conformity with the requirements of 37 C.F.R. §1.97-1.98, were originally filed on August 24, 2017, and November 9, 2017, respectively. The above-referenced application has now been allowed. It appears that none of the Documents listed in the Information Disclosure Statements were given consideration by the Examiner.

37 C.F.R. §1.181(a)(3) allows petition to invoke the supervisory authority of the Commissioner in appropriate circumstances. The Information Disclosure Statements are in compliance with 37 C.F.R. §1.97-1.98 since they were timely submitted with a showing of relevancy comprising:

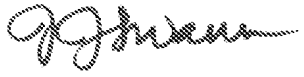
a) Document (AW), an European Search Report dated July 28, 2017, in European Patent Application No. 14848832.3 with an English translation indicating Category "Y" and "A" of Documents (AA) – (AE) respectively. A copy of Document (AW) in English can be found as a NPL document in PAIR and no copies of Documents (AA) – (AE) were provided because they are US published Patent Applications;

b) Documents (AW) and (AX), Office Actions for Japanese Application No. 2016-25511 both dated April 25, 2017, and both with English translations thereof and providing a statement of relevancy for Documents (AO), (AY) and (AZ). Copies of Documents (AW) and (AX) can be found as NPL documents respectively in PAIR, a copy of Document (AO) can be found as a FOR document in PAIR, and copies of Documents (AY) and (AZ) can be found as NPL documents in PAIR respectively.

Accordingly, it is respectfully submitted that this Petition Under 37 C.F.R. §1.181 be granted and that the Examiner consider the Information Disclosure Statements filed, on August 24, 2017, and November 9, 2017, including Documents (AA) – (AE) and (AW) and Documents (AO), (AW), (AX), (AY) and (AZ) respectively cited therein.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.



James Love
Attorney of Record
Registration No. 58,421

Aristotelis M. Psitos
Registration No. 63,739

Judy J. Swann
Registration No.: 76,815

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

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Page 237

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	02/15/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3717	463-025000

11/26/2018 HVUONG2 00000003 150030 15393646
01 FC:1501 40.00 DA 960.00 OP

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Oblon, McClelland,
2 Maier & Neustadt, L.L.P.
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE	(B) RESIDENCE: (CITY and STATE OR COUNTRY)
GREE, INC.	Minato-ku, JAPAN

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

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5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Maki Saitoh/ Date 11/23/2018
Typed or printed name Maki Saitoh Registration No. 72,208

Adjustment date: 11/26/2018 HVUONG2
08/02/2017 INIEFSW 00011358 15393646
01 FC:1501 -960.00 OP

Supercell Exhibit 1002 Page 238

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP2012-065831	04/05/2012	Japan (Corresponds to US 2013/0172068)		X
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Japanese Office Action issued October 30, 2018 in Patent Application No. 2018-182989 (with English Translation)
	AX	"How to Create StarCraft 2 Custom Map", captured by Wayback Machine, printed October 18, 2018, https://web.archive.org/web/20130307210601/http://segmentnext.com:80/2010/10/14/how-to-create-starcraft-2-custom-map/, 5 pages
	AY	Patent Owner's Sur-Reply submitted October 24, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594
	AZ	

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

■ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

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■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Noah K. Flaks
Registration No. 69,541

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	240	240
		Total in USD ($)		**240**

Electronic Acknowledgement Receipt

EFS ID:	34375093
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	21-NOV-2018
Filing Date:	29-DEC-2016
Time Stamp:	13:40:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$240
RAM confirmation Number	112318INTEFSW13414200
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	10081156 03f30c9856f2d54ee6fbf41e84e8ee8293b93ba6	yes	62

Multipart Description/PDF files in .zip description

Document Description	Start	End
Non Patent Literature	35	62
Non Patent Literature	30	34
Foreign Reference	13	29
Non Patent Literature	3	12
Information Disclosure Statement (IDS) Form (SB08)	2	2
Transmittal Letter	1	1

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30545 2d4682f3d05948126e5f80657a9c490ce6ac7f1e	no	2

Warnings:

Information:

Total Files Size (in bytes):	10111701

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

(19)日本国特許庁(JP)　(12)公開特許公報(A)　(11)特許出願公開番号
特開2012-65831
(P2012-65831A)
(43)公開日　平成24年4月5日(2012.4.5)

(51)Int.Cl.		F I		テーマコード（参考）
A63F 13/10	(2006.01)	A63F 13/10		2C001
A63F 13/12	(2006.01)	A63F 13/12	C	

審査請求 未請求　請求項の数 11　OL　（全 17 頁）

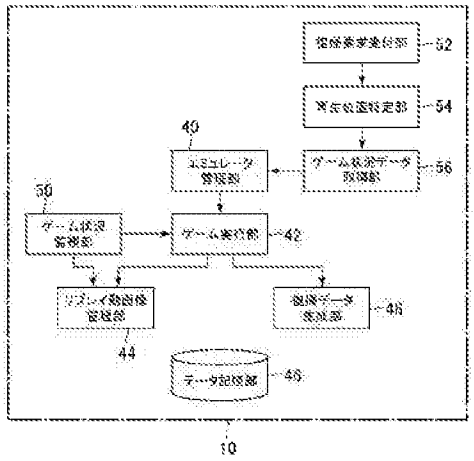
(21)出願番号　特願2010-212845 (P2010-212845)
(22)出願日　平成22年9月22日 (2010.9.22)

(71)出願人　310021766
株式会社ソニー・コンピュータエンタテインメント
東京都港区港南１丁目７番１号
(74)代理人　110000154
特許業務法人はるか国際特許事務所
(72)発明者　池長　俊哉
東京都港区港南一丁目７番１号　株式会社ソニー・コンピュータエンタテインメント内

Ｆターム(参考)　2C001 BA00 BA02 BC00 BC06 CB00 CB08

(54)【発明の名称】情報処理システム、情報処理方法、プログラム及び情報記憶媒体

(57)【要約】
【課題】ゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる情報処理システムを提供する。
【解決手段】復帰要求受付部５２が、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、ゲームの実行要求を受け付ける。ゲーム状況データ取得部５６が、動画像の再生位置に関連付けられた、ゲームの状況を示すゲーム状況データを記憶するデータ記憶部４６から、実行要求に対応付けられる再生位置に基づいて特定されるゲーム状況データを取得する。ゲーム実行部４２が、ゲーム状況データ取得部５６が取得するゲーム状況データが示す状況からゲームを実行する。
【選択図】図５



【特許請求の範囲】
【請求項１】
ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段と、
前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に基づいて特定されるゲーム状況データを取得するゲーム状況データ取得手段と、
前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段と、
を含むことを特徴とする情報処理システム。
【請求項２】
前記実行要求受付手段が、既にプレイされたゲームのプレイ内容を表す動画像の再生中に、当該動画像の再生位置に対応付けられる、ゲームの実行要求を受け付ける、
ことを特徴とする請求項１に記載の情報処理システム。
【請求項３】
前記ゲーム状況データ取得手段が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に基づいて特定されるゲーム状況データを取得する、
ことを特徴とする請求項２に記載の情報処理システム。
【請求項４】
前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データの少なくとも一部のうちの、関連付けられている再生位置が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に最も近いゲーム状況データを取得する、
ことを特徴とする請求項３に記載の情報処理システム。
【請求項５】
前記ゲーム状況データ取得手段が、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置が示すタイミング以前である前記記憶手段に記憶されているゲーム状況データのうちのいずれかを取得する、
ことを特徴とする請求項４に記載の情報処理システム。
【請求項６】
前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データのうちの、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていた前記動画像に含まれるフレーム画像の再生位置が示すタイミングから所定の時間だけ遡ったタイミングに最も近いゲーム状況データを取得する、
ことを特徴とする請求項３に記載の情報処理システム。
【請求項７】
前記記憶手段が、前記ゲームの進行段階に対応するゲームステージの開始時におけるゲーム状況データを含んでおり、
前記ゲーム状況データ取得手段が、前記実行要求に対応付けられる再生位置に対応するゲームステージの開始時におけるゲーム状況データを取得する、
ことを特徴とする請求項１から６のいずれか一項に記載の情報処理システム。
【請求項８】
前記ゲームの実行中に、当該実行中のゲームの現況を示す前記ゲーム状況データを生成するゲーム状況データ生成手段、をさらに含む、
ことを特徴とする請求項１から７のいずれか一項に記載の情報処理システム。
【請求項９】
ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付ステップと、

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前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得ステップと、
前記ゲーム状況データ取得ステップにより取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行ステップと、
を含むことを特徴とする情報処理方法。
【請求項１０】
ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段、
前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得手段、
前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段、
としてコンピュータを機能させることを特徴とするプログラム。
【請求項１１】
請求項１０に記載のプログラムを記憶したコンピュータ読み取り可能な情報記憶媒体。
【発明の詳細な説明】
【技術分野】
【０００１】
本発明は、情報処理システム、情報処理方法、プログラム及び情報記憶媒体に関する。
【背景技術】
【０００２】
ユーザにより登録された動画像を配信する動画像配信サイトが存在する（例えば、特許文献１参照）。そして、動画像配信サイトには、テレビゲームをユーザがプレイした内容を表す動画像が数多く登録されているものがある。
【０００３】
そして、テレビゲームをなかなかクリアできないユーザが、動画像配信サイトに登録されている、他のユーザによるプレイが示された動画像を閲覧することにより、そのゲームをクリアするためのヒントを得ることができることがある。また、ユーザが、動画像配信サイトに登録されている動画像に示されているゲームに興味を持ち、そのゲームを購入するということがある。
【先行技術文献】
【特許文献】
【０００４】
【特許文献１】米国特許出願公開第２００８／０２７６２７２号明細書
【発明の概要】
【発明が解決しようとする課題】
【０００５】
ユーザが、動画像配信サイトに登録されている、他のユーザがゲームをプレイした内容を表す動画像を閲覧していると、そのゲームをプレイしてみたくなるということがあり得る。ここで、例えば、ユーザが、閲覧している動画像の再生位置を指定した際に、その再生位置に応じたゲームの状況からそのゲームをプレイすることができるとなると、ユーザはそのゲームをより楽しむことができるようになると思われる。このことは、動画像配信サイトに登録されている動画像に限らず、テレビゲームをユーザがプレイした内容を表す動画像においてあてはまる。
【０００６】
本発明は上記課題に鑑みてなされたものであって、ゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる情報処理システム、情報処理方法、プログラム及び情報記憶媒体を提供することを目的とする。

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【課題を解決するための手段】

【０００７】

上記課題を解決するために、本発明に係る情報処理システムは、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段と、前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に基づいて特定されるゲーム状況データを取得するゲーム状況データ取得手段と、前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段と、を含むことを特徴とする。

【０００８】

また、本発明に係る情報処理方法は、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付ステップと、前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得ステップと、前記ゲーム状況データ取得ステップにより取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行ステップと、を含むことを特徴とする。

【０００９】

また、本発明に係るプログラムは、ゲームのプレイ内容を表す動画像の再生位置に対応付けられる、当該ゲームの実行要求を受け付ける実行要求受付手段、前記動画像の再生位置に関連付けられた、前記ゲームの状況を示すゲーム状況データを記憶する記憶手段から、前記実行要求に対応付けられる再生位置に対応するゲーム状況データを取得するゲーム状況データ取得手段、前記ゲーム状況データ取得手段により取得されるゲーム状況データが示す状況から前記ゲームを実行するゲーム実行手段、としてコンピュータを機能させることを特徴とする。

【００１０】

また、上記のプログラムはコンピュータ読み取り可能な情報記憶媒体に記憶することもできる。

【００１１】

本発明によると、ゲームの実行要求に対応付けられる動画像の再生位置に基づいて特定されるゲーム状況データが示す状況からゲームが実行されるので、ゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる。

【００１２】

本発明の一態様では、前記実行要求受付手段が、既にプレイされたゲームのプレイ内容を表す動画像の再生中に、当該動画像の再生位置に対応付けられる、ゲームの実行要求を受け付けることを特徴とする。こうすれば、既にプレイされたゲームのプレイ内容を表す動画像の再生位置に応じたゲームの状況からユーザがゲームをプレイすることができる。

【００１３】

また、本発明の一態様では、前記ゲーム状況データ取得手段が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に基づいて特定されるゲーム状況データを取得することを特徴とする。こうすれば、ゲームの実行要求の際に再生されていた場面に応じたゲームの状況からユーザがゲームをプレイすることができる。

【００１４】

この態様では、前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データの少なくとも一部のうちの、関連付けられている再生位置が、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置に最も近いゲーム状況データを取得してもよい。こうすれば、記憶手段に記憶されているゲーム状況データの少なくとも一部それぞれが示すゲームの状況のうちの、ゲームの実行要求の際に再生されていた場面での状況に最も近い状況からユーザがゲームをプレイすることができる

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【００１５】

また、この態様では、前記ゲーム状況データ取得手段が、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていたフレーム画像の前記動画像における再生位置が示すタイミング以前である前記記憶手段に記憶されているゲーム状況データのうちのいずれかを取得してもよい。こうすれば、ゲームの実行要求の際に再生されていた場面以前のゲームの状況のうちの、ゲームの実行要求の際に再生されていた場面での状況に最も近い状況からユーザがゲームをプレイすることができる。

【００１６】

また、本発明の一態様では、前記ゲーム状況データ取得手段が、前記記憶手段に記憶されているゲーム状況データのうちの、関連付けられている再生位置が示すタイミングが、前記ゲームの実行要求の際に再生されていた前記動画像に含まれるフレーム画像の再生位置が示すタイミングから所定の時間だけ遡ったタイミングに最も近いゲーム状況データを取得することを特徴とする。こうすれば、ゲームの実行要求の際に再生されていた場面から所定の時間だけ遡った場面でのゲームの状況に最も近い状況からユーザがゲームをプレイすることができる。

【００１７】

また、本発明の一態様では、前記記憶手段が、前記ゲームの進行段階に対応するゲームステージの開始時におけるゲーム状況データを含んでおり、前記ゲーム状況データ取得手段が、前記実行要求に対応付けられる再生位置に対応するゲームステージの開始時におけるゲーム状況データを取得することを特徴とする。こうすれば、ゲームの実行要求に対応付けられる再生位置に対応するゲームステージのはじめからユーザがゲームをプレイすることができる。

【００１８】

また、本発明の一態様では、前記ゲームの実行中に、当該実行中のゲームの現況を示す前記ゲーム状況データを生成するゲーム状況データ生成手段、をさらに含むことを特徴とする。こうすれば、実行中のゲームの現況を示すゲーム状況データが生成される。

【図面の簡単な説明】

【００１９】

【図１】本実施形態に係るコンピュータネットワークの全体構成の一例を示す図である。

【図２】ゲーム画面の一例を示す図である。

【図３】リプレイ動画像表示画面の一例を示す図である。

【図４】本実施形態に係るクラウドサービスとクライアントとの関係の一例を示す概念図である。

【図５】本実施形態に係るクラウドサービスで実現される機能の一例を示す機能ブロック図である。

【図６】復帰データの一例を示す図である。

【発明を実施するための形態】

【００２０】

以下、本発明の一実施形態について図面に基づき詳細に説明する。

【００２１】

図１は、本発明の一実施形態に係るコンピュータネットワークの全体構成の一例を示す図である。図１に示すように、インターネットなどのコンピュータネットワーク１６には、いずれもコンピュータを中心に構成されたクラウドサービス１０、動画像管理システム１２、クライアント１４（１４－１～１４－ｎ）、が接続されている。そして、クラウドサービス１０、動画像管理システム１２、クライアント１４は、互いに通信可能になっている。

【００２２】

クライアント１４は、クラウドサービス１０や動画像管理システム１２のユーザが利用するコンピュータであり、例えば、パーソナルコンピュータ、ゲームコンソール、テレビ

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受像器、携帯型ゲーム装置、携帯情報端末、などである。そして、クライアント１４は、例えば、ＣＰＵ等の制御装置、ＲＯＭやＲＡＭ等の記憶素子やハードディスクドライブ等の記憶装置、ディスプレイ、スピーカ等の出力装置、ゲームコントローラ、タッチパッド、マウス、キーボード、マイク等の入力装置、ネットワークボード等の通信装置、ＤＶＤ－ＲＯＭやＢｌｕ－ｒａｙ（登録商標）ディスクなどの光ディスク（コンピュータ読み取り可能な情報記憶媒体）を読み取る光ディスクドライブ、等を備えている。

【００２３】

また、本実施形態に係るクライアント１４は、ウェブブラウザ及びクラウドサービス１０用のプラグインプログラムが予めインストールされており，これらのアプリケーションプログラムが実行される。クライアント１４は，ウェブブラウザを通じてクラウドサービス１０や動画像管理システム１２が提供する各種サービスを受ける。クラウドサービス用プラグインプログラムの詳細については後述する。

【００２４】

動画像管理システム１２は、例えば、クライアント１４やクラウドサービス１０から受け付ける動画像を登録したり、クライアント１４からの要求に応じてクライアント１４に動画像の配信を行ったりするコンピュータシステムである。

【００２５】

クラウドサービス１０は、例えば、本発明の一実施形態に係る情報処理システムとして機能する分散コンピューティング環境であり，互いに通信可能に接続されている複数台のＷｅｂアプリケーションサーバ、複数台のデータベースサーバ、複数台のストレージデバイス、などを含んで構成されている。クラウドサービス１０に含まれるサーバは、例えば、ＣＰＵ等の制御部、ＲＯＭやＲＡＭ等の記憶素子やハードディスクドライブなどである記憶部、ネットワークボードなどの通信インタフェースである通信部、を含んで構成されている。これらの要素は、バスを介して接続される。

【００２６】

クラウドサービス１０を利用するクライアント１４は、クラウドサービス１０内に存在するサーバやストレージデバイスなどのリソースの所在を特に意識することなく、クラウドサービス１０が提供する各種サービスを利用することができる。

【００２７】

本実施形態では、クライアント１４が、ウェブブラウザを通じてクラウドサービス１０にアクセスし、ユーザＩＤ及びパスワードを入力してから、その後に所定のＵＲＬにアクセスすると，クライアント１４のディスプレイに所定のＵＲＬに対応する画面が表示される。なお、ユーザＩＤ及びパスワードを入力した後は、クラウドサービス１０は、例えば、クッキーを参照することによりクライアント１４を利用するユーザのユーザＩＤを特定することができるようになっている。

【００２８】

本実施形態では、例えば、あるユーザ（ユーザＡ）がクライアント１４からシューティングゲームの開始要求をクラウドサービス１０に送信すると，クラウドサービス１０はそのゲームの実行を開始する。そして、このゲームが実行されている間、クラウドサービス１０は、このゲームのプレイ内容を表すフレーム画像を、順次、ユーザＡのクライアント１４にストリーミング配信する。そして、ユーザＡのクライアント１４のディスプレイにはブラウザを介してこのフレーム画像が順次表示される。以下、このようにして順次ストリーミング配信されるフレーム画像群から構成される動画像を実況動画像と呼ぶこととする。ユーザＡは、実況動画像を見ながら、ゲームコントローラのボタンを押下するなどしてゲームを楽しむことができる。

【００２９】

図２に、ユーザＡのクライアント１４のディスプレイに表示されるゲーム画面２０の一例を示す。ゲーム画面２０には、上述の実況動画像が表示される。本実施形態では、ゲーム画面２０に、シューティングゲームにおいてプレイヤが操作する戦闘機等を表すプレイヤオブジェクト２２、プレイヤオブジェクト２２から発射される弾丸を表す弾丸オブジェ

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クト２４、プレイヤオブジェクト２２が倒すべき敵を表す敵オブジェクト２６が含まれている。ユーザＡは、ゲームコントローラのボタンを押下するなどの、キー入力を行うことにより、シューティングゲームにおけるプレイヤオブジェクト２２の移動や弾丸オブジェクト２４の発射等の操作を行うことができる。ユーザＡは、迫り来る敵オブジェクト２６をかわしながら、敵オブジェクト２６に向けて弾丸オブジェクト２４を発射して、敵オブジェクト２６を倒していく。

【００３０】

本実施形態では、上述のシューティングゲームは、ゲームの進行段階に対応する複数のゲームステージから構成されている。そして、ユーザＡがゲームステージをクリアする、あるいは、ゲームオーバーとなる、などのイベントが発生した際に、クラウドサービス１０は、そのゲームステージの開始時点からイベント発生時点までのゲームのプレイ内容を表す動画像（以下、この動画像をリプレイ動画像と呼ぶこととする。）を動画像管理システム１２に登録する。このようにして、本実施形態では、既にユーザＡによりプレイされたシューティングゲームのプレイ内容を表すリプレイ動画像が動画像管理システム１２に登録される。そして、別のユーザ（ユーザＢ）がクライアント１４から動画像管理システム１２にこのリプレイ動画像の再生要求を送信すると、動画像管理システム１２は、このリプレイ動画像をユーザＢのクライアント１４にストリーミング配信する。

【００３１】

図３に、ユーザＢのクライアント１４のディスプレイに表示されるリプレイ動画像表示画面２８の一例を示す。リプレイ動画像表示画面２８には、上述のリプレイ動画像が表示される。また、リプレイ動画像表示画面２８には、リプレイ動画像の再生位置に応じた状況への復帰（リプレイ動画像の再生位置に応じた状況からのゲームの実行）を要求するための復帰リンク３０が含まれている。また、リプレイ動画像表示画面２８には、動画像の再生を制御するための各種ボタン及び動画像が再生されるに従って左から右へ移動するノブ３２が配置されている。リプレイ動画像の再生中にユーザＢが復帰リンク３０をクリックすると、クライアント１４は、この再生位置に応じた状況からのゲームの実行要求をクラウドサービス１０に送信する。すると、クラウドサービス１０は、この状況からのゲームの実行を開始する。そして、このゲームが実行されている間、クラウドサービス１０は、このゲームのプレイ内容を表す実況動画像をユーザＢのクライアント１４にストリーミング配信する。そして、ユーザＢのクライアント１４では、図２と同様のゲーム画面２０が表示されることとなる。そして、ユーザＢは、このゲームを、ユーザＢが指定した再生位置に応じた状況から楽しむことができる。

【００３２】

図４は、本実施形態に係るクラウドサービス１０とクライアント１４との関係の一例を示す概念図である。本実施形態に係るクラウドサービス１０では、例えば、管理プロセス３４、サービス提供プロセス３６、エミュレータ３８が実行される。また、クラウドサービス１０に含まれるストレージデバイス等の記憶装置には、予め、各種ゲームプログラムのイメージファイルが記憶されている。ゲームプログラムには、ゲームの識別子であるゲームＩＤが関連付けられている。

【００３３】

サービス提供プロセス３６は、例えば、クラウドサービス１０に含まれるサーバが、ショッピングサイトやＳＮＳ（Social Networking Service）等、クラウドサービス１０が提供する種々のサービスを実現するプログラムを起動することで生成されるプロセスである。

【００３４】

管理プロセス３４は、例えば、クラウドサービス１０に含まれるサーバが、クラウドサービス１０に含まれるサーバやストレージデバイスにインストールされている管理プログラムを起動することで生成されるプロセスであり、エミュレータ３８の所在管理処理、エミュレータ３８の起動処理及び停止処理、クライアント１４からの要求に応じたクライアント１４とエミュレータ３８との接続処理及び切断処理、などを実行する。

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【００３５】
エミュレータ３８は、例えば、クラウドサービス１０に含まれるサーバやストレージデバイスに記憶されているゲームプログラムを実行するための仮想マシンとして機能するプロセスである。エミュレータ３８は、管理プロセス３４が、クライアント１４からの要求に応じて、クラウドサービス１０に含まれるサーバやストレージデバイスにインストールされているエミュレータプログラムを起動することにより生成される。そして、管理プロセス３４は、クライアント１４からの要求に応じて、クライアント１４により指定されたゲームプログラムのイメージファイルを読み込み、エミュレータ３８にロードする。このことによって、エミュレータ３８上でゲームプログラムが実行されることとなる。なお、エミュレータ３８が、クライアント１４により指定されたゲームプログラムを自プロセスにロードするようにしてもよい。

【００３６】
また、エミュレータ３８は、例えば、クライアント１４や管理プロセス３４からの要求に応じて、エミュレータ３８が管理しているエミュレートされたメモリイメージやレジスタ（例えば、プログラムカウンタ等）、エミュレータ３８上で動作するゲームプログラムによる入出力アクセスログ、エミュレータ３８上で実行されるＣＰＵ命令やＧＰＵ命令のログなどを出力する。

【００３７】
本実施形態では、図４に示すように、１つのエミュレータ３８を１つのクライアント１４が専有することができる（ゲームプログラムＰ１参照）。また、１つのエミュレータ３８に対して複数のクライアント１４が接続可能となっている（ゲームプログラムＰ２参照）。また、１つのエミュレータ３８上で複数のゲームプログラムが実行可能となっている（ゲームプログラムＰ３、Ｐ４参照）。

【００３８】
また、本実施形態では、図４に示すように、クライアント１４にエミュレータプログラムがインストールされている場合は、管理プロセス３４は、クライアント１４からの要求に応じて、クライアント１４にエミュレータ３８の起動指示や停止指示を出力する。クライアント１４は、管理プロセス３４から受け付ける起動指示に応じて、クライアント１４にインストールされているエミュレータプログラムを起動する。また、クライアント１４は、管理プロセス３４から受け付ける停止指示に応じて、実行中のエミュレータ３８を停止する。そして、クライアント１４に記憶されているゲームプログラムをクライアント１４で実行されているエミュレータ３８で実行することもできるようになっている（ゲームプログラムＰ５参照）。また、クライアント１４で実行されているエミュレータ３８に対して他のクライアント１４から接続できるようになっている（ゲームプログラムＰ６参照）。

【００３９】
図５は、本実施形態に係るクラウドサービス１０で実現される機能の一例を示す機能ブロック図である。なお、図５には、以下の説明と特に関係がある機能が示されているにすぎず、本実施形態に係るクラウドサービス１０では、図５に示す機能以外の機能も実現されている。図５に示すように、本実施形態に係るクラウドサービス１０は、機能的には、例えば、エミュレータ管理部４０、ゲーム実行部４２、リプレイ動画像管理部４４、データ記憶部４６、復帰データ生成部４８、ゲーム状況監視部５０、復帰要求受付部５２、再生位置特定部５４、ゲーム状況データ取得部５６、を含んで構成される。データ記憶部４６は、例えば、クラウドサービス１０に含まれるサーバに含まれるメモリやハードディスクドライブ、ストレージデバイス、などといった記憶装置を主として実現される。また、ゲーム実行部４２は、例えば、エミュレータ３８で実現される機能に対応する。その他の要素は、例えば、管理プロセス３４で実現される機能に対応する。

【００４０】
クラウドサービス１０は、上述のようにコンピュータを中心に構成されており、プログラムを実行することにより、図５に示す各機能要素が実現されるようになっている。また

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、このプログラムは、例えば、ＣＤ－ＲＯＭ、ＤＶＤ－ＲＯＭなどのコンピュータ読み取り可能な情報記憶媒体を介して、あるいは、インターネットなどの通信ネットワークを介してクラウドサービス１０に供給される。

【００４１】

エミュレータ管理部４０は、本実施形態では、例えば、クライアント１４からの要求に応じてエミュレータ３８を起動したり停止したりする。また、エミュレータ管理部４０は、クライアント１４からの要求に応じた、クライアント１４とエミュレータ３８との接続処理及び切断処理を実行する。また、エミュレータ管理部４０は、起動したエミュレータ３８へのゲームプログラムのイメージファイルのロードも行う。また、エミュレータ管理部４０は、エミュレータ３８の所在管理処理も実行する。

【００４２】

ゲーム実行部４２は、本実施形態では、例えば、エミュレータ３８にロードされたゲームプログラムを実行する。

【００４３】

本実施形態では、例えば、ユーザＡがクライアント１４からシューティングゲームの開始要求をクラウドサービス１０に送信すると、クラウドサービス１０のエミュレータ管理部４０が、この開始要求に応じて、エミュレータ３８を起動し、起動したエミュレータ３８にシューティングゲームのイメージファイルをロードする。そして、ゲーム実行部４２が、ロードされたシューティングゲームを開始する。

【００４４】

ゲーム実行部４２は、本実施形態では、シューティングゲームの開始以降、所定のゲーム更新時間（例えば、１／６０秒）毎に、ゲームの状況を示すゲーム状況データを更新するゲーム状況データ更新処理、更新後のゲーム状況データに基づいてゲームのプレイ内容を表すフレーム画像を生成するフレーム画像生成処理、生成されたフレーム画像をクライアント１４に送信するフレーム画像送信処理、の順に、これら３つの処理を実行する。すなわち、ゲーム実行部４２は、ゲーム更新時間間隔で、上述の３つの処理を順次実行するという処理を繰り返し実行する。

【００４５】

本実施形態では、ゲーム実行部４２は、ゲーム状況更新処理において、例えば、プレイヤオブジェクト２２、弾丸オブジェクト２４、敵オブジェクト２６、それぞれの位置や向きを示すゲーム状況データを更新する処理を実行する。また、本実施形態では、ゲーム実行部４２は、ゲーム状況更新処理において、更新後のオブジェクト間の衝突判定処理や、衝突判定結果に基づく、ゲームステージクリア判定処理、ミス判定処理なども併せて実行する。

【００４６】

また、本実施形態では、ゲーム実行部４２は、フレーム画像生成処理において、例えば、更新後のオブジェクト群の位置や向きを示すゲーム状況データに基づいてフレーム画像を生成する処理を実行する。また、本実施形態では、ゲーム実行部４２は、フレーム画像送信処理において、例えば、生成されたフレーム画像を生成時刻順に順序付けられているフレーム画像の識別子であるフレームＩＤに関連付けてクライアント１４に送信する。

【００４７】

本実施形態では、クライアント１４は、クラウドサービス１０から順次送信されるフレーム画像を受信する。そして、クライアント１４は、受信したフレーム画像が含まれるゲーム画面２０をディスプレイに表示出力する。本実施形態では、クライアント１４は、関連付けられているフレームＩＤ順にフレーム画像を表示出力する。そして、表示出力されるフレーム画像は、順次更新される。このようにして、実況動画像がクラウドサービス１０からクライアント１４へストリーミング配信される。

【００４８】

また、本実施形態では、ゲームの実行中に、クライアント１４が、ユーザによるボタンの押下などのキー入力を受け付けた際に、入力に応じたキー情報（例えば、押下されたボ

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タンの種別を示す信号）を、クラウドサービス１０に送信する。そして、クラウドサービス１０のゲーム実行部４２は、このキー情報に応じたゲーム状況データの更新（例えば、押下されたボタンが示す方向へのプレイヤオブジェクト２２の移動、プレイヤオブジェクト２２からの弾丸オブジェクト２４の発射等）を実行する。

【００４９】

リプレイ動画像管理部４４は、本実施形態では、例えば、ゲーム実行部４２がフレーム画像を生成した際に、そのフレーム画像を、生成時刻順に順序付けられているフレーム画像の識別子であるフレームＩＤに関連付けてデータ記憶部４６に出力する。

【００５０】

復帰データ生成部４８は、本実施形態では、例えば、所定の復帰データ生成間隔（例えば、５秒間隔）で、リプレイ動画像の再生位置に応じた状況への復帰（リプレイ動画像の再生位置に応じた状況からのゲームの実行）に用いられる復帰データ５８を生成して、データ記憶部４６に出力する（図６参照）。図６は、復帰データ５８の一例を示す図である。本実施形態では、復帰データ生成部４８は、ゲームステージが開始される際に、そのゲームステージの開始時点の復帰データ５８を生成して、データ記憶部４６に出力する。そのため、データ記憶部４６には、ゲームステージの開始時における復帰データ５８が記憶されることとなる。図６に示すように、復帰データ５８は、例えば、上述のリプレイ動画像の識別子である動画像ＩＤと、プレイされているゲームの識別子であるゲームＩＤと、ゲームステージの開始時点からの経過時間を示す経過時間データと、そのときのゲームの状況を示すゲーム状況データ（図６には、本実施形態におけるゲーム状況データの一例として、経過時間データに対応する時点における、シューティングゲームを実行しているエミュレータ３８が管理しているメモリイメージの内容やレジスタの値を示すスナップショットデータが示されている。）と、を含んでいる。復帰データ５８に含まれる経過時間データによって、復帰データ５８とリプレイ動画像に含まれるフレーム画像とは関連付けられていることとなる。

【００５１】

本実施形態では、復帰データ生成部４８は、復帰データの生成タイミングが到来した際に、その時点におけるエミュレータ３８のメモリイメージの内容やレジスタの値を取得する。そして、復帰データ生成部４８は、リプレイ動画像の識別子である動画像ＩＤと、プレイされているゲームの識別子であるゲームＩＤと、ゲームステージの開始時点から復帰データの生成タイミングまでの時間を示す経過時間データと、取得した内容に対応するスナップショットデータと、を含む復帰データ５８を生成する。

【００５２】

このようにして、本実施形態では、ゲーム実行部４２が実況動画像をクライアント１４にストリーミング配信している際に、同時進行で、リプレイ動画像管理部４４によるフレーム画像のデータ記憶部４６への出力、及び、復帰データ生成部４８による復帰データ５８の生成出力が行われることとなる。また、本実施形態では、ゲームの実行中に、その実行中のゲームの現況を示すスナップショットデータが順次生成されることとなる。

【００５３】

ゲーム状況監視部５０は、例えば、ゲーム実行部４２が実行しているシューティングゲームのゲーム処理の進行状況を監視する。本実施形態では、予め、各ゲームステージの終了時点のフレーム画像、及び、ゲームオーバー時点のフレーム画像がデータ記憶部４６に記憶されている。以下、これらのフレーム画像を判定画像と呼ぶこととする。本実施形態では、ゲーム状況監視部５０は、例えば、ゲーム実行部４２により生成されるフレーム画像を監視する。そして、ゲーム状況監視部５０は、公知の画像処理技術を用いて、監視されたフレーム画像と、データ記憶部４６に記憶されているいずれかの判定画像とが一致していることを確認した際に、ゲームステージが終了した、又は、ゲームオーバーとなったということを判定する。このようにして、本実施形態では、ゲームステージの終了時点やゲームオーバー時点を検出することができるようになっている。

【００５４】

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そして、本実施形態では、ゲーム状況監視部５０は、ゲームステージが終了した際、及び、ゲームオーバーとなった際に、リプレイ動画像管理部４４にその旨を通知する。すると、リプレイ動画像管理部４４は、この通知を受け付けた際に、それまでにデータ記憶部４６に出力された、そのゲームステージの開始時点から上述の通知を受け付けた時点までの１又は複数のフレーム画像、及び、上述の動画像ＩＤが含まれるリプレイ動画像を生成する。このリプレイ動画像に含まれるフレーム画像はフレームＩＤに関連付けられている。

【００５５】

そして、リプレイ動画像管理部４４は、リプレイ動画像を動画像管理システム１２に送信する。すると、動画像管理システム１２はこのリプレイ動画像を受信して、動画像管理システム１２に含まれるハードディスクドライブ等の記憶装置に出力する。このようにして、リプレイ動画像が動画像管理システム１２に登録される。

【００５６】

本実施形態では、動画像管理システム１２は、ユーザＢのクライアント１４から、検索条件となる文字列を受け付けた際に、その検索条件に合致するリプレイ動画像の概要の一覧画面（図示せず）を生成して、ユーザＢのクライアント１４に送信する。そして、ユーザＢのクライアント１４は、この一覧画面を受信して、ディスプレイに表示出力する。そして、ユーザＢが一覧画面のうちから上述のリプレイ動画像の概要が示されている部分をクリックすると、ユーザＢのクライアント１４は、このリプレイ動画像の再生要求を動画像管理システム１２に送信する。そして、動画像管理システム１２は、この再生要求を受信する。そして、動画像管理システム１２は、この再生要求に応じて、対応するリプレイ動画像に対応するリプレイ動画像表示画面２８を生成して、ユーザＢのクライアント１４に送信するとともに、リプレイ動画像のストリーミング配信を開始する。

【００５７】

本実施形態では、ユーザＢのクライアント１４は、リプレイ動画像表示画面２８を動画像管理システム１２から受信した際に、ユーザＢのクライアント１４にインストールされているクラウドサービス１０用のプラグインプログラムがクラウドサービス１０に対して、受信したリプレイ動画像の動画像ＩＤを送信して、受信したリプレイ動画像に対応する復帰データ５８が存在するか否かを問い合わせる。そして、復帰データ５８が存在する旨をクラウドサービス１０から受信すると、プラグインプログラムが、図３に示すように、リプレイ動画像表示画面２８内に、復帰リンク３０を埋め込む。

【００５８】

ユーザＢが、リプレイ動画像表示画面２８に配置されている、再生、スロー再生、早送り、巻き戻し、一時停止、等の、動画像の再生を制御するためのボタンをクリックすると、クライアント１４は、対応する信号を動画像管理システム１２に送信する。すると、動画像管理システム１２は、この信号を受信して、信号に応じた動画像の再生制御を行う。また、ユーザＢが、マウス等を用いてノブ３２を移動する操作を実行すると、クライアント１４は、移動後の位置に対応する再生位置を示す信号を動画像管理システム１２に送信する。そして、動画像管理システム１２は、この信号が示す再生位置からのリプレイ動画像の再生を行う。

【００５９】

ここで、リプレイ動画像の再生中に、ユーザＢが復帰リンク３０をクリックすると、クライアント１４は、再生されているリプレイ動画像の動画像ＩＤと再生時点のフレーム画像のフレームＩＤとの組合せに関連付けられた、そのフレーム画像に対応する状況への復帰要求（すなわち、そのフレーム画像に対応する状況からのゲームの実行要求）であるゲーム復帰要求をクラウドサービス１０に送信する。すると、クラウドサービス１０の復帰要求受付部５２が、このゲーム復帰要求を受け付ける。

【００６０】

そして、再生位置特定部５４は、受け付けた動画像ＩＤ、及び、フレームＩＤに基づいて、復帰リンク３０がクリックされた時点におけるそのリプレイ動画像の再生位置（例え

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は、ゲームステージの開始時点からの経過時間やフレーム数等）を特定する。そして、再生位置特定部５４は、このゲーム復帰要求に関連付けられている動画像ＩＤに基づいて、プレイされているゲームを特定する。また、再生位置特定部５４は、ゲームステージの開始時点から、復帰要求受付部５２が受け付けたゲーム復帰要求に関連付けられているフレームＩＤのフレーム画像が再生されたタイミングまでの時間（以下、復帰時経過時間と呼ぶ。）もしくは復帰時経過時間よりも短い時間を示し、かつ、復帰時経過時間に最も近い時間を示す経過時間データに関連付けられているスナップショットデータを特定する。

【００６１】

そして、ゲーム状況データ取得部５６が、本実施形態では、例えば、再生位置特定部５４により特定されたスナップショットデータを取得する。そして、エミュレータ管理部４０が、新規のエミュレータ３８を起動するとともに、ユーザＢのクライアント１４とこのエミュレータ３８との接続処理を実行する。そして、エミュレータ管理部４０が、再生位置特定部５４により特定されたゲームのイメージファイルをこのエミュレータ３８にロードする。そして、ゲーム実行部４２が、スナップショットデータが示す状況からのシューティングゲームの実行を開始する。ゲーム実行部４２は、具体的には、例えば、ゲーム状況データ取得部５６が取得したスナップショットデータに応じた、シューティングゲームを実行しているエミュレータ３８が管理しているメモリイメージの内容やレジスタの値の設定を行った上で、上述のシューティングゲームの実行を開始する。このようにして、そして、ユーザＢは、ユーザＢのクライアント１４で、復帰リンク３０がクリックされたタイミングでのリプレイ動画像の再生位置に応じた状況から開始されるシューティングゲームを楽しむことができる。

【００６２】

なお、本発明は上述の実施形態に限定されるものではない。

【００６３】

例えば、ゲーム状況データ取得部５６が、復帰時経過時間から、所定の時間（例えば、１分）だけ遡った時間に最も近い時間を示す経過時間データに関連付けられているスナップショットデータを取得するようにしてもよい。こうすれば、例えば、復帰リンク３０をクリックしたタイミングから少し遡ったタイミングにおける状況からゲームを開始するということができることとなる。

【００６４】

また、例えば、復帰要求受付部５２がゲーム復帰要求を受け付けた際に、ゲームステージの最初からゲームを開始したいか、ゲーム復帰要求を受け付けた際に再生されていたフレーム画像により表されている場面付近からゲームを開始したいかの選択を促す選択画面（図示せず）を出力してもよい。そして、クライアント１４が、後者の選択肢をクラウドサービス１０に送信した際には、再生位置特定部５４が、復帰時経過時間以下の時間を示し、かつ、復帰時経過時間に最も近い時間を示す経過時間データに関連付けられているスナップショットデータを特定し、前者の選択肢をクラウドサービス１０に送信した際には、ゲーム復帰要求に対応するゲームステージの開始時点のスナップショットデータを特定するようにしてもよい。

【００６５】

また、例えば、再生位置特定部５４は、受け付けたゲーム復帰要求に関連付けられているフレームＩＤのフレーム画像が示すタイミング以前、以後に関わらず、復帰時経過時間に最も近い経過時間を示す経過時間データに関連付けられているスナップショットデータを特定するようにしてもよい。

【００６６】

また、例えば、クラウドサービス１０が、受け付けたゲーム復帰要求に応じて、プレイされているゲーム、及び、スナップショットデータを特定した後で、このゲームのゲームＩＤ及びスナップショットデータに関連付けられたエミュレータ３８の起動指示をクライアント１４に送信してもよい。そして、クライアント１４がこの起動指示を受信して、エミュレータ３８を起動してもよい。そして、クライアント１４が、クライアント１４のハ

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ードディスクドライブ等に記憶されている、受信したゲームＩＤに対応するゲームプログラムのイメージファイルをエミュレータ３８にロードしてもよい。そして，クライアント１４が、受信したスナップショットデータに応じたエミュレータの設定を行って、エミュレートされたゲームを開始してもよい。なお、クライアント１４は、ハードディスクドライブ等に記憶されているイメージファイルの代わりに、光ディスクに記録されたゲームプログラムを光ディスクドライブから読み込んでエミュレータ３８にロードしてもよい。

【００６７】

また、例えば、クラウドサービス１０が、ユーザＢのクライアント１４から、ユーザＡの実況動画像の配信要求を受け付けた際に、ユーザＢのクライアント１４とユーザＡがプレイしているゲームがロードされているエミュレータ３８とを接続するようにしてもよい。そして，クラウドサービス１０が、ユーザＡのクライアント１４にストリーミング配信している実況動画像をユーザＢのクライアント１４にも配信するようにしてもよい。その後、クラウドサービス１０が，ユーザＢのクライアント１４から、ゲーム復帰要求を受け付けた際に、その時点における実況動画像の再生位置に基づいて復帰データ５８を特定してもよい。そして、クラウドサービス１０が、新規のエミュレータ３８を起動して、起動したエミュレータ３８に、特定された復帰データ５８に含まれるゲームＩＤに対応するゲームプログラムをロードしてもよい。そして、クラウドサービス１０が，ユーザＢのクライアント１４とユーザＡがプレイしているゲームがロードされているエミュレータ３８との接続を切断して，ユーザＢのクライアント１４とこの新規のエミュレータ３８とを接続してもよい。そして、ゲーム実行部４２が、特定された復帰データ５８に含まれるスナップショットデータに応じたエミュレータ３８の設定を行った上で，ゲームの実行を開始してもよい。

【００６８】

また、例えば、クライアント１４による、クラウドサービス１０から配信されている実況動画像、又は、リプレイ動画像の再生中に、クライアント１４が、再生されている動画像の動画像ＩＤと再生時点のフレーム画像のフレームＩＤとの組合せに関連付けられた、ブックマーク要求をクラウドサービス１０に送信してもよい。そして、クラウドサービス１０が、このブックマーク要求を受け付けた際に、動画像の配信を中止せず、受け付けたブックマーク要求に関連付けられている、動画像ＩＤとフレームＩＤとの組合せをブックマークデータとしてデータ記憶部４６に出力するようにしてもよい。そして、クラウドサービス１０が、クライアント１４からの要求に応じて、ブックマークデータの一覧をクライアント１４に送信するようにしてもよい。そして、クライアント１４がブックマークデータの一覧をディスプレイに表示出力してもよい。ここで、クライアント１４が、ユーザにより一覧の中から選択されたブックマークデータをクラウドサービス１０に送信したら、クラウドサービス１０が、このブックマークデータに対応するゲーム及びスナップショットデータを特定して、特定された状況からのシューティングゲームの実行を開始するようにしてもよい。なお、クラウドサービス１０は、ブックマーク要求を受け付けた際には要求元のユーザに対する課金処理を実行せずに、シューティングゲームの実行要求を受け付けた際に要求元のユーザに対する課金処理を実行するようにしてもよい。

【００６９】

また，この場合において、クライアント１４が実況動画像を再生している際には、クラウドサービス１０が、ブックマーク要求の受付をトリガとして、リプレイ動画像管理部４４によるフレーム画像のデータ記憶部４６への出力，及び、復帰データ生成部４８による復帰データの生成・出力を開始するようにしてもよい。

【００７０】

また、例えば、復帰要求受付部５２がゲーム復帰要求を受け付けた際に、ゲームの実行を開始するか否かを確認する画面をクライアント１４に送信してもよい。そして、復帰要求受付部５２がゲームの実行を開始する旨をクライアント１４から受け付けてはじめて、再生位置特定部５４が、復帰リンク３０がクリックされた時点におけるそのリプレイ動画像の再生位置を特定するようにしてもよい。

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【００７１】
また、例えば、クラウドサービス１０が、上述の動画像管理システム１２が提供するサービスを提供するようにしてもよい。また、クラウドサービス１０が、クライアント１４から受け付けるキー情報をその受け付けたタイミングを示すデータと関連付けてキーログとしてデータ記憶部４６に出力してもよい。そして、リプレイ動画像管理部４４が、キーログに基づいてリプレイ動画像に含まれる各フレーム画像を生成して、クライアント１４にストリーミング配信するようにしてもよい。

【００７２】
また、例えば、データ記憶部４６には、予め、判定画像の代わりに、ゲームステージの終了時点や、ゲームオーバー時点における、エミュレータ３８が管理しているエミュレートされたメモリイメージの内容やレジスタの値が記憶されていてもよい。そして、ゲーム状況監視部５０が、エミュレータ３８が管理しているエミュレートされたメモリイメージの内容やレジスタの値を監視して、その監視結果とデータ記憶部４６に記憶されている上述のデータとの比較結果に基づいて、ゲームステージの終了時点やゲームオーバー時点を検出するようにしてもよい。

【００７３】
また、例えば、リプレイ動画像管理部４４が、リプレイ動画像を生成する際に、ユーザＡのクライアント１４から、リプレイ動画像を生成するフレーム画像の範囲を指定する情報を受け付けてもよい。そして、リプレイ動画像管理部４４は、指定された範囲のフレーム画像を含んで構成されるリプレイ動画像を生成してもよい。そして、リプレイ動画像管理部４４は、指定された範囲外のフレーム画像に対応する復帰データ５８をデータ記憶部４６から削除するようにしてもよい。

【００７４】
また、例えば、動画像ＩＤが、復帰データ５８が存在するか否かを示す情報を含んでいてもよい。そして、ユーザＢのクライアント１４が、リプレイ動画像表示画面２８を動画像管理システム１２から受信した際に、ユーザＢのクライアント１４にインストールされているクラウドサービス１０用のプラグインプログラムが、受信したリプレイ動画像の動画像ＩＤに基づいて、このリプレイ動画像に対応する復帰データ５８が存在するか否かを判定してもよい。そして、プラグインプログラムは、リプレイ動画像に対応する復帰データ５８が存在すると判定した場合に、リプレイ動画像表示画面２８内に、復帰リンク３０を埋め込むようにしてもよい。

【００７５】
また、リプレイ動画像の再生中に、ユーザＢが復帰リンク３０をクリックし、クライアント１４がゲーム復帰要求をクラウドサービス１０に送信した際に、クラウドサービス１０が、このリプレイ動画像に対応する復帰データ５８が存在するか否かを確認してもよい。そして、復帰データ５８が存在する場合に、上述のように、再生位置特定部５４が、プレイされているゲームの特定、及び、スナップショットデータの特定を行ってもよい。

【００７６】
また、例えば、ユーザＡが、自らがプレイしたプレイ内容を表すリプレイ動画像が再生されているリプレイ動画像表示画面２８の閲覧中に、ユーザＡが復帰リンク３０をクリックしてもよい。この場合、ユーザＡのクライアント１４は、この再生位置に対応するゲーム復帰要求をクラウドサービス１０に送信する。そして、クラウドサービス１０は、ゲーム復帰要求に応じた状況からのゲームの実行を開始して、そのゲームのプレイ内容を表す実況動画像をユーザＡのクライアント１４にストリーミング配信する。こうすれば、例えば、ユーザＡが、自らがプレイした内容を表すリプレイ動画像を見ていて、再度そのゲームを楽しみたくなったときなどに、自らが指定した再生位置に応じた状況からそのゲームを楽しむことができる。

【００７７】
また、例えば、ゲーム状況データは、例えば、ゲームにおけるパラメータやステータスを示すデータでもよい。また、動画像ＩＤが、上述のようなリプレイ動画像に含まれるメ

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タ情報ではなく、リプレイ動画像に関連付けられている属性データであってもよい。また、例えば、クラウドサービス１０で実現されている機能が単一のサーバにより実現されていてもよい。

【００７８】

また、ゲームプログラムはエミュレータ３８上で実行される必要はなく、例えば、クラウドサービス１０やクライアント１４のシステムソフトウェア（オペレーティングシステム等）上で実行されてもよい。また、例えば、クライアント１４がゲーム装置である場合において、リプレイ動画像の再生中に、ユーザＢが復帰リンク３０をクリックした際に、クライアント１４が、再生されているリプレイ動画像の動画像ＩＤと再生時点のフレーム画像のフレームＩＤとの組合せに対応する、オブジェクト群の位置や向きを示すゲーム状況データを生成するようにしてもよい。そして、ゲーム装置であるクライアント１４が、生成されたゲーム状況データが示す状況からリプレイ動画像に対応するゲームを実行するようにしてもよい。

【００７９】

また、動画像管理システム１２は、クラウドサービス１０を提供する事業者とは異なる事業者によって動画像配信サービスが提供されている一般的なサーバであっても構わない。

【００８０】

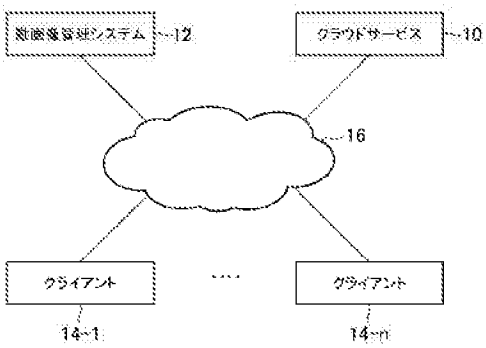
また、上記の具体的な数値や文字列や図面中の具体的な数値や文字列は例示であり、これらの数値や文字列には限定されない。

【符号の説明】

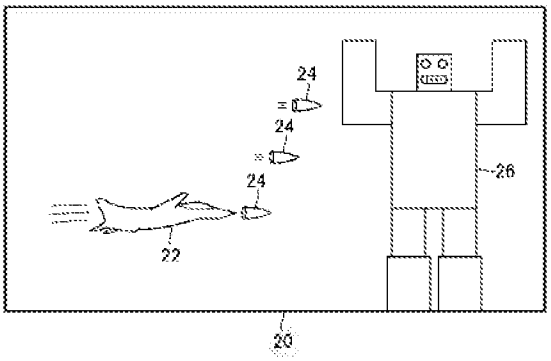
【００８１】

１０　クラウドサービス、１２　動画像管理システム、１４　クライアント、１６　コンピュータネットワーク、２０　ゲーム画面、２２　プレイヤオブジェクト、２４　弾丸オブジェクト、２６　敵オブジェクト、２８　リプレイ動画像表示画面、３０　復帰リンク、３２　ノブ、３４　管理プロセス、３６　サービス提供プロセス、３８　エミュレータ、４０　エミュレータ管理部、４２　ゲーム実行部、４４　リプレイ動画像管理部、４６　データ記憶部、４８　復帰データ生成部、５０　ゲーム状況監視部、５２　復帰要求受付部、５４　再生位置特定部、５６　ゲーム状況データ取得部、５８　復帰データ。

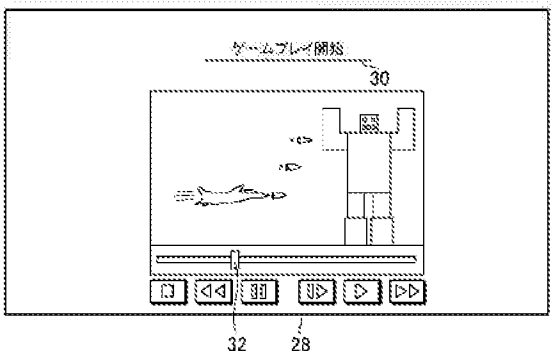
【図１】



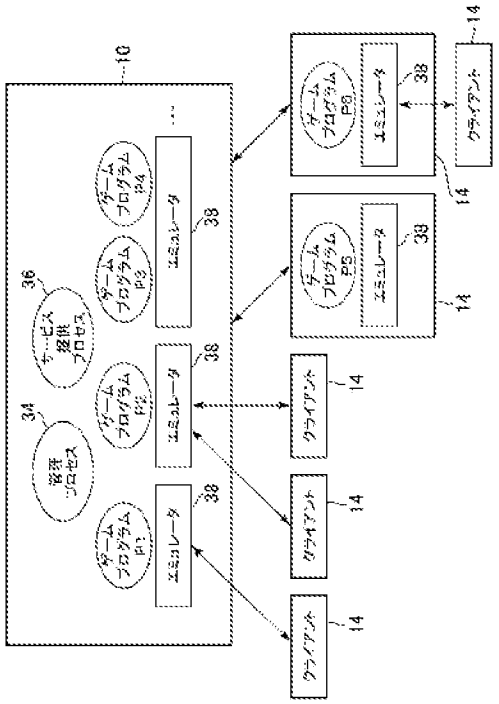
【図２】



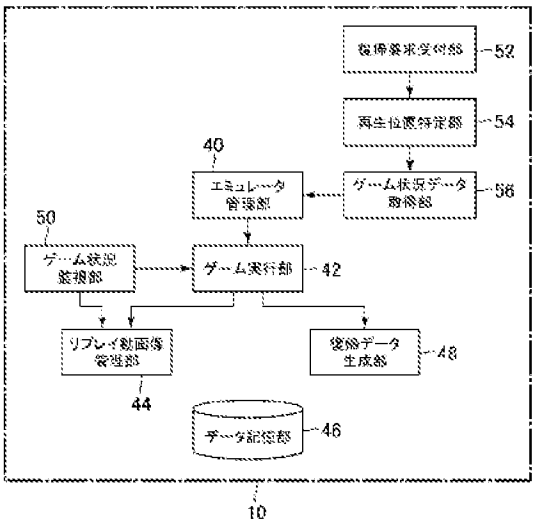
【図３】



【図４】



【図５】



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【図６】

動画像ID	ゲームID	経過時間データ	スナップショットデータ
0001	001	00:00:00	……
0001	001	00:00:05	……
0001	001	00:00:10	……
0001	001	00:00:15	……

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22850 7590 11/15/2018

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

DATE MAILED: 11/15/2018

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	02/15/2019

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	02/15/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3717	463-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

Supercell
Exhibit 1002
Page 264

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 11/15/2018

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	
ART UNIT	**PAPER NUMBER**
3717	

DATE MAILED: 11/15/2018

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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Exhibit 1002
Page 265

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, TAIKI	
	Examiner MASUD AHMED	Art Unit 3717	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *10/10/18*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *17-41*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☒ All b) ☐ Some *c) ☐ None of the:
   1. ☒ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

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BIB DATA SHEET

CONFIRMATION NO. 3602

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/393,646	12/29/2016	463	3717	481331US

APPLICANTS
Gree, Inc., Minato-ku, JAPAN;

INVENTORS
Taiki EDA, Tokyo, JAPAN;

**** CONTINUING DATA ***************************
This application is a CON of 14/983,984 12/30/2015 PAT 9597594
which is a CON of PCT/JP2014/075673 09/26/2014

**** FOREIGN APPLICATIONS ***************************
JAPAN 2014-080554 04/09/2014
JAPAN 2013-202721 09/27/2013

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
01/10/2017

Foreign Priority claimed ☑ Yes ☐ No 35 USC 119(a-d) conditions met ☑ Yes ☐ No Verified and Acknowledged /MASUD AHMED/ Examiner's Signature	☐ Met after Allowance MA Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		JAPAN	15	29	4

ADDRESS
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FILING FEE RECEIVED		
2740	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

DOCKET NO.: 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:
Taiki EDA.

SERIAL NO: 15/393,646 GROUP: 3717

FILED: December 29, 2016 EXAMINER: AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

STATEMENT OF RELEVANCY

Reference AAC on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AAD on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AAF on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AAQ on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AAT on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AAW on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AAX on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABA on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABB on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABC on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABD on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Reference ABE on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABF on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABG on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABH on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference ABI on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

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Reference ABK on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

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Reference AFF on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

/MASUD AHMED/ 11/11/2018

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	"Wikia, Clash of Clans WiKi Navigation", captured by Wayback Machine, submitted July 27, 2017, 4 pages
	AX	Declaration of Tommi Suvinen, submitted September 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 56 pages
	AY	Declaration of Marika Appel, submitted September 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 41 pages
	AZ	"Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, printed September 11, 2017, https://web.archive.org/web/20130915081112/http://forum.supercell.net:80/showthread.php/149687-Mastermind-s-In-Game-Builder-Idea-(with-LOADS-of-picutres!), 16 pages

[redacted] Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	11/11/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
	481331US	15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT	
	Taiki EDA	
	FILING DATE	GROUP
	December 29, 2016	3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	"Thread: Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, submitted September 15, 2017, http://forum.supercell.net:80/showthread.php/149687-Mastermind-s-In-Game-Builder-Idea-(with-LOADS-of-picutres!), 13 pages
	AAB	"Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, printed September 12, 2017, https://forum.supercell.com/showthread.php/149687-Mastermind-s-In-Game-Builder-Ideas-(with-LOADS-of-picutres!), 13 pages
	AAC	Takeo Nasu, A Report on Operation Check of Hotel Giants 2, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 6 pages
	AAD	Shinya Kamata, A Report on Operation Check of Winning Eleven 2011, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 7 pages
	AAE	Declaration of Sean Oiesiuk, submitted December 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 63 pages
	AAF	Takeo Nasu, A Report on Operation Check of Hotel Giants 2 ver.2, submitted January 26, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 4 pages
	AAG	"StarCraft II: Wings of Liberty, Overview", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Overview, 2 pages
	AAH	"StarCraft II: Wings of Liberty, Gameplay", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Gameplay, 2 pages
	AAI	"StarCraft II: Wings of Liberty, Marine", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Units/Terran/Marine, 3 pages
	AAJ	"StarCraft II: Wings of Liberty, Structures", captured by Wayback Machine, submitted September 15, 2017, https://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures, 2 pages
	AAK	"StarCraft II: Wings of Liberty, Terran", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures/Terran, 2 pages
	AAL	"StarCraft II: Wings of Liberty, Missile Turret", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures/Terran/Missile Turret, 2 pages
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	AB						
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	Art Unit
	MASUD AHMED	3717

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	29-42	11/11/2018	MA

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	11/11/2018	MA
CONDUCTE NPL SEARCH ON GOOGLE FOR BUILDING GAMES	11/11/2018	MA
VERIFIED THE APPROVAL OF THE TD	11/11/2018	MA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	TEXT SEARCHED WITHIN ALL THE CLASSES AND THE SUBCLASSES INCLUDING FOREIGN DATABASES ON EAST	11/11/2018	MA
	SEARCHED ALL THE CLASSES AND THE SUBCLASSES LISTED ON ISSUE CLASSIFICATION	11/11/2018	MA

	/M.A./ Primary Examiner.Art Unit 3717

Supercell
Exhibit 1002
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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

CPC						
Symbol					**Type**	**Version**
A63F		13	/	537	F	2014-09-02
A63F		13	/	31	I	2014-09-02
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CPC Combination Sets							
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NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	11/11/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
463	25	A	6	3	F	9 / 24 (2006.0)						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	11/11/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	11/11/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

EAST Search History

EAST Search History (Prior Art)

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L3	6804	L2 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/11/11 16:51
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S7	12304	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
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S54	4392	S53 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
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		"20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.				
S56	50	S55 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S57	50	S49 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S58	4390	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/05/10 02:05
S59	3794	S58 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S60	4392	S52 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S61	50	S55 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S62	14273	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S63	776	S62 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S64	616	S63 @ad<="20140409"	US-PGPUB; USPAT;	AND	OFF	2017/05/10 02:05

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S65	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/10 02:06
S66	50	S65 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S67	616	S63 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S68	50	S49 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S69	11	(("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/11/12 19:46
S70	6	(("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	OR	OFF	2017/11/12 19:46
S71	33	"1574238"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2017/11/12 20:27

			IBM_TDB			
S72	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
S73	55	S72 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S74	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
S75	55	S74 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S76	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" |	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58

		"8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.				
S77	55	S76 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S78	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
S79	55	S78 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S80	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S81	838	S80 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S82	634	S81 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S83	4405	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/11/12 20:58
S84	3794	S83 @ad<="20140409"	US-PGPUB; USPAT; USOCR;	AND	OFF	2017/11/12 20:58

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S85	121453	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S86	5969	S85 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S87	4457	S86 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S88	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S89	838	S88 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S90	634	S89 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S91	55	S76 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S92	55	S76 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S93	83	("20020154174" | "20030008696" |	US-PGPUB;	OR	OFF	2018/03/3

		"20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	USPAT; USOCR			19:23
S94	56	S93 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S95	15801	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S96	873	S95 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S97	640	S96 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S98	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/30 19:23
S99	56	S98 @ad<="20140409"	US-PGPUB;	AND	OFF	2018/03/30

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			19:23
S100	126221	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S101	6280	S100 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S102	4495	S101 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S103	4495	S102 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S104	640	S96 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S105	15801	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S106	873	S105 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S107	640	S106 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2018/03/30 19:23

			IBM_TDB			
S108	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/30 19:23
S109	56	S108 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S110	640	S96 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S111	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/30 19:24
S112	56	S111 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:24
S113	56	S93 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2018/03/30 19:24

			IBM_TDB			
S114	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2018/03/30 19:24
S115	56	S114 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:24
S116	56	S111 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:24
S117	90	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/21 19:40
S118	57	S117 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S119	130153	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2018/07/21 19:40

			IBM_TDB			
S120	6537	S119 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S121	4520	S120 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S122	90	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/21 19:40
S123	57	S122 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S124	90	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/21 19:40
S125	57	S124 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2018/07/21 19:40

			IBM_TDB			
S126	57	S117 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S127	4520	S120 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
S128	16338	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S129	903	S128 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S130	642	S129 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S131	16338	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S132	903	S131 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S133	642	S132 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:41
S134	4520	S121 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS;	AND	OFF	2018/07/21 19:41

			EPO; JPO; DERWENT; IBM_TDB			

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Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Office Action for corresponding European Patent Application No. 14848832.3 dated October 9, 2018 (6 pages)
	AX	
	AY	
	AZ	

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this information disclosure statement. 37 C.F.R. 1.704(d) And, each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1)

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Electronic Acknowledgement Receipt

EFS ID:	34070984
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	22-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	11:10:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	1377034 ac96eed536dd9e4570fd3c0362805bbaa71b6ded	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Non Patent Literature	3	8
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Transmittal Letter	1	1
Warnings:			
Information:			
	Total Files Size (in bytes):	1377034	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No.: 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Taiki EDA

SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

This is a Request for Continued Examination (RCE) under 37 C.F.R. §1.114 of the above-identified application.

Submission required under 37 C.F.R. §1.114

Previously Submitted:

- ☐ Consider the amendment(s)/reply under 37 C.F.R. §1.116 previously filed on
- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on

Enclosed:

- ■ Amendment/Reply
- ■ Information Disclosure Statement (IDS)
- ☐ Track I Prioritized Examination
- ☐ Other:

FEES	RATE	CALCULATIONS
☐ Suspension of action on the above-identified application is requested under 37 C.F.R. §1.103(c) for a period of months.	$140.00	$0.00
■ RCE Fee required under 37 C.F.R. §1.17(e) - **2nd and subsequent request**	$1,900.00	$1,900.00
☐		$0.00
☐		$0.00
TOTAL OF ABOVE CALCULATIONS:		$1,900.00
☐ REDUCTION BY 50% FOR FILING AS SMALL ENTITY		$0.00
TOTAL:		$1,900.00

■ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount of **$1,900.00.**

■ Please charge any additional Fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to Deposit Account No. **15-0030**.

■ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 CFR 1.136, and any additional fees required under 37 CFR 1.136 for any necessary extension of time may be charged to Deposit Account No. **15-0030**

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Noah K. Flaks
Registration No. 69,541

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413-2220
(OMMN 12/11)

DOCKET NO: 481331US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	
TAIKI EDA	: EXAMINER: AHMED, MASUD
SERIAL NO: 15/393,646	:
FILED: DECEMBER 29, 2016	: GROUP ART UNIT: 3717
FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	:

AMENDMENT UNDER 37 C.F.R. §1.114

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

In response to the Notice of Allowance dated September 6, 2018, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

IN THE CLAIMS

Please amend the claims as follows:

1-16. (Canceled)

17. (Original) A method performed by a portable electronic device, the method comprising:

executing a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by a second player;

receiving a command to create a template from the first player;

creating, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

creating a plurality of images that each correspond to one of the plurality of templates;

displaying a screen including the plurality of images;

receiving a selection corresponding to one of the displayed images; and

applying a template corresponding to the received selection to a predetermined area within the game space.

18. (Original) The method of claim 17, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

19. (Original) The method of claim 17, comprising:

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displaying an interface including the game space and images corresponding to a plurality of game contents; and

receiving a command to allocate at least one of the plurality of game contents in an area of the game space; and

allocating the at least one of the plurality of game contents to the area of the game space based on the received command.

20. (Original) The method of claim 19, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

21. (Original) The method of claim 17, comprising:

allocating the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

22. (Original) The method of claim 17, comprising:

registering the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the portable electronic device.

23-29. (Canceled)

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30. (Previously Presented) One or more non-transitory computer readable media, including computer-program instructions, which when executed by an electronic device, cause the electronic device to:

execute a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by another player;

receive a command to create a template from the first player;

create, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

create a plurality of images that each correspond to one of the plurality of templates;

display a screen including the plurality of images;

receive a selection corresponding to one of the displayed images; and

apply a template corresponding to the received selection to the game space.

31. (Previously Presented) The one or more non-transitory computer readable media of claim 30, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

32. (Previously Presented) The one or more non-transitory computer readable media of claim 30, wherein the computer-program instructions, when executed by the electronic device, cause the electronic device to:

display an interface including the game space and images corresponding to a plurality of game contents;

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Page 321

receive a command to allocate at least one of the plurality of game contents in an area of the game space; and

allocate the at least one of the plurality of game contents to the area of the game space based on the received command.

33. (Previously Presented) The one or more non-transitory computer readable media of claim 32, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

34. (Previously Presented) The one or more non-transitory computer readable media of claim 30, wherein the computer-program instructions, when executed by the electronic device, cause the electronic device to:

allocate the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

35. (Currently Amended) The one or more non-transitory computer readable media of claim 30, wherein the computer-program instructions, when executed by the electronic device, cause the electronic device to:

register the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the ~~portable~~ electronic device.

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36. (Previously Presented) An electronic device comprising:

circuitry configured to

execute a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by another player;

receive a command to create a template from the first player;

create, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

create a plurality of images that each correspond to one of the plurality of templates;

display a screen including the plurality of images;

receive a selection corresponding to one of the displayed images; and

apply a template corresponding to the received selection to the game space.

37. (Previously Presented) The electronic device of claim 36, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

38. (Previously Presented) The electronic device of claim 36, wherein the circuitry is configured to:

display an interface including the game space and images corresponding to a plurality of game contents;

receive a command to allocate at least one of the plurality of game contents in an area of the game space; and

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Exhibit 1002
Page 323

allocate the at least one of the plurality of game contents to the area of the game space based on the received command.

39. (Previously Presented) The electronic device of claim 38, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

40. (Previously Presented) The electronic device of claim 36, wherein the circuitry is configured to:

allocate the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

41. (Currently Amended) The electronic device of claim 36, wherein the circuitry is configured to:

register the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the ~~portable~~ electronic device.

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REMARKS/ARGUMENTS

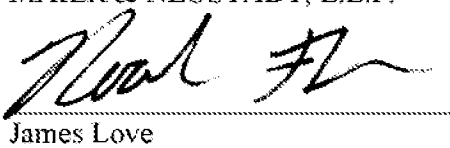
Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 17-22 and 30-41 are currently pending in the present application. Claims 35 and 41 are amended by the present amendment. More specifically, the amendments to Claims 35 and 41 were made to correct minor antecedent informalities in the claims. Support for the amended claims is self-evident from the originally filed specification. No new matter is presented.

Consequently, in view of the present amendment and in light of the above discussion, the application as amended herewith is believed to also be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.



James Love
Attorney of Record
Registration No. 58,421

Noah K. Flaks
Registration No. 69,541

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

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CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

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Respectfully submitted,

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MAIER & NEUSTADT, L.L.P.

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LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
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FOREIGN PATENT DOCUMENTS

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	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	"Wikia, Clash of Clans WiKi Navigation", captured by Wayback Machine, submitted July 27, 2017, 4 pages
	AX	Declaration of Tommi Suvinen, submitted September 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 56 pages
	AY	Declaration of Marika Appel, submitted September 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 41 pages
	AZ	"Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, printed September 11, 2017, https://web.archive.org/web/20130915081112/http://forum.supercell.net:80/showthread.php/149687-Mastermind-s-In-Game-Builder-Idea-(with-LOADS-of-picutres!), 16 pages

[redacted] Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
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	Taiki EDA	
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		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	AAA	"Thread: Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, submitted September 15, 2017, http://forum.supercell.net:80/showthread.php/149687-Mastermind-s-In-Game-Builder-Idea-(with-LOADS-of-picutres!), 13 pages
	AAB	"Mastermind's In-Game Builder idea (with LOADS of pictures!)", captured by Wayback Machine, printed September 12, 2017, https://forum.supercell.com/showthread.php/149687-Mastermind-s-In-Game-Builder-Ideas-(with-LOADS-of-picutres!), 13 pages
	AAC	Takeo Nasu, A Report on Operation Check of Hotel Giants 2, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 6 pages
	AAD	Shinya Kamata, A Report on Operation Check of Winning Eleven 2011, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 7 pages
	AAE	Declaration of Sean Oiesiuk, submitted December 14, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 63 pages
	AAF	Takeo Nasu, A Report on Operation Check of Hotel Giants 2 ver.2, submitted January 26, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 4 pages
	AAG	"StarCraft II: Wings of Liberty, Overview", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Overview, 2 pages
	AAH	"StarCraft II: Wings of Liberty, Gameplay", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Gameplay, 2 pages
	AAI	"StarCraft II: Wings of Liberty, Marine", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Units/Terran/Marine, 3 pages
	AAJ	"StarCraft II: Wings of Liberty, Structures", captured by Wayback Machine, submitted September 15, 2017, https://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures, 2 pages
	AAK	"StarCraft II: Wings of Liberty, Terran", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures/Terran, 2 pages
	AAL	"StarCraft II: Wings of Liberty, Missile Turret", captured by Wayback Machine, submitted September 15, 2017, http://gamewaise.co/games/36254/ StarCraft-II-Wings-of-Liberty/Structures/Terran/Missile Turret, 2 pages
	AAM	"StarCraft II: Arcade", captured by Wayback Machine, submitted September 15, 2017, us.battle.net/sc2/en/game/maps-and-mods/, 3 pages
	AAN	"StarCraft II: Map Making Tutorials, Terrain Module, Introduction", captured by Wayback Machine, submitted September 15, 2017, http://us.battle.net/sc2/en/game/maps-and-mods/tutorials/terrain/1, 3 pages
	AAO	"StarCraft II: Map Making Tutorials, Terrain Module, Place some units", captured by Wayback Machine, submitted September 15, 2017, http://us.battle.net/sc2/en/game/maps-and-mods/tutorials/terrain/3, 2 pages
	AAP	"StarCraft II: Map Making Tutorials, Terrain Module, Publishing", captured by Wayback Machine, submitted September 15, 2017, http://us.battle.net/sc2/en/game/maps-and-mods/tutorials/publishing, 6 pages
	AAQ	Takeo Nasu, A Report on Operation Check of StarCraft II, ver. 1, submitted December 21, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 6 pages

Examiner	Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	FILING DATE	GROUP
	December 29, 2016	3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAR	"StarCraft II: Wings of Liberty, Map Making Tutorials, Terrain Module, Publishing", captured by Wayback Machine, submitted January 9, 2018, http://us.battle.net:80/sc2/en/game/maps-and-mods/tutorials/publishing, 5 pages
	AAS	"StarCraft II: Wings of Liberty, Map Making Tutorials, Terrain Module, Map Properties", captured by Wayback Machine, submitted January 9, 2018, http://us.battle.net:80/sc2/en/game/maps-and-mods/tutorials/terrain/5, 5 pages
	AAT	"Play Station 3 System Software 4.00, User's Guide, Save Data", captured by Wayback Machine, submitted October 17, 2017, http://manuals.playstation.net/document/jp/ps3/current/game/3savedata.html, 2 pages
	AAU	Declaration of Eric Gray submitted November 8, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 3 pages
	AAV	Declaration of Antti Takala submitted November 9, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 19 pages
	AAW	Takeo Nasu, A Report of Operation Check of Clash of Clans ver. 5.2 on Actual Device, submitted November 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 6 pages
	AAX	Takeo Nasu, A Report on Operation Check of StarCraft II, submitted October 20, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 3 pages
	AAY	"StarCraft 2 Beta: Battle.Net Impressions", printed September 28, 2017, https://gamerant.com/starcraft-2-beta-battlenet-impressions-paul-11666/3/, 5 pages
	AAZ	"StarCraft II, Map Making Tutorials, Terrain Module, Map Properties", captured by Wayback Machine, submitted December 26, 2017, http://us.battle.net:80/sc2/en/game/maps-and-mods/tutorials/terrain/5, 7 pages
	ABA	Nobuhiko Suzuki, A Report on Operation Check of Civilization IV, submitted May 8, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 4 pages
	ABB	"Civilization IV, weekly article, "Bummeido, the snack at 3AM" vol. 1", printed September 21, 2017, http://www.4gamer.net/weekly/civ4_001.shtml, 6 pages
	ABC	"Tips of Backup Technics for Saved Data of Popular Game Applications, before Purchasing New iPhone", September 16, 2013, http://www.appbank.net/2013/09/16/iphone-news/66683.php, 12 pages
	ABD	"How to migrate Data of Clash of Clans from iPhone5 to iPad mini", July 25, 2013, https://blogs.yahoo.co.jp/syuel1009/68066740.html, 4 pages
	ABE	"Clash of Clans, Playing it lightly with iPhone Outside, Playing it deliberately with iPad at Home, and Setting of Notification", July 5, 2013, http://kitchencompany.jp/post-3464/, 3 pages
	ABF	Supercell's First Brief, submitted July 6, 2018 in Case No. H30 WA 10447 of JP Patent No. 5676032, 87 pages
	ABG	Nobuhiko Suzuki, A Report of Operation Check of Hotel Giants 2 on Actual Device, submitted July 6, 2018 in Case No. H30 WA 10447 of JP Patent No. 5676032, 7 pages
	ABH	Supercell's First Brief, submitted July 20, 2018 in Case No. H30 WA 10446 of JP Patent No. 5903517, 78 pages

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LIST OF REFERENCES CITED BY APPLICANT		APPLICANT	
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		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	ABI	Supercell's First Brief, submitted January 26, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 45 pages
	ABJ	Gree's First Brief, submitted February 5, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 112 pages
	ABK	Supercell's Third Brief, submitted March 16, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 18 pages
	ABL	Gree's Second Brief, submitted May 16, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 16 pages
	ABM	Supercell's Fourth Brief, submitted May 8, 2018 in Case No. H29 WA 34031 of JP Patent No. 5952946, 72 pages
	ABN	Supercell's First Brief, submitted February 6, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 60 pages
	ABO	Gree's First Brief, submitted February 16, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 37 pages
	ABP	Supercell's Third Brief, submitted March 23, 2018 in Case No. H29 WA 40193 of JP Patent No. 5952947, 26 pages
	ABQ	Supercell's First Brief, submitted June 25, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 72 pages
	ABR	Supercell's Third Brief, submitted July 18, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 45 pages
	ABS	Gree's Second Brief, submitted September 4, 2018 in Case No. H30 WA 11146 of JP Patent No. 5953448, 8 pages
	ABT	Motion for Preliminary Injunction, submitted March 29, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 31 pages
	ABU	"Internet Archive's Terms of Use, Privacy policy and copyright policy", Archive.org, December 31, 2014, https://archive.org/about/terms.php, 3 pages
	ABV	"Internet News of Stock, Nikkei.com", captured by Wayback Machine, printed October 20, 2017, https://web.archive.org/web/20171017091811/https://nikkei.com/markets/kabu/, 1 page
	ABW	"Internet News of Stock, Nikkei.com", October 17, 2017, https://www.nikkei.com/article/DGXLAS3LTSEC1_X11C17A0000000/, 1 page
	ABX	"Wayback Machine PlayBack... now with Timestamps!", Internet Archive Blogs, October 5, 2017, 1 page
	ABY	"Function of Presenting Elements configuring Web Pages with Timestamps in List added to Wayback Machine, the Internet Archive", Current Awareness Portal by the National Diet Library, October 5, 2017, http://current.ndl.go.jp/node/34792, 2 pages

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	ABZ	Hirofumi Tada, Search Report of Wayback Machine, submitted October 20, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 9 pages
	ACA	Ada Lerner et al., Rewriting History: Changing the Archived Web from the Present, published at the 22nd ACM Conference on Computer and Communications Security, printed October 30, 2017, 15 pages
	ACB	Supercell's Second Brief, submitted June 1, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 86 pages
	ACC	Gree's First Brief, submitted June 26, 2018 in Case No. H30 YO 22032 of JP Patent No. 5676032, 21 pages
	ACD	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22016 of JP Patent No. 5903517, 24 pages
	ACE	Search Result of "Image File, Meta Data, Edit", Google.co.jp, printed December 28, 2017, 2 pages
	ACF	"Information Requests, The Internet Archive's Policy for Responding to Information Requests", Archive.org, printed December 28, 2017, https://archive.org/legal/, 2 pages
	ACG	"Standard Affidavit", Archive.org, printed December 28, 2017, https://archive.org/legal/affidavit.php, 1 page
	ACH	"App Statuses", Apple .com, printed October 23, 2017, 3 pages
	ACI	Supercell's Second Brief, submitted June 1, 2018 in Case No. H30 YO 22016 of JP Patent No. 5903517, 78 pages
	ACJ	Gree's First Brief, submitted June 18, 2018 in Case No. H30 YO 22016 of JP Patent No. 5903517, 19 pages
	ACK	Motion for Preliminary Injunction, submitted March 2, 2018 in Case No. H30 YO 22019 of JP Patent No. 5911992, 31 pages
	ACL	Supercell's Second Brief, submitted May 31, 2018 in Case No. H30 YO 22019 of JP Patent No. 5911992, 77 pages
	ACM	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22017 of JP Patent No. 5952946, 23 pages
	ACN	Supercell's First Brief, submitted May 15, 2018 in Case No. H30 YO 22017 of JP Patent No. 5952946, 18 pages
	ACO	Gree's First Brief, submitted July 6, 2018 in Case No. H30 YO 22017 of JP Patent No. 5952946, 27 pages
	ACP	Motion for Preliminary Injunction, submitted April 6, 2018 in Case No. H30 YO 22042 of JP Patent No. 5952947, 31 pages

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	ACQ	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 22 pages
	ACR	Supercell's Second Brief, submitted May 31, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 74 pages
	ACS	Supercell's Fourth Brief, submitted July 31, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 10 pages
	ACT	Nobuhiko Suzuki, A Report on Operation Check of Clash of Clans as of the Filing Date of the Original Application, submitted July 30, 2018, 9 pages
	ACU	Naoki Okumura, A Report on Operation Check of Clash of Clans, submitted July 31, 2018, 4 pages
	ACV	Naoki Okumura, A Report on Operation Check of Clash of Clans, submitted July 30, 2018, 5 pages
	ACW	"Registration Reopened: Clash of Clans Fan Meet Up #1 - San Francisco", printed July 19, 2018, https://forum.supercell.com/showthread.php/150023-Registration-Reopend-Clash-of-Clans-Fan-Meet-Up-1-San-Francisco, 2 pages
	ACX	"Clash of Clans Meet Up: September 25th!", printed July 19, 2018, https://forum.supercell.com/showthread.php/149458-Clash-of-Clans-Meet-Up-September-25th%21, 4 pages
	ACY	"Clash of Clans: Perfect Translation of Tutorial! Let's get started!", APPBANK.net, June 5, 2013, 19 pages
	ACZ	"Surging Players! Lecture of How to Play "Clash of Clans"", Famitsu.com, June 4, 2013, https://app.famitsu.com/20130604_173029/, 11 pages
	ADA	"Village Edit Mode of Clash of Clans", printed July 5, 2018, http://clashofclans.wikia.com/wiki/Village_Edit_Mode, 4 pages
	ADB	Motion for Preliminary Injunction, submitted February 28, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 33 pages
	ADC	Supercell's Answer, submitted March 15, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 3 pages
	ADD	Kengo Nakajima, Technology for Online Game, Gijutsu-Hyohron Co., Ltd., ISBN978-4-7741-4580-6 C3055, April 25, 2011, 7 pages (p79-83, cover page, and back cover page)
	ADE	Supercell's Fourth Brief, submitted June 19, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 5 pages
	ADF	Gree's Second Brief, submitted June 29, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 20 pages
	ADG	Supercell's Fifth Brief, submitted July 20, 2018 in Case No. H30 YO 22015 of JP Patent No. 5953448, 45 pages

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		OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)
	ADH	Supercell's Petition, submitted July 6, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 5 pages
	ADI	Supercell's First Brief, submitted August 22, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 36 pages
	ADJ	Supercell's Third Brief, submitted October 17, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 59 pages
	ADK	Gree's Second Brief, submitted November 8, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 40 pages
	ADL	Supercell's Fourth Brief, submitted November 30, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 8 pages
	ADM	Gree's Third Brief, submitted December 20, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 12 pages
	ADN	Gree's Fourth Brief, submitted February 6, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 11 pages
	ADO	Supercell's Fifth Brief, submitted January 26, 2018 in Case No. H29 YO 22046 of JP Patent No. 5676032, 28 pages
	ADP	Affidavit of Christopher Butler, submitted December 11, 2017 in Case No. H29 YO 22046 of JP Patent No. 5676032, 21 pages
	ADQ	Supercell's Answer, submitted September 7, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 35 pages
	ADR	Supercell's First Brief, submitted October 11, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 44 pages
	ADS	Supercell's Second Brief, submitted November 27, 2017 in Case No. H29 YO 22172 of JP Patent No. 5903518, 18 pages
	ADT	"Executive Profile: Lassi Leppinen", Bloomberg.com, printed October 26, 2017, 2 pages
	ADU	Supercell's Third Brief, submitted January 9, 2018 in Case No. H29 YO 22172 of JP Patent No. 5903518, 28 pages
	ADV	Gree's Seventh Brief, submitted February 16, 2018 in Case No. H29 YO 22172 of JP Patent No. 5903518, 22 pages
	ADW	Supercell's First Brief, submitted August 22, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 35 pages
	ADX	Supercell's Third Brief, submitted October 17, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 49 pages

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	ADY	Gree's Second Brief, submitted November 8, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 31 pages
	ADZ	Supercell's Fourth Brief, submitted December 22, 2017 in Case No. H29 YO 22043 of JP Patent No. 5953448, 22 pages
	AEA	Jun Wun Chul, Online Game Programming, Software Publishing Co., ISBN4-7973-2847-9, March 3, 2005, 12 pages (p iii, p iv, p v, p 1-7, cover page and back cover page)
	AEB	Yuichiroh Ohtsuki, Online Programming Class with C: Starting from Fourteen, Rutles Inc., ISBN978-4-89977-240-8, April 10, 2009, 15 pages (p 144-156, cover page and back cover page)
	AEC	Gree's Third Brief, submitted January 19, 2018 in Case No. H29 YO 22043 of JP Patent No. 5953448, 17 pages
	AED	Supercell's First Brief, submitted August 25, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 28 pages
	AEE	Supercell's First Brief, submitted October 13, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 58 pages
	AEF	Gree's Second Brief, submitted November 9, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 26 pages
	AEG	Supercell's Fourth Brief, submitted December 21, 2017 in Case No. H29 YO 22042 of JP Patent No. 5903517, 26 pages
	AEH	Gree's Third Brief, submitted January 22, 2018 in Case No. H29 YO 22042 of JP Patent No. 5903517, 15 pages
	AEI	Supercell's Seventh Brief, submitted February 9, 2018 in Case No. H29 YO 22042 of JP Patent No. 5903517, 15 pages
	AEJ	Supercell's First Brief, submitted July 27, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 29 pages
	AEK	Supercell's Second Brief, submitted September 15, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 54 pages
	AEL	Gree's Third Brief, submitted October 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 26 pages
	AEM	Supercell's Third Brief, submitted October 3, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 14 pages
	AEN	"Wikipedia: Soccer", Wikipedia.org, printed September 25, 2017, https://ja.wikipedia.org/wiki/%E3%82%B5%E3%83%83%E3%82%AB%E3%83%BC, 14 pages
	AEO	Supercell's Fourth Brief, submitted October 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 2 pages

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	AEP	Supercell's Fifth Brief, submitted November 10, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 21 pages
	AEQ	Gree's Fourth Brief, submitted November 17, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 17 pages
	AER	Supercell's Seventh Brief, submitted December 27, 2017 in Case No. H29 YO 22041 of JP Patent No. 5911992, 17 pages
	AES	Gree's Fifth Brief, submitted February 9, 2018 in Case No. H29 YO 22041 of JP Patent No. 5911992, 19 pages
	AET	Supercell's Answer, submitted September 13, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 33 pages
	AEU	Supercell's First Brief, submitted October 20, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 40 pages
	AEV	Gree's Second Brief, submitted November 17, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 13 pages
	AEW	Supercell's Third Brief, submitted December 26, 2017 in Case No. H29 YO 22163 of JP Patent No. 5952946, 24 pages
	AEX	Gree's Second Brief, submitted February 5, 2018 in Case No. H29 YO 22163 of JP Patent No. 5952946, 25 pages
	AEY	"Terran - StarCraft II: Wings of Liberty Structures", Gamewise, printed January 19, 2018, 2 pages
	AEZ	"Structures - StarCraft II: Wings of Liberty Structures", Gamewise, printed January 19, 2018, https://web.archive.org/web/20130908134452/http://gamewise.co/games/36254/StarCraft-II-Wings-of-Liberty/Structures, 1 page
	AFA	Supercell's Answer, submitted August 30, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 38 pages
	AFB	Supercell's First Brief, submitted October 17, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 52 pages
	AFC	Gree's Second Brief, submitted November 8, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 16 pages
	AFD	Supercell's Fourth Brief, submitted December 26, 2017 in Case No. H29 YO 22164 of JP Patent No. 5952947, 21 pages
	AFE	Gree's Fourth Brief, submitted August 23, 2018 in Case No. H30 YO 22018 of JP Patent No. 5903518, 6 pages
	AFF	Gree's First Brief, submitted September 4, 2018 in Case No. H30 WA 10447 of JP Patent No. 5676032, 11 pages

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	AFG	Japanese Office Action mailed August 21, 2018 in Japanese Patent Application No. 2015-248965 with translation, 6 pages
	AFH	"Shin-Tenmakai - GOC IV, another side -", Dengeki Play Station, Media Works Corporation, number 11, Vol. 10, p196-199, March 11, 2005, section "Point: Make more advantageous Battle Situation, Formation" in p199 with partial English translation, 5 pages
	AFI	Deposition of David Crane, submitted September 4, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594, 162 pages
	AFJ	"Exeter Chess Club, A place to enjoy and learn about chess", printed September 4, 2018, http://exeterchessclub.org.uk/content/new-starting-formations-tabiat, 9 pages
	AFK	"Chess History 1: Shatranj", printed September 4, 2018, https://www.chess.com/clubs/forum/view/chess-history-1-shatranj, 5 pages
	AFL	Petitioner's Reply to Patent Owner's Response, submitted September 4, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594, 32 pages
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:
Taiki EDA.

SERIAL NO: 15/393,646 GROUP: 3717

FILED: December 29, 2016 EXAMINER: AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

STATEMENT OF RELEVANCY

Reference AAC on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

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Reference AEN on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

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Reference AEP on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AEQ on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AER on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AES on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AET on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AEU on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AEV on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AEW on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AEX on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AFA on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AFB on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AFC on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AFD on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AFE on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Reference AFF on Form PTO 1449 is based on a concurrent proceeding in a foreign jurisdiction.

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE- 2ND AND SUBSEQUENT REQUEST	1820	1	1900	1900
		Total in USD ($)		**1900**

Electronic Acknowledgement Receipt

EFS ID:	33971035
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	15:40:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1900
RAM confirmation Number	101118INTEFSW15415100
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_RCE-IDSRefs_AW-AY-128pgs.pdf	18891311 aff382862ddf6f3bfcbd46243a08e5687a58174c	yes	128

Multipart Description/PDF files in .zip description

Document Description	Start	End
Request for Continued Examination (RCE)	1	1
Amendment Submitted/Entered with Filing of CPA/RCE	2	2
Claims	3	8
Applicant Arguments/Remarks Made in an Amendment	9	9
Transmittal Letter	10	10
Information Disclosure Statement (IDS) Form (SB08)	11	20
Transmittal Letter	21	27
Non Patent Literature	28	31
Non Patent Literature	32	87
Non Patent Literature	88	128

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30594 c6a076ee765fbab3dc8668f7369cdb3d905b3683	no	2

Warnings:

Information:

Total Files Size (in bytes):	18921905

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	33972047
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	16:17:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_RCE-IDSRefs_AZ-AAH-128pgs.pdf	9348925 dacacbe76522269f70e9a66456d6433fb15e6ce2	yes	128

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	Non Patent Literature	1	16
	Non Patent Literature	17	29
	Non Patent Literature	30	42
	Non Patent Literature	43	50
	Non Patent Literature	51	57
	Non Patent Literature	58	120
	Non Patent Literature	121	124
	Non Patent Literature	125	126
	Non Patent Literature	127	128

Warnings:

Information:

2		481331US_Refs_AAI-ABB-94pgs.pdf	5221350 8ad67cba9a42d7a379f92b412cc53118670c15f9	yes	94

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
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	Non Patent Literature	4	5
	Non Patent Literature	6	7
	Non Patent Literature	8	9
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	Non Patent Literature	13	15
	Non Patent Literature	16	17

	Non Patent Literature	18	23
	Non Patent Literature	24	29
	Non Patent Literature	30	34
	Non Patent Literature	35	39
	Non Patent Literature	40	41
	Non Patent Literature	42	44
	Non Patent Literature	45	63
	Non Patent Literature	64	69
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Warnings:			
Information:			
		Total Files Size (in bytes):	14570275

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	33972979
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	16:55:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Refs_ABC-ABK-366pgs.pdf	22205363 11979bf2e32265c57abc863968fea14ef2aea1ca	yes	366

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Non Patent Literature	1	12
	Non Patent Literature	13	16
	Non Patent Literature	17	19
	Non Patent Literature	20	106
	Non Patent Literature	107	113
	Non Patent Literature	114	191
	Non Patent Literature	192	236
	Non Patent Literature	237	348
	Non Patent Literature	349	366

Warnings:					
Information:					
2		481331US_Refs_ABL-ABU-370pgs.pdf	25003279 cce53ccc4fe824edbe8dee2ef80ec3ec3c1baf90	yes	370

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
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	Non Patent Literature	17	88
	Non Patent Literature	89	148
	Non Patent Literature	149	185
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	Non Patent Literature	212	283
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	Non Patent Literature	329	336
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Warnings:			
Information:			
	Total Files Size (in bytes):	47208642	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	33973419
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	17:14:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Refs_ABV-ACO-441pgs.pdf	20270221 fa95a448bb7cef248f96042b280fdf4263d38f18	yes	441

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Non Patent Literature	1	1
Non Patent Literature	2	2
Non Patent Literature	3	3
Non Patent Literature	4	5
Non Patent Literature	6	14
Non Patent Literature	15	29
Non Patent Literature	30	136
Non Patent Literature	137	160
Non Patent Literature	161	162
Non Patent Literature	163	164
Non Patent Literature	165	165
Non Patent Literature	166	168
Non Patent Literature	169	246
Non Patent Literature	247	265
Non Patent Literature	266	296
Non Patent Literature	297	373
Non Patent Literature	374	396
Non Patent Literature	397	414
Non Patent Literature	415	441

Warnings:	
Information:	
Total Files Size (in bytes):	20270221

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	33973789
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	17:32:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Refs_ACP-ADI-349pgs.pdf	14685446 d1f2d2504382ff3e9c0bd475e676ccb272418745	yes	349

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Non Patent Literature	1	31
Non Patent Literature	32	53
Non Patent Literature	54	127
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Non Patent Literature	138	146
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Non Patent Literature	162	180
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Non Patent Literature	192	195
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Non Patent Literature	229	231
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Warnings:

Information:	
Total Files Size (in bytes):	14685446

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	33973998
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	17:43:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Refs_ADJ-AEC-500pgs.pdf	21915685 05a30340a2050775b124b181d5444972a62c0187	yes	500

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Non Patent Literature	1	59
Non Patent Literature	60	99
Non Patent Literature	100	107
Non Patent Literature	108	119
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Non Patent Literature	131	158
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Warnings:

Information:	
Total Files Size (in bytes):	21915685

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	33974188
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	17:53:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Ref_AED-AEL-277pgs.pdf	18984014 7d9ccc147cc0874d4c7569119bffd751a36d8d37	yes	277

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	Non Patent Literature	1	28
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Warnings:					
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2		481331US_Refs_AEM-AEX-239pgs.pdf	18668926 6da2db248a99d0aa6f67f08c960f7d0d53e564df	yes	239

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	Non Patent Literature	105	137
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Warnings:			
Information:			
	Total Files Size (in bytes):	37652940	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	33974294
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Susie Hockaday
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	10-OCT-2018
Filing Date:	29-DEC-2016
Time Stamp:	18:00:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Refs_AEY-AFL-366pgs.pdf	17541113 1a2a27874c6efee42d2ba401b366b26092b4e370	yes	366

	Multipart Description/PDF files in .zip description		
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	Non Patent Literature	1	2
	Non Patent Literature	3	3
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	Non Patent Literature	321	329
	Non Patent Literature	330	334
	Non Patent Literature	335	366
Warnings:			
Information:			
	Total Files Size (in bytes):	17541113	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/393,646	Filing Date 12/29/2016	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **10/10/2018**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 18	Minus	** 29	= 0	X $100 =	0
Independent (37 CFR 1.16(h))	* 3	Minus	***4	= 0	X $460 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
JAMES ELLIOTT

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22850 7590 09/06/2018

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

DATE MAILED: 09/06/2018

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	12/06/2018

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

22850 7590 09/06/2018
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	12/06/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3717	463-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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Exhibit 1002
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PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 09/06/2018

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	
ART UNIT	**PAPER NUMBER**
3717	

DATE MAILED: 09/06/2018

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, TAIKI	
	Examiner MASUD AHMED	Art Unit 3717	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *6/18/18*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *17-41*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☒ All b) ☐ Some *c) ☐ None of the:
   1. ☒ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

CPC							
Symbol						**Type**	**Version**
A63F		13	/	537		F	2014-09-02
A63F		13	/	31		I	2014-09-02
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			/				

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	7/21/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
463	25	A	6	3	F	9 / 24 (2006.0)						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	7/21/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	1	17	10	33										
	2	2	18	11	34										
	3	3	19	12	35										
	4	4	20	13	36										
	5	5	21	14	37										
	6	6	22	15	38										
	7		23	16	39										
	8		24	17	40										
	9		25	18	41										
	10		26												
	11		27												
	12		28												
	13		29												
	14	7	30												
	15	8	31												
	16	9	32												

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	7/21/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	Art Unit
	MASUD AHMED	3717

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	29-42	7/21/2018	MA

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	3/30/2018	MA
CONDUCTE NPL SEARCH ON GOOGLE FOR BUILDING GAMES	7/21/2018	MA
VERIFIED THE APPROVAL OF THE TD	7/21/2018	MA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	TEXT SEARCHED WITHIN ALL THE CLASSES AND THE SUBCLASSES INCLUDING FOREIGN DATABASES ON EAST	7/21/2018	MA
	SEARCHED ALL THE CLASSES AND THE SUBCLASSES LISTED ON ISSUE CLASSIFICATION	7/21/2018	MA

	/M.A./ Primary Examiner.Art Unit 3717

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Exhibit 1002
Page 380

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Website Fundamental Information of Clash of Clans for Beginners, 9 pages
	AX	Website Information on Clash of Clans Data Linkage between iPhone and iPad, http://www.appbank.net/2013/06/25iphone-application/627513.php, 6 pages , September 8, 2017
	AY	Play Manual of Hotel Giant 2. 32 pages
	AZ	Website Clash of Clans Wiki Village Edit Mode, http://clashofclans.wikia.com/wiki/Village_Edit_Mode 07/24/2017, 2 pages

■ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	04/19/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
LIST OF REFERENCES CITED BY APPLICANT	481331US	15/393,646
	APPLICANT: Taiki EDA	
	FILING DATE: December 29, 2016	GROUP: 3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	Play Manual of Winning Eleven 2011, 20 pages
	AAB	Play Manual of SidMeiers Civilization, 116 pages
	AAC	
	AAD	
	AAE	
	AAF	
	AAG	
	AAH	
	AAI	
	AAJ	
	AAK	
	AAL	
	AAM	
	AAN	
	AAO	
	AAP	
	AAQ	

Examiner /MASUD AHMED/	Date Considered 08/31/2018

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	6,398,646	06-04-2002	WEI et al.			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Patent Owner's Response submitted July 3, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594.
	AX	Declaration of David Crane submitted July 3, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594.
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	07/21/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	90	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/21 19:40
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L4	6537	L3 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/07/21 19:40
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S2	4292	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2016/03/18 20:48
S3	3792	S2 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 20:50
S4	128	S3 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2016/03/18 20:53

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S7	12304	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
S8	646	S7 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
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S18	4940	S17 and template	US-PGPUB;	AND	OFF	2016/08/05

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S22	4940	S21 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
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S58	4390	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/05/10 02:05
S59	3794	S58 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S60	4392	S52 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S61	50	S55 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S62	14273	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S63	776	S62 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S64	616	S63 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S65	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/10 02:06

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S66	50	S65 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S67	616	S63 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S68	50	S49 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
S69	11	((("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/11/12 19:46
S70	6	((("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	OR	OFF	2017/11/12 19:46
S71	33	"1574238"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:27
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S73	55	S72 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S74	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
S75	55	S74 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S76	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
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S78	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" |	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58

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S80	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S81	838	S80 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S82	634	S81 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S83	4405	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/11/12 20:58
S84	3794	S83 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S85	121453	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S86	5969	S85 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58

S87	4457	S86 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S88	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S89	838	S88 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S90	634	S89 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S91	55	S76 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S92	55	S76 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
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S95	15801	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S96	873	S95 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S97	640	S96 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
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S100	126221	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S101	6280	S100 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2018/03/30 19:23

			IBM_TDB			
S102	4495	S101 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S103	4495	S102 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S104	640	S96 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S105	15801	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S106	873	S105 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S107	640	S106 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
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S110	640	S96 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
S111	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/03/30 19:24
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S113	56	S93 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:24
S114	83	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2018/03/30 19:24
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S116	56	S111 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:24

7/21/2018 7:46:36 PM
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Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

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		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
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	AP	EP 1082984 A2	03/14/2001	Europe		
	AQ	JP 2010-125222	06/10/2010	Japan (w/ computer-generated translation)	X	
	AR	JP 2009-247474 A	10/29/2009	Japan (w/ computer-generated translation)	X	
	AS					
	AT					
	AU					
	AV					

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	AX	Yoshie Hori et al.; "The Convenience Store DS: Adult Management Skills Training Official Perfect Guide", Shinkigensha Co., Ltd., first issue, December 4, 2008, P4, 8, 35 with translation
	AY	R. Barba, et al., "STAR CRAFT, WINGS OF LIBERTY", BRADYGAMES, Official Strategy Guide, ISBN-13: 978-074401128-9, ISBN-10: 074401128-0, Blizzard Entertainment, Inc., 2010, Total pages submitted herewith: 5 pages (The first page: the cover page, the second and third pages: pages188 and 196 of this reference, the fourth and fifth pages: the back cover pages)
	AZ	Japanese Office Action mailed May 29, 2018 in Japanese Patent Application No. 2017-242679 with translation

■ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	07/21/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
	481331US	15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT	
	Taiki EDA	
	FILING DATE	GROUP
	December 29, 2016	3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	PETITION FOR POST-GRANT REVIEW OF U.S. PATENT 9,597,594 dated November 7, 2017 by Petitioner's Counsel
	AAB	AUSTIN LOCKWOOD, A Guide to Correspondence Chess in Wales, Welsh Correcpondence Chess Federation, June 17, 2016, Updated February 9, 2017 by Austin Lockwood <ULR: https://www.welshccf.org.uk/content/19>
	AAC	Bryce D. Avery, Correspondence chess in America, ISBN 978-0-7864-7396-0, © 2000 Bryce D. Avery. All rights reserved., pages ix, x, 1-3
	AAD	Microsoft Computer Dictionary, 4th edition, Microsoft Press. A Division of Microsoft Corporation, ISBN 0-7356-0615-3, 1999, page 102
	AAE	USPTO MEMORANDUM dated May 4, 2016, titled "Formulating a Subject Matter Eligibility Rejection and Evaluating the Applicant's Response to a Subject Matter Eligibility Rejection" from Deputy Commissioner For Patent Examination Policy
	AAF	PATENT OWNER'S PRELIMINARY RESPONSE dated February 20, 2018 by Counsel for Patent Owner
	AAG	July 2015 Update Appendix 1: Examples dated July 30, 2015 by USPTO
	AAH	Petitioner's Reply to Patent Owner's Preliminary Response dated March 21, 2018 by Petitioner's Counsel
	AAI	PATENT OWNER'S SURREPLY TO PETITIONER'S REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE dated March 28, 2018 by Counsel for Patent Owner
	AAJ	DECISION dated May 1, 2018, Granting Institution of Post-Grant Review 35 U.S.C. § 324(a) by Patent Trial and Appeal Board
	AAK	
	AAL	
	AAM	
	AAN	
	AAO	
	AAP	
	AAQ	

Examiner	/MASUD AHMED/	Date Considered	07/21/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

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BIB DATA SHEET

CONFIRMATION NO. 3602

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/393,646	12/29/2016	463	3717	481331US

APPLICANTS
Gree, Inc., Minato-ku, JAPAN;

INVENTORS
Taiki EDA, Tokyo, JAPAN;

**** CONTINUING DATA ***************************
This application is a CON of 14/983,984 12/30/2015 PAT 9597594
which is a CON of PCT/JP2014/075673 09/26/2014

**** FOREIGN APPLICATIONS ***************************
JAPAN 2014-080554 04/09/2014
JAPAN 2013-202721 09/27/2013

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
01/10/2017

Foreign Priority claimed ☑ Yes ☐ No 35 USC 119(a-d) conditions met ☑ Yes ☐ No Verified and Acknowledged /MASUD AHMED/ Examiner's Signature	☐ Met after Allowance MA Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		JAPAN	15	29	4

ADDRESS
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FILING FEE RECEIVED		
2740	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
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		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	6,398,646	06-04-2002	WEI et al.			
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	AC						
	AD						
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	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
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	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Patent Owner's Response submitted July 3, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594.
	AX	Declaration of David Crane submitted July 3, 2018 in Case No. PGR2018-00008 of U.S. Patent No. 9,597,594.
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Acknowledgement Receipt

EFS ID:	33161307
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Jacob A. Doughty/Melissa Satorre
Filer Authorized By:	Jacob A. Doughty
Attorney Docket Number:	481331US
Receipt Date:	12-JUL-2018
Filing Date:	29-DEC-2016
Time Stamp:	14:37:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331USIDS.pdf	22775708 a6ab90ff7455634409077cdaec5c5c7b5f156bba	yes	78

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Non Patent Literature	3	57
	Non Patent Literature	58	78
Warnings:			
Information:			
	Total Files Size (in bytes):	22775708	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

James Love
Registration No. 58,421

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Docket No.: 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Taiki EDA

SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

This is a Request for Continued Examination (RCE) under 37 C.F.R. §1.114 of the above-identified application.

Submission required under 37 C.F.R. §1.114

Previously Submitted:

- ☐ Consider the amendment(s)/reply under 37 C.F.R. §1.116 previously filed on
- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on

Enclosed:

- ☐ Amendment/Reply
- ■ Information Disclosure Statement (IDS)/PTO Form-1449, References
- ☐ Track 1 Prioritized Examination
- ■ Other: Related Case Status Update

FEES	RATE	CALCULATIONS
☐ Suspension of action on the above-identified application is requested under 37 C.F.R. §1.103(c) for a period of months.	$140.00	$0.00
■ RCE Fee required under 37 C.F.R. §1.17(e) - **2nd and subsequent request**	$1,900.00	$1,900.00
☐		$0.00
☐		$0.00
TOTAL OF ABOVE CALCULATIONS:		$1,900.00
☐ REDUCTION BY 50% FOR FILING AS SMALL ENTITY		$0.00
TOTAL:		$1,900.00

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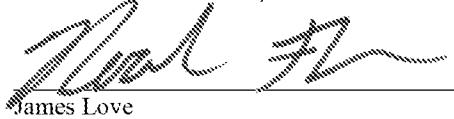
■ Please charge any additional Fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to Deposit Account No. **15-0030**.

■ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 CFR 1.136, and any additional fees required under 37 CFR 1.136 for any necessary extension of time may be charged to Deposit Account No. **15-0030**.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.



James Love
Registration No. 58,421

Noah K. Flaks
Registration No. 69,541

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 12/11)

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

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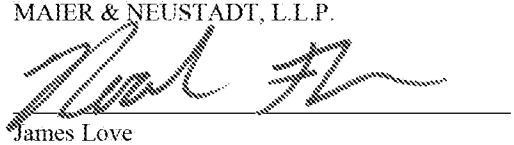
DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.



James Love
Registration No. 58,421

Noah K. Flaks
Registration No. 69,541

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP 2001-079269	03/27/2001	Japan (Corresponds to EP 1082984 A2)		X
	AP	EP 1082984 A2	03/14/2001	Europe		
	AQ	JP 2010-125222	06/10/2010	Japan (w/ computer-generated translation)	X	
	AR	JP 2009-247474 A	10/29/2009	Japan (w/ computer-generated translation)	X	
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Japanese Office Action mailed March 20, 2018 in Japanese Patent Application No. 2017-242679 with translation
	AX	Yoshie Hori et al.; "The Convenience Store DS: Adult Management Skills Training Official Perfect Guide", Shinkigensha Co., Ltd., first issue, December 4, 2008, P4, 8, 35 with translation
	AY	R. Barba, et al., "STAR CRAFT, WINGS OF LIBERTY", BRADYGAMES, Official Strategy Guide, ISBN-13: 978-074401128-9, ISBN-10: 074401128-0, Blizzard Entertainment, Inc., 2010, Total pages submitted herewith: 5 pages (The first page: the cover page, the second and third pages: pages188 and 196 of this reference, the fourth and fifth pages: the back cover pages)
	AZ	Japanese Office Action mailed May 29, 2018 in Japanese Patent Application No. 2017-242679 with translation

■ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
	481331US	15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT	
	Taiki EDA	
	FILING DATE	GROUP
	December 29, 2016	3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	PETITION FOR POST-GRANT REVIEW OF U.S. PATENT 9,597,594 dated November 7, 2017 by Petitioner's Counsel
	AAB	AUSTIN LOCKWOOD, A Guide to Correspondence Chess in Wales, Welsh Correcpondence Chess Federation, June 17, 2016, Updated February 9, 2017 by Austin Lockwood <ULR: https://www.welshccf.org.uk/content/19>
	AAC	Bryce D. Avery, Correspondence chess in America, ISBN 978-0-7864-7396-0, © 2000 Bryce D. Avery. All rights reserved., pages ix, x, 1-3
	AAD	Microsoft Computer Dictionary, 4th edition, Microsoft Press. A Division of Microsoft Corporation, ISBN 0-7356-0615-3, 1999, page 102
	AAE	USPTO MEMORANDUM dated May 4, 2016, titled "Formulating a Subject Matter Eligibility Rejection and Evaluating the Applicant's Response to a Subject Matter Eligibility Rejection" from Deputy Commissioner For Patent Examination Policy
	AAF	PATENT OWNER'S PRELIMINARY RESPONSE dated February 20, 2018 by Counsel for Patent Owner
	AAG	July 2015 Update Appendix 1: Examples dated July 30, 2015 by USPTO
	AAH	Petitioner's Reply to Patent Owner's Preliminary Response dated March 21, 2018 by Petitioner's Counsel
	AAI	PATENT OWNER'S SURREPLY TO PETITIONER'S REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE dated March 28, 2018 by Counsel for Patent Owner
	AAJ	DECISION dated May 1, 2018, Granting Institution of Post-Grant Review 35 U.S.C. § 324(a) by Patent Trial and Appeal Board
	AAK	
	AAL	
	AAM	
	AAN	
	AAO	
	AAP	
	AAQ	

Examiner	Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(19)日本国特許庁（ＪＰ）　(12)**公開特許公報**（Ａ）　(11)特許出願公開番号
特開2001－79269
（P2001－79269A）
(43)公開日　平成13年３月27日(2001.3.27)

(51)Int.Cl.[7]	識別記号	ＦＩ	ﾃｰﾏｺｰﾄﾞ(参考)
Ａ６３Ｆ　13/10		Ａ６３Ｆ　13/10	２Ｃ００１

審査請求　有　　請求項の数11　ＯＬ　（全 15 頁）

(21)出願番号　特願平11－257792

(22)出願日　平成11年９月10日(1999.9.10)

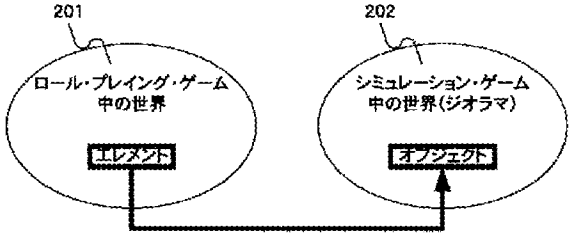
(71)出願人　395015319
株式会社ソニー・コンピュータエンタテインメント
東京都港区赤坂７－１－１
(72)発明者　日野　晃博
福岡県福岡市中央区大名２－６－28九勧大名ビル５階　有限会社レベルファイブ内
(72)発明者　本村　健太郎
東京都港区赤坂７丁目１番１号　株式会社ソニー・コンピュータエンタテインメント内
(74)代理人　100084032
弁理士　三品　岩男　（外１名）

最終頁に続く

(54)【発明の名称】　ゲームシステムおよび情報記録媒体

(57)【要約】
【課題】ゲームプレイヤ独自の世界をロール・プレイング・ゲームの世界に設けることで、数多くのロール・プレイング・ゲームを体験したゲームプレイヤであっても、飽きずにゲームを楽しめることができるようにする。
【解決手段】ロール・プレイング・ゲームで、ゲームプレイヤ独自の世界を造るためのシミュレーション・ゲームを行うことができるようにすると共に、ロール・プレイング・ゲーム中の世界２０１と、シミュレーション・ゲームにより造られた世界（ジオラマ）２０２とをリンクさせ、これまでにないゲームを楽しむことができるようにしている。具体的には、世界２０１でロール・プレイング・ゲームのシナリオをこなしている間に入手した素材（エレメント）を基に、ジオラマ２０２でオブジェクト（建築物等）を建設できるようにする。

図 3



Supercell
Exhibit 1002
Page 414

1

【特許請求の範囲】

【請求項１】操作手段と演算手段と記憶手段とを少なくとも備え、

上記演算手段が、上記操作手段からゲームプレイヤが入力する情報、並びに、上記記憶手段に記憶されているゲームプログラムおよびデータに基づいて演算を行うことでゲームを進行させるゲームシステムであって、

上記演算手段が、

ゲームプレイヤが自分に割り当てられたキャラクタの行動を指示することにより、シナリオをこなしていく形式のロール・プレイング・ゲームと、

ゲームプレイヤが任意に編集することにより、ゲームプレイヤ独自の世界を造り上げていく形式のシミュレーション・ゲームとを並行して進行させ、

これら２つのゲームを関連付けることを特徴とするゲームシステム。

【請求項２】請求項１記載のゲームシステムであって、

上記シミュレーション・ゲームで造られていく世界は、その地形が、ゲームプレイヤの指示に従って変更可能であることを特徴とするゲームシステム。

【請求項３】請求項１または２記載のゲームシステムであって、

上記演算手段は、

上記ロール・プレイング・ゲームを進行させる際に、

上記シミュレーション・ゲームで造られていく世界の構成要素となるオブジェクトごとに対応した、該オブジェクトを配置するために必要な素材を、シナリオがこなされていく過程で提供し、

上記シミュレーション・ゲームを進行させる際に、

上記ロール・プレイング・ゲームで提供した素材に対応するオブジェクトを、ゲームプレイヤの指示に従って配置することを特徴とするゲームシステム。

【請求項４】請求項３記載のゲームシステムであって、

上記オブジェクトとそれに対応する素材とは、１対１または１対多の関係にあることを特徴とするゲームシステム。

【請求項５】請求項３または４記載のゲームシステムであって、

上記オブジェクトには、予め定めた属性が定義されており、

上記演算手段は、

上記オブジェクトを配置する際に、

予め用意されている複数種類のキャラクタのうちから、該オブジェクトの属性および該オブジェクトの配置位置に応じたキャラクタを選択し、選択したキャタクタを提供することを特徴とするゲームシステム。

【請求項６】操作手段と演算手段と記憶手段とを少なくとも備え、

上記演算手段が、上記操作手段からゲームプレイヤが入力する情報、並びに、上記記憶手段に記憶されているゲームプログラムおよびデータに基づいて演算を行うことでゲームを進行させるゲームシステムで、

上記記憶手段として用いられる情報記録媒体であって、

上記演算手段が、

ゲームプレイヤが自分に割り当てられたキャラクタの行動を指示することにより、シナリオをこなしていく形式のロール・プレイング・ゲームと、

ゲームプレイヤが任意に編集することにより、ゲームプレイヤ独自の世界を造り上げていく形式のシミュレーション・ゲームとを並行して進行させ、

これら２つのゲームを関連付けるよう、動作させるためのゲームプログラムおよびデータが記録されていることを特徴とする情報記録媒体。

【請求項７】請求項６記載の情報記録媒体であって、

上記シミュレーション・ゲームで造られていく世界は、その地形が、ゲームプレイヤの指示に従って変更可能であることを特徴とする情報記録媒体。

【請求項８】請求項６または７記載の情報記録媒体であって、

上記演算手段が、

上記ロール・プレイング・ゲームを進行させる際に、

上記シミュレーション・ゲームで造られていく世界の構成要素となるオブジェクトごとに対応した、該オブジェクトを配置するために必要な素材を、シナリオがこなされていく過程で提供し、

上記シミュレーション・ゲームを進行させる際に、

上記ロール・プレイング・ゲームで提供した素材に対応するオブジェクトを、ゲームプレイヤの指示に従って配置するよう、動作させるためのゲームプログラムおよびデータが記録されていることを特徴とする情報記録媒体。

【請求項９】請求項８記載の情報記録媒体であって、

上記オブジェクトとそれに対応する素材とは、１対１または１対多の関係にあることを特徴とする情報記録媒体。

【請求項１０】請求項８または９記載の情報記録媒体であって、

上記オブジェクトには、予め定めた属性が定義されており、

上記演算手段が、

上記オブジェクトを配置する際に、

予め用意されている複数種類のキャラクタのうちから、該オブジェクトの属性および該オブジェクトの配置位置に応じたキャラクタを選択し、選択したキャタクタを提供するよう、動作させるためのゲームプログラムおよびデータが記録されていることを特徴とする情報記録媒体。

【請求項１１】操作指示の入力を行うための操作装置と、画像表示を行う表示装置とを接続して、ゲームを実行するゲーム装置において、

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Page 415

装着された記録媒体からゲームプログラムおよびデータを読み出す手段と、
前記記録媒体から読み出されたゲームプログラムに従ってゲームを実行し、前記表示装置に表示させる手段とを備え、
前記ゲームを実行する手段は、ゲームに登場するキャラクタの行動について、前記操作装置を介して指示することによってゲームを進行させる第１のゲーム進行手段と、第１のゲームにおいて設定されるゲーム世界での環境について、前記操作装置を介して編集することでゲームを進行させる第２のゲーム進行手段とを備え、
前記第１のゲーム進行手段は、予め定めたシナリオに基づいてゲーム環境を設定してゲームを進行させると共に、前記操作装置を介してゲームプレイヤの指示を受け付けて、指示内容に応じて前記シナリオの進行状況を変更し、かつ、プレイヤの指示が予め定めた条件を満たすとき、シナリオ中において定義された素材要素の使用をプレイヤに使用可能とする制御を行い、
前記第２のゲーム進行手段は、
前記第１のゲーム進行手段によって設定された環境において、前記第１のゲーム進行手段によって使用が許容された素材要素の選択と、前記ゲーム世界の環境への配置とを、前記操作装置を介して行われるプレイヤの指示に応じて受け付けて、指示された素材要素を指示された位置に配置して、ゲーム世界の環境を構築する制御を行うことを特徴とするゲーム装置。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】本発明は、ゲームプレイヤが、ゲーム機のコントローラを操作して、自分に割り当てられたキャラクタのゲーム画面上での行動を指示することにより、ゲーム画面上でシナリオをこなしていく形式のロール・プレイング・ゲーム、および、そのゲームのプログラムを格納した情報記録媒体に関する。

【０００２】

【従来の技術】ロール・プレイング・ゲームは、ゲームプレイヤが、ゲーム機のコントローラを操作して、自分に割り当てられたキャラクタ（自キャラクタ）のゲーム画面上での行動を指示することにより、ゲーム画面上の自キャラクタに戦い等を体験させて成長させ、最終的な目標をクリアするために、シナリオをこなしていく形式のゲームである。例えば、コントローラの操作により、自キャラクタを、ゲーム画面上に表示された世界（山野や町や洞窟等）を歩き回らせながら、敵キャラクタと戦わせる形式のものが知られている。

【０００３】

【発明が解決しようとする課題】多くのロール・プレイング・ゲームは、シナリオの内容に工夫を凝らしているものの、最終目標は敵キャタクタのボスを倒すことであり、また、最終目標までに至るシナリオの内容から、ゲーム途中に設けてある各種イベントの内容に制限が生じてしまうので、多くのゲームプレイヤが同様の過程をたどることとなる。そこで、従来と同様の考え方で製作されたロール・プレイング・ゲームでは、数多くのロール・プレイング・ゲームを体験したゲームプレイヤに飽きられてしまうという危険性がある。

【０００４】本発明の目的は、ゲームプレイヤ独自の世界をロール・プレイング・ゲームの世界に設けることで、数多くのロール・プレイング・ゲームを体験したゲームプレイヤであっても、飽きずにゲームを楽しめることができるようにすることにある。

【０００５】

【課題を解決するための手段】上記目的を達成するために、本発明は、ロール・プレイング・ゲームで、ゲームプレイヤ独自の世界を造るためのシミュレーション・ゲームを行うことができるようにしている。そして、ロール・プレイング・ゲームで用意されている世界と、シミュレーション・ゲームで造られた世界とをリンクさせ、これまでにないゲームを楽しむことができるようにしている。

【０００６】具体的には、本発明者等は、操作手段と演算手段と記憶手段とを少なくとも備え、上記演算手段が、上記操作手段からゲームプレイヤが入力する情報、並びに、上記記憶手段に記憶されているゲームプログラムおよびデータに基づいて演算を行うことでゲームを進行させるゲームシステムであって、上記演算手段が、ゲームプレイヤが自分に割り当てられたキャラクタの行動を指示することにより、シナリオをこなしていく形式のロール・プレイング・ゲームと、ゲームプレイヤが任意に編集することにより、ゲームプレイヤ独自の世界を造り上げていく形式のシミュレーション・ゲームとを並行して進行させ、これら２つのゲームを関連付けることを特徴としたゲームシステムを考案した。

【０００７】なお、上記シミュレーション・ゲームで造られていく世界は、その地形が、ゲームプレイヤの指示に従って変更可能であるようにすると、ゲームプレイヤの独自性がより発揮されることとなる。

【０００８】上記ロール・プレイング・ゲームおよび上記シミュレーション・ゲームの２つのゲームを関連付けるためには、例えば、上記演算手段は、上記ロール・プレイング・ゲームを進行させる際に、上記シミュレーション・ゲームで造られていく世界の構成要素となるオブジェクトごとに対応した、該オブジェクトを配置するために必要な素材を、シナリオがこなされていく過程で提供し、上記シミュレーション・ゲームを進行させる際に、上記ロール・プレイング・ゲームで提供した素材に対応するオブジェクトを、ゲームプレイヤの指示に従って配置するようにすることができる。

【０００９】ここで、上記オブジェクトとそれに対応する素材とは、１対１の関係であっても、１対多の関係で

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あってもよい。

【００１０】また、上記オブジェクトには、予め定めた属性が定義されており、上記演算手段は、上記オブジェクトを配置する際に、予め用意されている複数種類のキャラクタのうちから、該オブジェクトの属性および該オブジェクトの配置位置に応じたキャラクタを選択し、選択したキャタクタを提供するようにしてもよい。

【００１１】

【発明の実施の形態】以下、本発明の実施の形態について図面を参照して説明する。

【００１２】図１に、本実施形態に係るゲームシステムの主要部分の機能ブロック図を示す。

【００１３】図１において、１０１はゲームプレイヤが各種指示を入力するための操作手段であり、操作手段１０１が入力した操作データは、ゲーム実行手段１０２に送られる。

【００１４】ゲーム実行手段１０２は、予め定めたシナリオに従ってゲームを進めていくロール・プレイング・ゲーム実行手段１０３と、ゲームプレイヤ独自の世界を造るためのシミュレーション・ゲーム実行手段１０４と、画像生成手段１０５とを備えており、操作手段１０１から受け取ったゲームプレイヤの指示と、記憶手段１０６に記憶されているゲームプログラムやゲーム用データ等に基づいて、ロール・プレイング・ゲームおよびシミュレーション・ゲームの進行処理を行うと共に、画像生成手段１０５によって、ゲーム画面として表示すべき画像を生成して表示手段１０７に表示する処理を行う。また、ゲーム実行手段１０２は、ロール・プレイング・ゲーム実行手段１０３によって行われるロール・プレイング・ゲームの進行処理と、シミュレーション・ゲーム実行手段１０４によって行われるシミュレーション・ゲームの進行処理とを関連付けて管理する。

【００１５】なお、ゲーム実行手段１０２は、ＣＰＵ（Central Processing Unit），ＧＰＵ（Graphic Processing Unit）等のハードウェアで実現することができ、記憶手段１０６は、ＣＤ－ＲＯＭ（Compact Disk－Read Only Memory），ハードディスク，メモリ，ＤＶＤ（Digital Video Disk）等のハードウェアで実現することができる。

【００１６】また、表示手段１０７は、ＣＲＴ（Cathode Ray Tube）等を用いたモニタやテレビジョン等で実現することができ、家庭用や業務用等のゲーム機の形態に応じて、ゲーム機本体と一体化されたもの、または、本体と分離されたもののどちらであってもよい。

【００１７】本実施形態においては、ゲーム実行手段１０２が、ロール・プレイング・ゲームおよびシミュレーション・ゲームを並行して実行すると共に、両者を関連付けるようになっている。

【００１８】具体的には、本実施形態においては、図２に示すように、ロール・プレイング・ゲーム実行手段１０３によって提供される世界２０１とは別に、シミュレーション・ゲーム実行手段１０４によって、ゲームプレイヤが編集可能な世界（ジオラマ）２０２が提供されるようにしている。そして、シミュレーション・ゲーム実行手段１０４は、このジオラマ２０２中に、ゲームプレイヤがオブジェクト（建築物等）を建設することを可能としている。

【００１９】なお、図２の例では、ロール・プレイング・ゲーム実行手段１０３によって提供される世界２０１の中央部分に、ゲームプレイヤが編集可能なジオラマ２０２を配置しているが、本例に限るものではない。

【００２０】そして、本実施形態においては、図３に示すように、建設されるオブジェクトは、ロール・プレイング・ゲーム実行手段１０３によって提供される世界２０１で、ゲームプレイヤがロール・プレイング・ゲームのシナリオをこなしている間に入手する素材（エレメント）を基に建設されるようになっており、これにより、ロール・プレイング・ゲームとシミュレーション・ゲームとが関連付けられるようになっている。

【００２１】すなわち、ゲームプレイヤは、ロール・プレイング・ゲーム実行手段１０３によって提供される世界２０１で、自キャラクタの行動を指示することにより、エレメントを探し、エレメントを入手すると、ジオラマ２０２で、入手したエレメントを用いてオブジェクトを建設し、ジオラマ２０２を育てていくというように、両方の世界で遊ぶことができる。

【００２２】特に、ジオラマ２０２では、ゲームプレイヤの好きな位置にオブジェクトを建設することができるので、ゲームプレイヤ独自のジオラマ２０２を造ることができる。

【００２３】なお、本実施形態では、ジオラマ２０２を多彩なものにするために、当然のことながら、複数種類のオブジェクトを用意するようにし、各オブジェクトに対応するエレメントも複数種類を用意するようにする。

【００２４】ここで、オブジェクトとエレメントの対応関係は１対１ではなく、１つのオブジェクトを建設するために、２つ以上のエレメントが必要であるようにしてもよい。すなわち、例えば、設計図および資材をエレメントとして入手しないと、オブジェクトを建設できないようにしてもよい。

【００２５】具体例を図４に示す。

【００２６】図４では、ゲームプレイヤがジオラマ２０２にオブジェクトを建設するときのゲーム画面の遷移例を示している。図４（ｂ）の画面４１０には、入手済みエレメントを用いて建設可能な６つのオブジェクトが選択ウィンドウ４２０内に選択枝４２１ａ～４２１ｆとして表示されている。これら６つの選択枝４２１ａ～４２１ｆの中から、「ふつうの家」が選択され、図４（ｃ）の画面４１０において、「ふつうの家」４３１が建設されている。

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【００２７】ここで、本実施形態では、さらに、オブジェクトごとに、予め定めた属性を定義しておき、この属性に応じて、予め用意しておいた複数種類のキャラクタのうちから、該オブジェクトに対応するキャラクタを決定し、決定したキャラクタをジオラマ２０２に登場させるようにすることができる。

【００２８】具体例としては、武器屋に武器商人を対応付け、自キャラクタがジオラマ２０２で武器を調達できるようにしたり、池に魚を対応付けるようにしたりすることができる。

【００２９】ジオラマ２０２中にキャラクタを登場させるようにすれば、ロール・プレイング・ゲーム実行手段１０３とは別のロール・プレイング・ゲーム実行手段をさらに設け、この別のロール・プレイング・ゲーム実行手段によって、ジオラマ２０２中でロール・プレイング・ゲームが進められるようにすることも可能となるので、ゲームプレイヤは、より楽しんで遊ぶことができるようになる。

【００３０】次に、ロール・プレイング・ゲームとシミュレーション・ゲームとが関連付けられつつ並行して実行されるようにするための、本実施形態の動作について、図５～図１０を用いて簡単に説明する。

【００３１】図５に、記憶手段１０６の記憶内容の例を示す。

【００３２】図５に示すように、記憶手段１０６には、ロール・プレイング・ゲームのゲームプログラム５０１およびシミュレーション・ゲームのゲームプログラム５０２の他に、シナリオファイル５０３と、グラフィックファイル５０４と、ジオラマテーブル５０５と、オブジェクトーエレメント対応テーブル５０６と、入手済みエレメントテーブル５０７と、オブジェクトテーブル５０８とが、少なくとも格納されている。

【００３３】図５において、シナリオファイル５０３は、複数のサブシナリオファイルから構成されており、ゲームプログラム５０１を実行するロール・プレイング・ゲーム実行手段１０３によって参照される。

【００３４】ロール・プレイング・ゲーム実行手段１０３は、最初に参照すべきサブシナリオファイルから順に、次々とサブシナリオファイルを参照していき、参照したサブシナリオファイルに従ってロール・プレイング・ゲームを進行させていくが、次に参照すべきサブシナリオファイルの決定は、参照中のサブシナリオファイルに従って進行されているロール・プレイング・ゲーム中でイベントを発生させ、そのイベントに対するゲームプレイヤの指示に応じて行うようにする。なお、ロール・プレイング・ゲーム実行手段１０３は、最初に参照すべきサブシナリオファイル等の、必ず参照されるサブシナリオファイルについて、該サブシナリオファイルに従って進行されているロール・プレイング・ゲーム中で、初期状態のジオラマ２０２をゲームプレイヤに提供するようにすることが好ましい。

【００３５】そこで、例えば、ロール・プレイング・ゲームの進行処理時にサブシナリオファイルが参照されていく様子は、図６に示すようになる。

【００３６】本実施形態では、予め定めたサブシナリオファイルについて、該サブシナリオファイルに従って進行されるロール・プレイング・ゲーム中で発生するイベントで、予め定めたエレメントを提供するようにしている。

【００３７】例えば、自キャラクタが敵キャラクタを撃退した場合に、予め定めたエレメントを入手することができるようにしたり、予め定めたエレメントを収めた宝箱を用意しておいて、自キャラクタがその宝箱を発見した場合に、該エレメントを入手することができるようにしたりすることができる。

【００３８】図６の例では、サブシナリオファイル６０１および６０２が、エレメントを入手可能なサブシナリオファイルである旨を表している。なお、６０１のように、エレメントを入手可能なサブシナリオファイルであっても、それに従って進行されるロール・プレイング・ゲーム中で発生するイベントに対するゲームプレイヤの指示によっては、エレメントが入手できない場合もある。すなわち、図６においては、サブシナリオファイル６０２に従って進行されているロール・プレイング・ゲーム中では、次に参照されるサブシナリオファイルがサブシナリオファイル６０２１および６０２２のいずれであっても、エレメントを入手することができるようなイベントが発生する旨の例を示しており、また、サブシナリオファイル６０１に従って進行されているロール・プレイング・ゲーム中では、次に参照されるサブシナリオファイルがサブシナリオファイル６０１１であれば、エレメントを入手することができるが、次に参照されるサブシナリオファイルがサブシナリオファイル６０１２であれば、エレメントを入手することができないようなイベントが発生する旨の例を示している。

【００３９】図５に戻って、入手済みエレメントテーブル５０７は、ゲームプレイヤが入手済みのエレメントの識別子を格納するためのテーブルである。例えば、図７に示すように、入手済みエレメントの識別子５０７ａ，５０７ｂ，５０７ｃ…が登録される。

【００４０】ロール・プレイング・ゲーム実行手段１０３は、図７に示すように、ゲームプレイヤ（自キャラクタ）が入手したエレメントの識別子５０７ａ，５０７ｂ，５０７ｃ…を、入手済みエレメントテーブル５０７に格納する。入手済みエレメントテーブル５０７は、ゲームプログラム５０２を実行するシミュレーション・ゲーム実行手段１０４によって参照される。

【００４１】また、オブジェクトーエレメント対応テーブル５０６は、図８に示すように、オブジェクトの識別子５０６ａ，５０６ｂ，５０６ｃ…ごとに、該オブジ

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クトを建設するために必要なエレメントの識別子５０７ａ，５０７ｂ，５０７ｃ…が格納されているテーブルである。オブジェクトテーブル５０８は、図９に示すように、オブジェクトの識別子５０６ａ，５０６ｂ，５０６ｃ…ごとに、該オブジェクトの属性５０８ａ，５０８ｂ，５０８ｃ…が格納されているテーブルである。オブジェクトーエレメント対応テーブル５０６およびオブジェクトテーブル５０８も、ゲームプログラム５０２を実行するシミュレーション・ゲーム実行手段１０４によって参照される。

【００４２】本実施形態においては、上述したように、ロール・プレイング・ゲーム実行手段１０３によって提供される世界２０１の中央部分にジオラマ２０２が配置されているが、このジオラマ２０２をゲームプレイヤの指示に従って形成していくのが、シミュレーション・ゲーム実行手段１０４である。

【００４３】シミュレーション・ゲーム実行手段１０４は、ゲームプレイヤの指示に従って、ジオラマ２０２中にオブジェクトを配置していく。このときの動作の流れについて、図１０を用いて簡単に説明する。

【００４４】図１０に示すように、シミュレーション・ゲーム実行手段１０４は、例えば、図４（ａ）に示すように、ゲームプレイヤからオブジェクトの建設位置４１１が指示されると（Ｓ１００１）、オブジェクトーエレメント対応テーブル５０６および入手済みエレメントテーブル５０７を参照し、入手済みエレメントを用いて建設可能なオブジェクトを特定する（Ｓ１００２）。

【００４５】そして、シミュレーション・ゲーム実行手段１０４は、例えば、図４（ｂ）に示すように、Ｓ１００２で特定したオブジェクトを、選択枝４２１ａ～４２１ｆとして操作ウィンドウ４２０内に表示して、ゲームプレイヤに提供する（Ｓ１００３）。ここで、ゲームプレイヤが、操作手段１０１を介してカーソルＣを選択ウィンドウ４２０内のいずれかの選択枝上に位置させると、図４（ｂ）に示すように、選択枝の内容を紹介する紹介ウィンドウ４３０が表示される。

【００４６】その後、シミュレーション・ゲーム実行手段１０４は、操作手段１０１を介していずれかの選択枝が選択指示されると（Ｓ１００４）、例えば、図４（ｃ）に示すように、対応するオブジェクト４３１を配置する（Ｓ１００５）。なお、このとき、シミュレーション・ゲーム実行手段１０４は、配置したオブジェクトに対応するエレメントの識別子（例えば、５０７ａ）を、入手済みエレメントテーブル５０７から削除する（Ｓ１００６）。

【００４７】ところで、図５に示したジオラマテーブル５０５には、ジオラマ２０２の地形の情報と、配置されているオブジェクトの情報（識別子や配置位置等）とが格納されるようになっている。そこで、シミュレーション・ゲーム実行手段１０４は、このジオラマテーブル５０５を参照し、オブジェクトの配置前に、オブジェクトが配置可能であるか等を判断したり、オブジェクトの配置後に、配置したオブジェクトの情報を追加したりする。

【００４８】また、図５に示したグラフィックファイル５０４には、キャラクタ，オブジェクト，エレメント，背景等のグラフィックデータが、その識別子と共に格納されている。このグラフィックファイル５０４は、画像生成手段１０５によって参照される。すなわち、シミュレーション・ゲーム実行手段１０４が、表示対象（オブジェクトやキャラクタ等）の識別子と表示位置を、画像生成手段１０５に対して指定すると、画像生成手段１０５が、グラフィックファイル５０４を参照して、ゲーム画面を生成して表示手段１０７に表示させるようになっている。ゲーム画面生成方法については、従来技術と同様であるので省略する。

【００４９】本実施形態では、このようにしてオブジェクトが配置されるジオラマ２０２は、ロール・プレイング・レーム実行手段１０３によってロール・プレイング・ゲームが進行されている間も、シミュレーション・ゲーム実行手段１０４によって、時間の経過と共に進化していくようになっている。すなわち、シミュレーション・ゲーム実行手段１０４は、オブジェクトテーブル５０８を参照し、オブジェクトの属性に応じて、予め定めた時間が経過すると、該オブジェクトに対応するキャラクタをジオラマ２０２に登場させるようにする。

【００５０】なお、本実施形態においては、さらに、オブジェクトの属性だけではなく、オブジェクトが建設された位置（周囲のオブジェクトや地形との関係等）に応じて、登場させるキャラクタを変化させ、バラエティに富んだアウトプットを提供するようにしてもよい。このようにする場合も、予めテーブルを用意しておき、そのテーブルを参照するようにすればよい。

【００５１】具体例としては、池に魚を対応付けるようにした場合に、さらに、その池の側に建設された民家に釣り好きの住人を対応付け、釣りをさせるようにしたりすることができる。また、さらに、属性も変更可能としてもよく、例えば、火山の側に池を建設すると、その池は温泉になるというようにすることもできる。

【００５２】以上説明したように、本実施形態によれば、ゲームプレイヤ独自の世界であるジオラマ２０２を、ロール・プレイング・ゲーム中の世界２０１に設けるようにしており、ゲームプレイヤは、両方のゲームを関連付けて楽しむことができるようになるので、数多くのロール・プレイング・ゲームを体験したゲームプレイヤであっても、飽きずにゲームを楽しめることができるようになる。

【００５３】なお、本実施形態において、ジオラマ２０２の成長が予め定めた条件を満たすということを、ロール・プレイング・ゲームの最終的な目標に加えるよう

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してもよい。このようにすれば、ゲームプレイヤ側にとっては、ジオラマ２０２をどのように造り上げていくかの参考にすることができるようになる。一方、ゲーム製作者側にとっては、ロール・プレイング・ゲームに費やす時間とシミュレーション・ゲームに費やす時間とのバランスを加減するように製作することができるようになる。

【００５４】また、本実施形態において、ジオラマ２０２のサイズも、予め定めた条件を満たす度に、大きくしていくようにすることができる。このようにすれば、ゲームプレイヤ側にとっては、ジオラマ２０２のサイズを大きくする楽しみも増える。ロール・プレイング・ゲーム実行手段１０３とは別のロール・プレイング・ゲーム実行手段によって、ジオラマ２０２中でロール・プレイング・ゲームが進められるようにする場合には、このロール・プレイング・ゲームを楽しむ幅も増えることになる。

【００５５】さらに、本実施形態においては、オブジェクトの建設だけではなく、ゲームプレイヤがジオラマ２０２の地形を自由に編集できるようにしてもよい。

【００５６】例えば、自キャラクタに、地形を編集することが可能なアイテム（杖等）を与える。このようにすれば、図１１（ａ）の画面４５０に示すように、地面に穴４５１をあけ、図１１（ｂ）に示すように、穴を徐々につなげて溝４５２にしていき、図１１（ｃ）に示すように、溝の先端に水源４５３を建設することで、川４５４を造りあげることを可能とすることができる。そして、造りあげた川で、自キャラクタも釣りを楽しむようなサブゲームを設けるようにすることもできる。

【００５７】さらに、地形を編集することが可能なアイテムを自キャラクタに与えることで、自キャラクタが敵キャラクタを撃退する際の戦闘シーンにおいて、地形を考慮した戦い方を許可することも可能となる。

【００５８】具体的には、自キャラクタは、図１２の画面４６０に示すように、敵キャラクタ４６１の前に穴４６２を掘っておびきだし、敵キャラクタ４６１が穴４６２に落ちたら生き埋めにするようにする。また、図１３の画面４７０に示すように、高所から岩４７２を転がして敵キャラクタ４７１をつぶすようにする。さらに、図１４の画面４８０に示すように、木４８２等を切り倒して敵キャラクタ４８１を下敷きにするようにする。

【００５９】以下、本実施形態を実現できるゲーム機の概観の一例、および、概略的なハードウェア構成の一例について、図１５および図１６を用いて説明しておく。

【００６０】本ゲーム機の概観は、例えば、図１５に示すようになっており、ゲーム機１は、ＣＤ－ＲＯＭ等の光ディスクに記録されているゲームプログラムを読み出して、ゲームプレイヤの操作に応じて実行するものである。

【００６１】ゲーム機１の本体２は、ゲームプログラムが記録された光ディスクが装着されるディスク装着部３と、ゲームを任意にリセットするためのリセットスイッチ４と、電源スイッチ５と、光ディスクの装着を操作するためのディスク操作スイッチ６と、スロット部７Ａ，７Ｂ（本例では、２つ）とを備えて構成されている。

【００６２】スロット部７Ａ，７Ｂには、操作装置（コントローラ）２０を接続することができ、また、ゲームデータを記録したり読み出したりすることができるメモリカードを装着することもできる。

【００６３】なお、ゲーム機１は、モニタ３０およびスピーカ４０と接続されるようになっており、接続部分については図示していない。図１５では、モニタ３０およびスピーカ４０として、テレビジョンを用いた例を示している。

【００６４】また、ゲーム機１の概略的なハードウェア構成は、例えば、図１６に示すようになっており、ゲーム機１は、ＣＰＵ５１およびその周辺装置等からなる制御系５０と、フレームバッファ６３に描画を行うＧＰＵ６２等からなるグラフィックシステム６０と、楽音・効果音等を発生するＳＰＵ（Sound Processing Unit）等からなるサウンドシステム７０と、ゲームプログラムが記録されている光ディスクの制御を行う光ディスク制御系８０と、ゲームプレイヤからの指示が入力されるコントローラ２０からの信号およびゲームの設定等を記憶するメモリカード１０からのデータの入出力を制御する通信制御系９０とを備えて構成されている。

【００６５】図１６において、制御系５０は、ＣＰＵ５１と、割り込み制御やダイレクト・メモリ・アクセス（ＤＭＡ）転送の制御等を行う周辺装置制御部５２と、ＲＡＭ（Random Access Memory）からなるメインメモリ５３と、メインメモリ５３・グラフィックシステム６０・サウンドシステム７０等の管理を行うオペレーティングシステム（ＯＳ）が格納されたＲＯＭ（Read Only Memory）５４とを備えて構成されている。

【００６６】ＣＰＵ５１は、電源が投入されると、ＲＯＭ５４に格納されているＯＳを実行することで、グラフィックシステム６０・サウンドシステム７０等のゲーム機１の全体を制御するようになっている。

【００６７】また、ＣＰＵ５１は、ＯＳが実行されると、動作確認等の初期化を行った後、光ディスク制御系８０を制御して、光ディスクに記録されているゲームプログラムを実行する。このゲームプログラムの実行により、ＣＰＵ５１は、ゲームプレイヤからの指示に応じて、グラフィックシステム６０・サウンドシステム７０等を制御して、画像の表示や楽音・効果音等の発生を制御する。

【００６８】また、図１６において、グラフィックシステム６０は、座標変換等の処理を行うＧＴＥ（Geometry Transfer Engine）６１と、ＣＰＵ５１からの描画指示に従って描画処理を行うＧＰＵ６２と、ＧＰＵ６２によ

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り描画された画像を記憶するフレームバッファ６３と、圧縮符号化された画像データを復号する画像デコーダ６４とを備えて構成されている。

【００６９】ＧＴＥ６１は、例えば、複数の演算を並列に実行する並列演算機能を備え、ＣＰＵ５１からの演算要求に応じて、座標変換・透視変換・光源計算等の演算を高速に行うことができるようになっている。また、ＧＰＵ６２は、ＣＰＵ５１からの描画命令に従って、フレームバッファ６３に対して、ポリゴン等の描画を行う。

【００７０】また、フレームバッファ６３は、デュアルポートＲＡＭからなり、ＧＰＵ６２からの描画またはメインメモリ５３からの転送と、表示のための読み出しとを、同時に行うことができるようになっている。なお、フレームバッファ６３には、ビデオ出力としてモニタ３０に出力される表示領域の他に、ＧＰＵ６２がポリゴン等の描画を行う際に参照するカラー・ルックアップ・テーブル（ＣＬＵＴ）が記憶されるＣＬＵＴ領域と、描画時に座標変換されてＧＰＵ６２によって描画されるポリゴン等の中に挿入される素材（テクスチャ）が記憶されるテクスチャ領域とが設けられている。

【００７１】また、画像デコーダ６４は、ＣＰＵ５１からの制御により、メインメモリ５３に記憶されている静止画や動画の画像データを復号し、再度メインメモリ５３に記憶する。この復号された画像データは、ＧＰＵ６２によって、フレームバッファ６３に記憶され、背景画像として使用されることができるようになっている。

【００７２】また、図１６において、サウンドシステム７０は、ＣＰＵ５１からの指示に従って、楽音・効果音等を発生するＳＰＵ７１と、ＳＰＵ７１により波形データ等が記憶されるサウンドバッファ７２とを備えて構成されている。ＳＰＵ７１によって発生される楽音・効果音等は、スピーカ４０に出力される。ＳＰＵ７１は、音声データを復号する機能と、サウンドバッファ７２に記憶されている波形データを、そのままもしくは変調してから再生する機能とを有している。

【００７３】また、図１６において、光ディスク制御系８０は、光ディスクに記録されたゲームプログラムやデータ等を読み出す光ディスク装置８１と、ゲームプログラムやデータ等を復号するデコーダ８２と、光ディスク装置８１の読み出しデータを一時的に格納することにより、光ディスクからの読み出し速度を高速化するためのバッファ８３とを備えている。

【００７４】また、図１６において、通信制御系９０は、バスを介してＣＰＵ５１との間の通信の制御を行う通信制御部９１を備えて構成されており、ゲームプレイヤからの指示を入力するコントローラ２０が接続されるコントローラ接続部９と、ゲームの設定データ等を記憶するメモリカード１０が接続されるメモリカード挿入部８が、通信制御部９１に設けられている。

【００７５】コントローラ接続部９に接続されたコントローラ２０は、ゲームプレイヤからの指示を入力するために、複数の指示キーを有し、通信制御部９１からの指示に従って、この指示キーの状態を送信する。そして、通信制御部９１は、コントローラ２０の指示キーの状態をＣＰＵ５１に送信する。これにより、ゲームプレイヤからの指示がＣＰＵ５１に入力され、ＣＰＵ５１は、実行しているゲームプログラムに基づいて、ゲームプレイヤからの指示に応じた処理を行う。

【００７６】また、ＣＰＵ５１は、実行されているゲームの設定データ等を記憶する必要があるときに、その記憶すべきデータを通信制御部９１に送信し、通信制御部９１は、ＣＰＵ５１からのデータを、メモリカード挿入部８のスロットに装着されたメモリカード１０に書き込む。

【００７７】以上に、本実施形態を実現できるゲーム機の概観の一例、および、概略的なハードウェア構成の一例を示したが、本実施形態を実現できるゲーム機の例は、本例に限るものではない。

【００７８】

【発明の効果】以上説明したように、本発明は、ゲームプレイヤ独自の世界をロール・プレイング・ゲームの世界に設けるようにしているので、数多くのロール・プレイング・ゲームを体験したゲームプレイヤであっても、飽きずにゲームを楽しめることができるようになる。

【図面の簡単な説明】

【図１】本実施形態に係るゲーム機の主要部分の機能ブロック図。

【図２】本実施形態において提供される２つの世界を示す説明図。

【図３】本実施形態におけるロール・プレイング・ゲームとシミュレーション・ゲームとの関連を示す概念図。

【図４】エレメントを基にオブジェクトが建設されるときのゲーム画面の様子を示す説明図。

【図５】記憶手段の記憶内容の例を示す説明図。

【図６】ロール・プレイング・ゲームの進行処理時にサブシナリオファイルが参照されていく様子を示す説明図。

【図７】入手済みエレメントテーブルの記憶内容の例を示す説明図。

【図８】オブジェクト－エレメント対応テーブルの記憶内容の例を示す説明図。

【図９】オブジェクトテーブルの記憶内容の例を示す説明図。

【図１０】シミュレーション・ゲーム実行手段がジオラマにオブジェクトを配置していくときの動作の流れを示すフローチャート。

【図１１】ゲームプレイヤがジオラマの地形を編集するときのゲーム画面の様子を示す説明図。

【図１２】自キャラクタが敵キャラクタを撃退する際の戦闘シーンで地形を考慮した戦い方の例を示す説明図。

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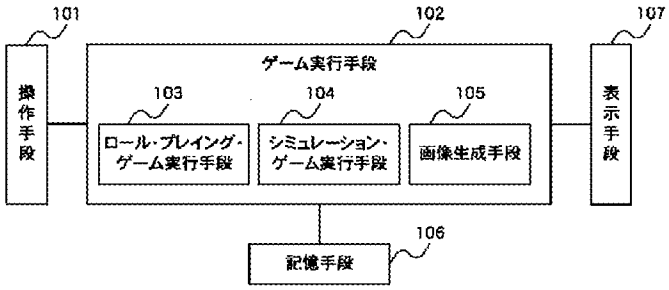
【図１３】自キャラクタが敵キャラクタを撃退する際の戦闘シーンで地形を考慮した戦い方の例を示す説明図。
【図１４】自キャラクタが敵キャラクタを撃退する際の戦闘シーンで地形を考慮した戦い方の例を示す説明図。
【図１５】本実施形態を実現できるゲーム機の概観の一例を示す説明図。
【図１６】本実施形態を実現できるゲーム機の概略的なハードウェア構成の一例を示す説明図。
【符号の説明】
１０１…操作手段、１０２…ゲーム実行手段、１０３…ロール・プレイング・ゲーム実行手段、１０４…シミュレーション・ゲーム実行手段、１０５…画像生成手段、１０６…記憶手段、１０７…表示手段、２０１…ロール・プレイング・ゲーム中の世界、２０２…シミュレーション・ゲーム中の世界（ジオラマ）、５０１…ロール・プレイング・ゲームのゲームプログラム、５０２…シミュレーション・ゲームのゲームプログラム、５０３…シナリオファイル、５０４…グラフィックファイル、５０＊５…ジオラマテーブル、５０６…オブジェクトーエレメント対応テーブル、５０７…入手済みエレメントテーブル、５０８…オブジェクトテーブル、１…ゲーム機、２…ゲーム機本体、３…ディスク装着部、４…リセットスイッチ、５…電源スイッチ、６…ディスク操作スイッチ、７…スロット部、８…メモリカード挿入部、９…コントローラ接続部、１０…メモリカード、２０…コントローラ、３０…モニタ、４０…スピーカ、５０…制御系、５１…ＣＰＵ（Central Processing Unit）、５２…周辺装置制御部、５３…メインメモリ、５４…ＲＯＭ（Read Only Memory）、６０…グラフィックシステム、６１…ＧＴＥ（Geometry Transfer Engine）、６２…ＧＰＵ（Graphic Processing Unit）、６３…フレームバッファ、６４…画像デコーダ、７０…サウンドシステム、７１…ＳＰＵ（Random Access Memory）、７２…サウンドバッファ、８０…光ディスク制御系、８１…光ディスク装置、８２…デコーダ、８３…バッファ、９０…通信制御系、９１…通信制御部。

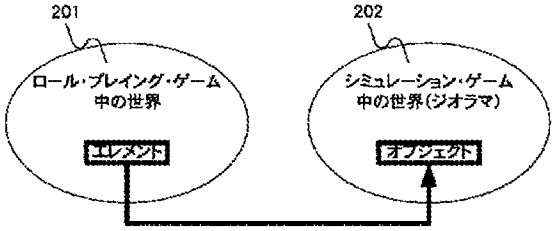
【図１】

図 1



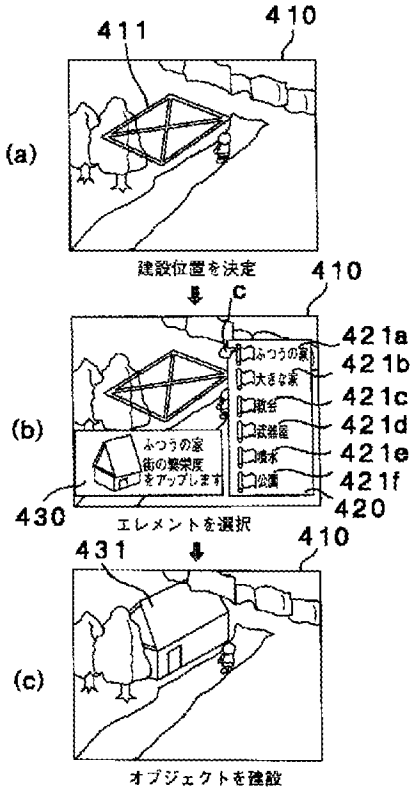
【図３】

図 3



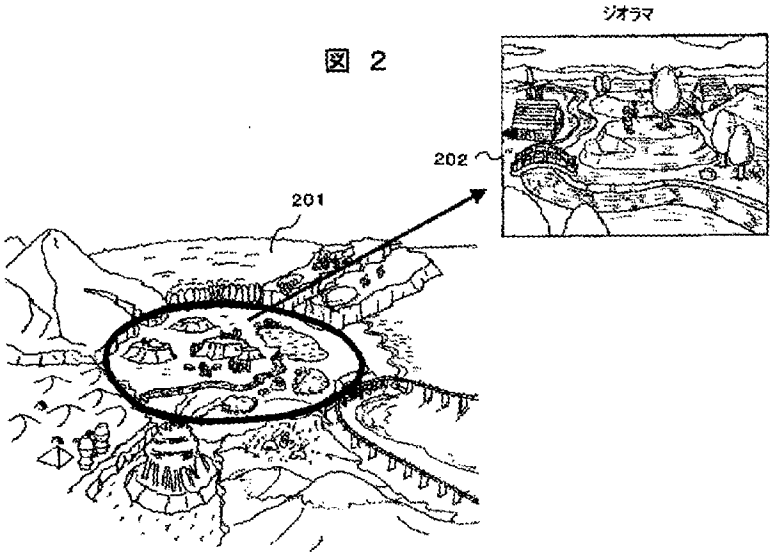
【図４】

図 4



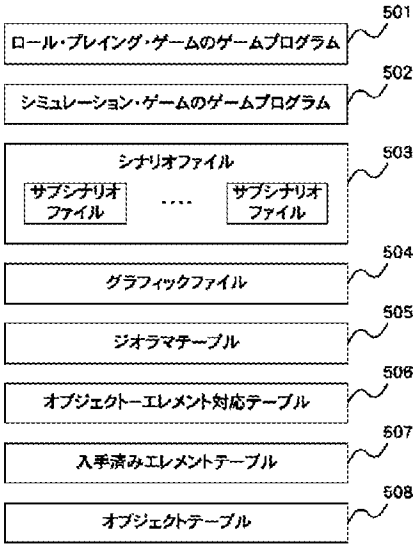
【図２】

図 2



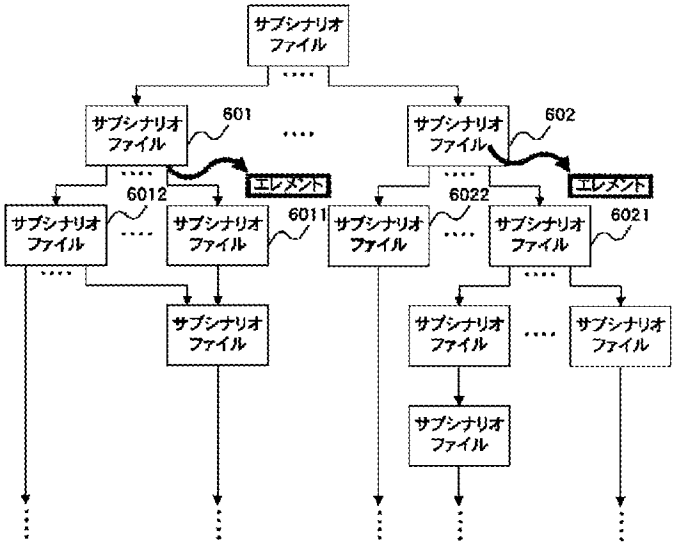
【図５】

図 5



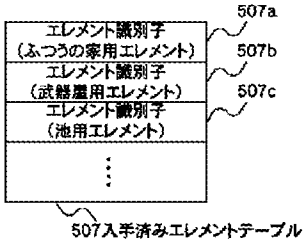
【図６】

図 6



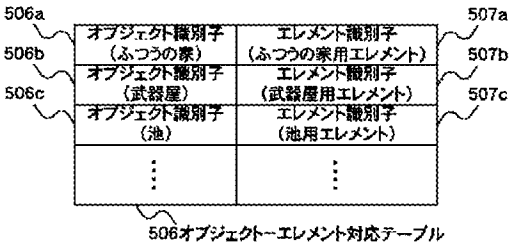
【図７】

図 7



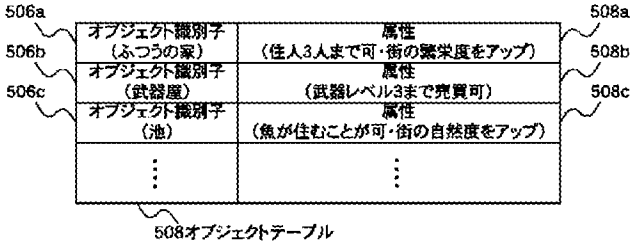
【図８】

図 8



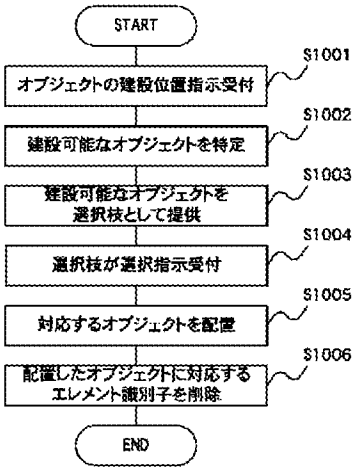
【図９】

図 9



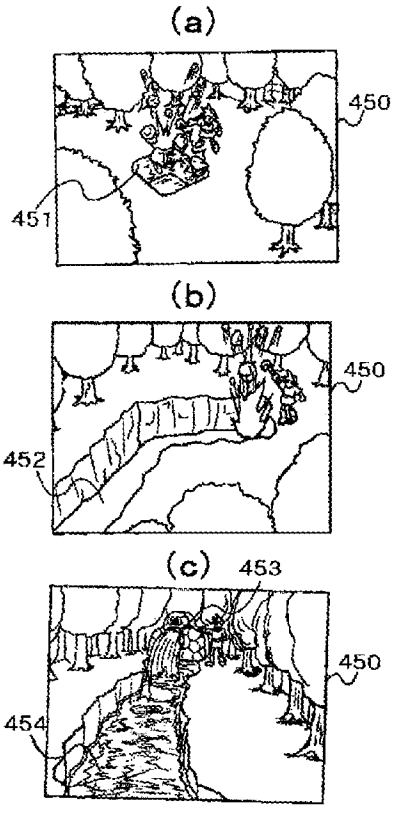
【図１０】

図 10



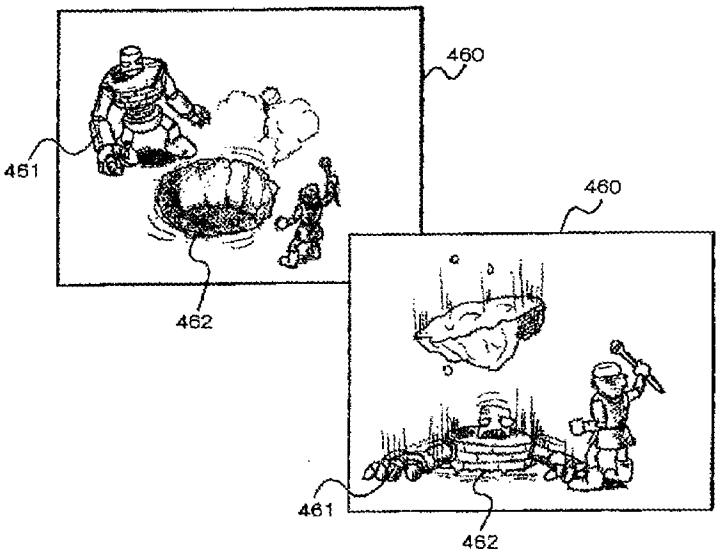
【図１１】

図 11



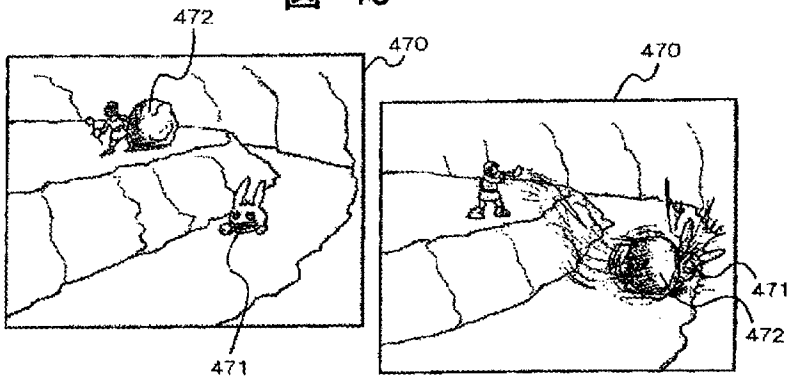
【図１２】

図 12



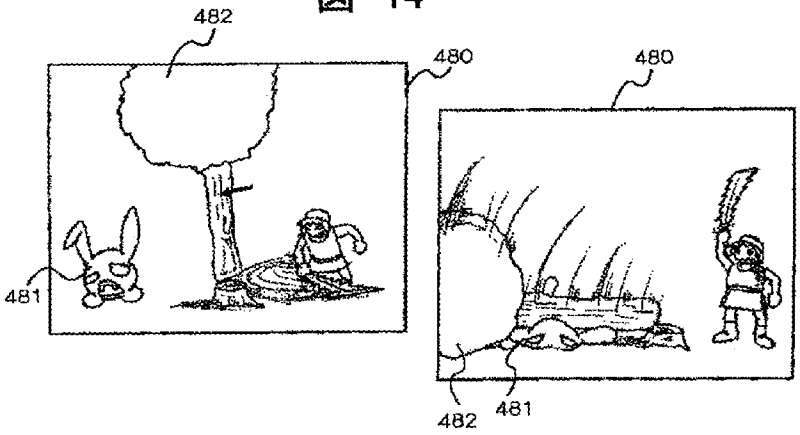
【図１３】

図 13



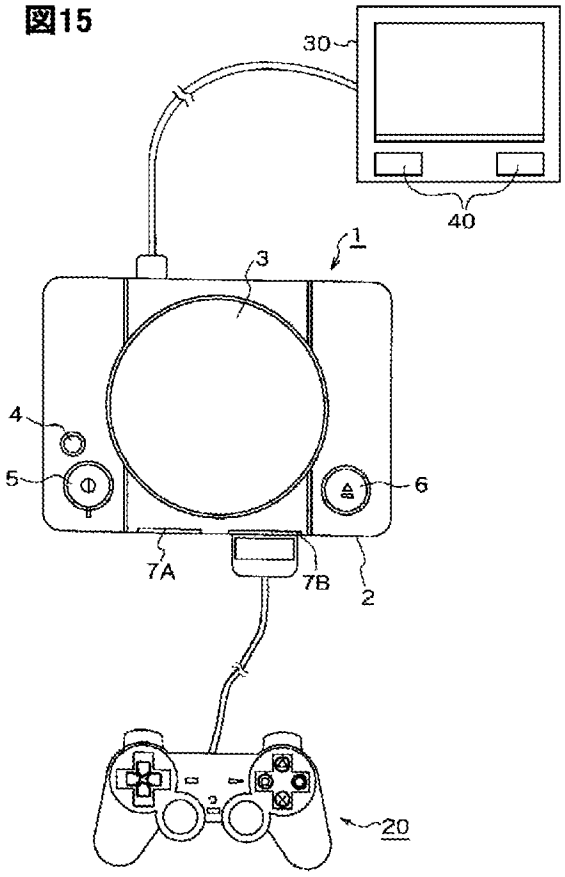
【図１４】

図 14



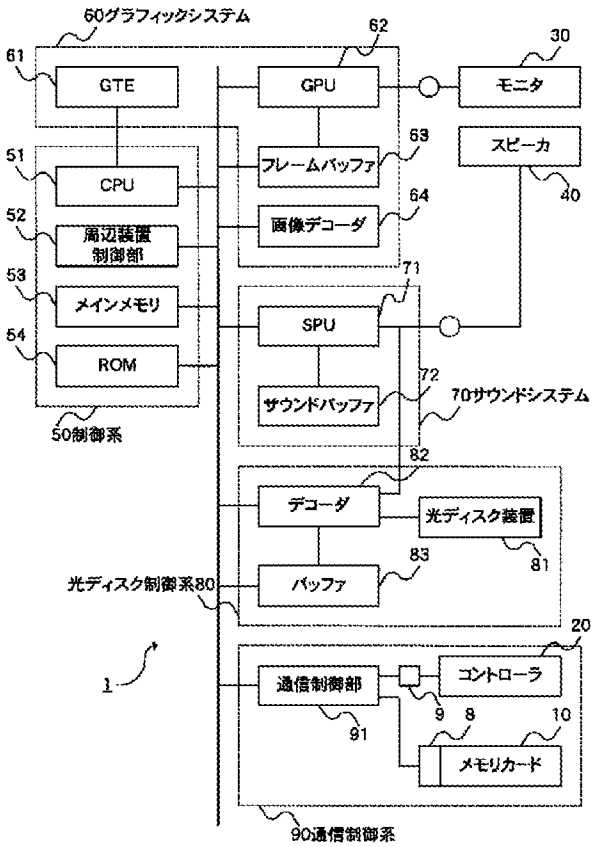
【図１５】

図15



【図１６】

図 16



【手続補正書】
【提出日】平成１２年８月２９日（２０００．８．２９）
【手続補正１】
【補正対象書類名】明細書
【補正対象項目名】特許請求の範囲
【補正方法】変更
【補正内容】
【特許請求の範囲】
【請求項１】操作装置を介して受け付けたプレイヤの操作内容にしたがってゲームを進行させるゲーム機であって、
プレイヤが自分に割り当てられたキャラクタを操作することにより、シナリオを進行させる形式のゲームを提供するロールプレイングゲーム提供手段と、
プレイヤが、仮想世界上に、世界の構成要素であるオブジェクト等を配置することにより、プレイヤ独自の世界を造り上げていく形式のゲームを提供するシミュレーションゲーム提供手段と、
上記２つのゲームを関連付けて並行に進行させるゲーム制御手段とを有することを特徴とするゲーム機。
【請求項２】請求項１記載のゲーム機であって、
上記シミュレーションゲーム提供手段は、プレイヤが作り上げる世界の地形について、プレイヤからの変更要求を受け付け、変更後の地形を提供することを特徴とするゲーム機。
【請求項３】請求項１記載のゲーム機であって、
上記ゲーム制御手段は、上記ロールプレイングゲーム提供手段がプレイヤに与えた、上記世界の構成要素であるオブジェクトを配置するために必要な素材を、上記シミュレーションゲーム提供手段が利用できるようにし、
上記シミュレーションゲーム提供手段は、この素材をプレイヤに選択可能に提示することを特徴とするゲーム機。
【請求項４】請求項３記載のゲーム機であって、
上記オブジェクトとそれを配置するために必要な素材とは、１対１または１対多の関係にあることを特徴とするゲーム機。
【請求項５】請求項３記載のゲーム機であって、

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上記シミュレーションゲーム提供手段は、
プレイヤの操作に基いて上記オブジェクトを仮想世界上に配置すると、上記世界の構成要素であるオブジェクトと、キャラクタとを関連付けたデータを参照し、このオブジェクトに関連付けられたキャラクタを登場させることを特徴とするゲーム機。

【請求項６】操作装置を介して受け付けたプレイヤの操作内容にしたがってゲームを進行させる処理をゲーム機に実行させるためのプログラムを記憶したゲーム機読取可能な記憶媒体であって、
上記プログラムは、
プレイヤが自分に割り当てられたキャラクタを操作することにより、シナリオを進行させる形式のゲームを提供するロールプレイングゲーム実行処理と、
プレイヤが、仮想世界上に、世界の構成要素であるオブジェクト等を配置することにより、プレイヤ独自の世界を造り上げていく形式のゲームを提供するシミュレーションゲーム実行処理と、
上記２つのゲームを関連付けて並行に進行させるゲーム制御処理とをゲーム機に実行させることを特徴とする記憶媒体。

【請求項７】請求項６記載の記憶媒体であって、
上記シミュレーションゲーム実行処理は、プレイヤが作り上げる世界の地形について、プレイヤからの変更要求を受け付け、変更後の地形を提供する処理を含むことを特徴とする記憶媒体。

【請求項８】請求項６記載の記憶媒体であって、
上記ゲーム実行処理は、上記ロールプレイングゲーム実行処理においてプレイヤに与えた、上記世界の構成要素であるオブジェクトを配置するために必要な素材を、上記シミュレーションゲーム実行処理において利用できるようにする処理を含み、
上記シミュレーションゲーム実行処理は、この素材をプレイヤに選択可能に提示する処理を含むことを特徴とする記憶媒体。

【請求項９】請求項８記載の記憶媒体であって、
上記オブジェクトとそれを配置するために必要な素材とは、１対１または１対多の関係にあることを特徴とする記憶媒体。

【請求項１０】請求項８記載の記憶媒体であって、
上記シミュレーションゲーム実行処理は、
プレイヤの操作に基いて上記オブジェクトを仮想世界上に配置すると、上記世界の構成要素であるオブジェクトと、キャラクタとを関連付けたデータを参照し、このオブジェクトに関連付けられたキャラクタを登場させる処理を含むことを特徴とする記憶媒体。

【請求項１１】操作指示を受け付ける操作装置と、画像表示を行う表示装置とが接続され、装着された記憶媒体からプログラムを読み込んでゲームを実行するゲーム実行手段を有するゲーム機において、
前記ゲーム実行手段は、
前記操作装置が受け付けた操作指示に基いてゲームに登場するキャラクタを行動させ、キャラクタが所定の行動を行なった場合に、あらかじめ定められたゲーム中の素材要素をプレイヤが使用可能となる状態とする第１のゲーム進行手段と、
前記第１のゲーム進行手段により使用可能な状態となった素材要素を、プレイヤに対し選択可能に表示し、その選択を受け付けると当該ゲーム機内に生成した仮想世界に、選択された素材要素を配置し、仮想世界の構成物とする第２のゲーム進行手段とを有することを特徴とするゲーム機。

【手続補正２】
【補正対象書類名】明細書
【補正対象項目名】０００６
【補正方法】変更
【補正内容】
【０００６】具体的には、操作装置を介して受け付けたプレイヤの操作内容にしたがってゲームを進行させるゲーム機であって、プレイヤが自分に割り当てられたキャラクタを操作することにより、シナリオを進行させる形式のゲームを提供するロールプレイングゲーム提供手段と、プレイヤが、仮想世界上に、世界の構成要素であるオブジェクト等を配置することにより、プレイヤ独自の世界を造り上げていく形式のゲームを提供するシミュレーションゲーム提供手段と、上記２つのゲームを関連付けて並行に進行させるゲーム制御手段とを有することを特徴とするゲーム機を提供する。

【手続補正３】
【補正対象書類名】明細書
【補正対象項目名】０００８
【補正方法】変更
【補正内容】
【０００８】上記ロールプレイングゲームとシミュレーションゲームを関連付けるために、例えば、上記ゲーム制御手段は、上記ロールプレイングゲーム提供手段がプレイヤに与えた、上記世界の構成要素であるオブジェクトを配置するために必要な素材を、上記シミュレーションゲーム提供手段が利用できるようにし、上記シミュレーションゲーム提供手段は、この素材をプレイヤに選択可能に提示するようにすることができる。

【手続補正４】
【補正対象書類名】明細書
【補正対象項目名】００１０
【補正方法】変更
【補正内容】
【００１０】また、上記オブジェクトにあらかじめキャラクタを関連付けておき、上記シミュレーションゲーム提供手段は、プレイヤの操作に基いて上記オブジェクトを仮想世界上に配置すると、上記世界の構成要素である

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オブジェクトと、キャラクタとを関連付けたデータを参照し、このオブジェクトに関連付けられたキャラクタを＊　＊登場させるようにしてもよい。

フロントページの続き

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BA02 BA05 BC00 BC05 BC10
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(71) Applicant: **Sony Computer Entertainment Inc.**
Tokyo 107-0052 (JP)

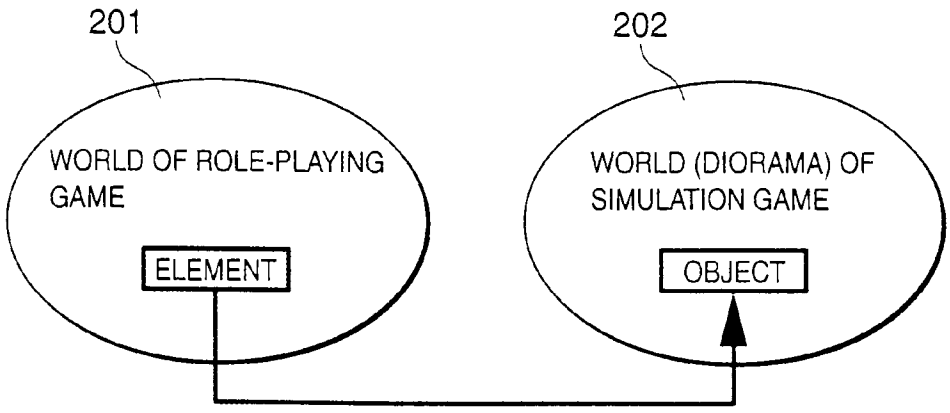
(72) Inventors:
- **Hino, Akihiro**
  Omuta-shi, Fukuoka 837-0916 (JP)
- **Motomura, Kentaro,**
  c/o Sony Computer Entertain.Inc
  Tokyo 107-0052 (JP)

(74) Representative: **Turner, James Arthur**
D. Young & Co.,
21 New Fetter Lane
London EC4A 1DA (GB)

(54) Entertainment system which correlates a role-playing game and a simulation game

(57) In a role-playing game, a player is allowed to play a simulation game to construct his/her own world. A world (diorama) created by the simulation game and the world of the role-playing game are linked with each other. As a result, the player can enjoy a game of an unprecedented type. Specifically, a game is configured in such a manner that an object (e.g., a building) can be constructed in a diorama by using an element that is obtained while the player plays the role-playing game according to a scenario.

FIG. 3



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Description

[0001] This application claims a priority based on Japanese Patent Application No. 11-257792, filed on September 10, 1999, the entire contents of which are incorporated herein by reference for all purposes.

BACKGROUND OF THE INVENTION

[0002] The present invention relates to a type of video game in which a player proceeds with a scenario by operating a controller to instruct a character how to act in game pictures, the character being assigned to the player.

[0003] A role-playing game is a game in which a scenario progresses as a player instructs a character (player character) in game pictures how to act, the character being assigned to the game player, by operating a controller that is connected to an entertainment system. There is known a game as this type, for example, the subject of which is to achieve a final goal by allowing the player character to grow with experiences of fights, etc., against opponent characters.

SUMMARY OF THE INVENTION

[0004] Although there are some variations in many of role-playing games, they are generally common in having a final goal of defeating a boss of the opponent characters. Since contents of a scenario to reach the final goal are determined in advance, many players may follow similar processes. Therefore, role-playing games produced according to a concept that is similar to conventional ones may be less attractive to players who have already experienced a great number of role-playing games.

[0005] An object of the present invention is to provide a game that is attractive and enjoyable to players who have already experienced a great number of role-playing games, by providing a world that is unique to the player in the role-playing game.

[0006] In order to attain the above object, in the present invention, the player is allowed to play a simulation game to construct his/her own world in the role-playing game. A world created by the simulation game and the world of the role-playing game are linked with each other. As a result, the player can enjoy a game of an unprecedented type.

[0007] Specifically, the inventors of the present invention have invented an entertainment system for proceeding with a game according to operations of a player that are accepted through an operating device, comprising role-playing game providing means for providing a game of such a type that the game proceeds according to a scenario as a player manipulates a character that is assigned to the player; simulation game providing means for providing a game of such a type that a world unique to the player is created by placing, in a virtual world, an object that is a component of the virtual world; and game control means for proceeding with the two games in parallel in such a manner that the two games are correlated with each other.

[0008] An originality of the player may be presented better, if a terrain of the world created by the above simulation game can be altered according to a player's instruction.

[0009] Here, the role-playing game relates to the simulation game, for example, in the following manner. The game control means allows the simulation game providing means to use an element that is necessary to place an object, as a component of the virtual world, the element being given to the player by the role-playing game providing means, and the simulation game providing means presents the element to the player in a selectable manner.

[0010] The object and the element corresponding to the object may be in either a one-to-one relationship or a one-to-plural relationship.

[0011] The above simulation game providing means may refer to data that relates the object with a character, the object being a component of the virtual world, so as to make the related character thus related appear on the scene at the time when the object is placed on the virtual world according to the player's operation.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012]

Fig. 1 is a functional block diagram of the main part of an entertainment system according to an embodiment of the present invention;

Fig. 2 illustrates two worlds that are provided in the embodiment;

Fig. 3 is a conceptual diagram showing a relationship between a role-playing game and a simulation game in the embodiment;

Figs. 4A-4C show game pictures that are displayed when selectable objects are displayed, and an object is constructed according to a selection;

Fig. 5 shows an illustration of storage contents of a storing means;

Fig. 6 shows how sub-scenario files are referred to in a process of proceeding with a role-playing game;

Fig. 7 shows an illustration of storage contents of an obtained elements table;

Fig. 8 shows an example of storage contents of an object-element correspondence table;

Fig. 9 shows an example of storage contents of an object table;

Fig. 10 is a flowchart showing a flow of operation that a simulation game executing means places an object in a diorama;

Figs. 11A-11C show game pictures that are displayed when a player edits a terrain of a diorama;

Fig. 12 illustrates examples of fight in which the ter-

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rain is taken into consideration in the fighting scene in which a player character defeats an opponent character;

Figs. 13 illustrates examples of fight in which the terrain is taken into consideration in the fighting scene in which a player character defeats an opponent character;

Figs. 14 illustrates examples of fight in which the terrain is taken into consideration in the fighting scene in which a player character defeats an opponent character;

Fig. 15 shows an example of an appearance of the entertainment system capable of implementing the embodiment of the present invention; and

Fig. 16 shows an outlined, example of a hardware configuration of the entertainment system capable of implementing the embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0013] An embodiment of the present invention will be hereinafter described with reference to the accompanying drawings.

[0014] First, an example of an appearance of the entertainment system capable of implementing the embodiment and its outlined example of a hardware configuration will be described with reference to Figs. 15 and 16.

[0015] The entertainment system has an appearance as shown in Fig. 15, for example. The entertainment system 1 reads out a game program that is recorded on an optical disc such as a CD-ROM and executes the program according to operations of a player.

[0016] A main body 2 of the entertainment system 1 is provided with a disc mounting section 3 in which an optical disc where a game program is recorded is to be mounted, a reset switch 4 for resetting a game arbitrarily, a power switch 5, a disc operation switch 6 to be operated for mounting of the optical disc, and slots 7A and 7B.

[0017] An operation device (controller) 20 can be connected to the slots 7A and 7B. Furthermore, a memory card on/from which game data can be recorded/read out is also mounted on the slots 7A and 7B.

[0018] The entertainment system 1 can be connected to a monitor 30 and speakers 40 though they are not shown. Fig. 15 shows an example in which a television set is used as the monitor 30 and the speakers 40.

[0019] The entertainment system 1 has an outlined hardware configuration as shown in Fig. 16, for example. The entertainment system 1 is provided with a control system 50 that includes a CPU 51 and its peripheral devices, a graphic system 60 that includes a frame buffer 63 and a GPU 62 for drawing an image in the frame buffer 63, a sound system 70 that includes an SPU (sound processing unit) for generating a musical sound, an effect sound, or the like, an optical disc control system 80 for controlling an optical disc on which a game program is recorded, and a communication control system 90 for controlling input/output of a signal that is supplied from the controller 20 to which an instruction of the player is inputted, and of data from the memory card 10 for storing a game setting, etc.

[0020] As shown in Fig. 16, the control system 50 is provided with the CPU 51, a peripheral device control section 52 for performing, a interrupt control, a direct memory access (DMA) transfer control, etc., a main memory 53 comprising a RAM (random access memory), and a ROM (read-only memory) 54 in which an operating system (OS) for managing the main memory 53, the graphic system 60, the sound system 70, etc. is stored.

[0021] When the power is applied to the entertainment system 1, the CPU 51 starts to control the entire entertainment system 1, that is, the graphic system 60, the sound system 70, etc., by executing the OS that is stored in the ROM 54.

[0022] After the OS is executed, the CPU 51 performs initialization such as an operation check and then executes the game program recorded on the optical disc by controlling the optical disc control system 80. By executing the game program, the CPU 51 controls image display and generation of a musical sound, an effect sound, or the like by controlling the graphic system 60, the sound system 70, etc. according to an instruction of the player.

[0023] The graphic system 60 is provided with a GTE (geometry transfer engine) 61 for performing a processing such as coordinate conversion, the GPU 62 for performing a drawing processing according to drawing instructions from the CPU 51, a frame buffer 63 for storing image data that has been drawn by the GPU 62, and an image decoder 64 for decoding compressed and coded image data.

[0024] Having, for example, a parallel computation function for performing a plurality of computations in parallel, the GTE 61 can perform computations, such as coordinate conversion, transparent transformation, and light source calculation at high speed in response to a computation request from the CPU 51.

[0025] The GPU 62 draws polygons etc. in the frame buffer 63 in accordance with a drawing instruction from the CPU 51.

[0026] The frame buffer 63 comprises a dual-port RAM and can perform drawing from the GPU 62 or transferring the image data from the main memory 53, simultaneously with reading the image data for display. The frame buffer 63 is provided with not only a display area from which video signals are outputted to the monitor 30 but also a CLUT area where a color look-up table (CLUT) is stored, which is referred to by the GPU 62 in drawing polygons etc., and a texture area in which textures to be inserted into polygons etc., that are drawn by the CPU 62 after a coordinate conversion in drawing processing.

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[0027] Controlled by the CPU 51, the image decoder 64 decodes image data of a still picture or a moving picture that is stored in the main memory 53 and stores the decoded image data again in the main memory 53. The decoded image data can be used as a background image after it is stored in the frame buffer 63 by the GPU 62.

[0028] The sound system 70 is provided with the SPU 71 for generating a musical sound, an effect sound, or the like in accordance with an instruction from the CPU 51 and a sound buffer 72 in which waveform data or the like is stored by the SPU 71. A musical sound, an effect sound, or the like generated by the SPU 71 is outputted to the speakers 40. The SPU 71 has a function of decoding audio data and a function of reproducing waveform data stored in the sound buffer 72 as it is or after it is modulated.

[0029] The optical disc control system 80 is provided with an optical disc device 81 for reading out a game program, data, etc. that are recorded on the optical disc, a decoder 82 for decoding the game program, data, etc., and a buffer 83 for increasing the speed of reading data from the optical disc, by temporarily storing data that has been read out by the optical disc device 81.

[0030] The communication control system 90 is provided with a communication control section 91 for controlling a communication with the CPU 51 via a bus. The communication control section 91 is provided with a controller connection portion 9 to which the controller 20 is connected for inputting an instruction from the player, and a memory card insertion portion 8 to which the memory card 10 for storing game setting data etc., is connected.

[0031] The controller 20 that is connected to the controller connection portion 9 has a plurality of instruction keys to be operated by the player to input an instruction. The controller 20 transmits a state of the instruction keys to the communication control section 91. The communication control section 91 transmits the received state of the instruction keys to the CPU 51. In this manner, the CPU 51 receives the instruction of the player. The CPU 51 performs processing in accordance with the instruction of the player based on the game program being executed.

[0032] When it is necessary to store setting data etc. of the game being executed, the CPU 51 transmits the data to be stored to the communication control section 91. The communication control section 91 writes the data received from the CPU 51 to the memory card 10 that is mounted in the slot of the memory card insertion portion 8.

[0033] An example of the appearance of the entertainment system that can implement the present embodiment and the outlined example of the hardware configuration have been described above. It goes without saying that an apparatus that can implement the present embodiment is not limited to the above entertainment system.

[0034] Fig. 1 is a functional block diagram of the main part of a game system according to the embodiment of the present invention. As shown in Fig. 1, the game system is provided with an operating means 101 through which the player inputs various instructions, a game executing means 102 for accepting operation data from the operating means 101, a storing means 106 in which a game program, game data, etc. are stored, and a display means 107 for displaying a game picture.

[0035] The game executing means 102 is provided with a role-playing game executing means 103 for proceeding with a game according to a predetermined scenario, a simulation game executing means 104 for creating a world that is unique to the player, and an image generating means 105. The role-playing game executing means 103 and the simulation game executing means 104 perform processes for proceeding with a role-playing game and a simulation game, respectively, based on instructions of the player that are received from the operating means 101 and the game programs, game data, etc. that are stored in the storing means 106. The image generating means 105 performs a process of generating an image to be displayed as a game picture and displaying it on the display means 107. The game executing means 102 manages the role-playing game progressing process that is performed by the role-playing game executing means 103 and the simulation game progressing process that is performed by the simulation game executing means 104 by correlating those with each other.

[0036] The game executing means 102 can be implemented by hardware of the CPU 51, the GPU 62, etc. and the storing means 106 can be implemented by hardware such as an optical disc, for example, a CD-ROM or a DVD, or an external storage device such as a hard disk.

[0037] The display means 107 can be implemented with a monitor using a CRT (cathode-ray tube) or the like, such as a television set. The display means 107 may be either integrated with or separated from the entertainment system main body 2 depending on the form of entertainment system 1, that is, depending on whether the entertainment system 1 is for home use, business use, or some other use.

[0038] In this embodiment, the game executing means 102 executes a role--playing game and a simulation game in parallel while correlating those with each other.

[0039] Specifically, in this embodiment, as shown in Fig. 2, the simulation game executingmeans 104 provides aworld (diorama) 202 that can be edited by the player separately from a world 201 that is provided by the role-playing game executing means 103. The simulation game executing means 104 allows the player to construct an object (e.g., a building) in the diorama 202.

[0040] Although in the example of Fig. 2 the diorama 202 that can be edited by the player is located at the center of the world 201 that is provided by the role-play-

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ing game executing means 103, the invention is not limited to such a case.

[0041] In this embodiment, as shown in Fig. 3, the player can construct an object by using an element that is obtained in the world 201 that is provided by the role-playing game executing means 103, while the player plays the role-playing game according to the scenario. The role-playing game and the simulation game are correlated with each other in this manner.

[0042] That is, the player searches for an element by instructing the player character how to act in the world 201 that is provided by the role-playing game executing means 103. Using the element thus obtained, the player can construct an object in the diorama 202, and then the player develops the diorama 202. In this manner, the player can play in both fields of the world 201 and the diorama 202.

[0043] In particular, since the player can construct an object at a desired position in the diorama 202, the player can create his/her own diorama 202.

[0044] In this embodiment, as a matter of course, to make it possible to create a variety of dioramas 202, plural kinds of objects are prepared and plural kinds of elements are prepared for each object.

[0045] Figs. 4A-4C show a specific example.

[0046] Figs. 4A-4C show an example of transitions between game pictures in constructing an object by the player in the diorama 202. Six objects that can be constructed by using an obtained element are displayed as choices 421a-421f in a selection window 420 of a picture 410 of Fig. 4B. In this example, a "normal house" is selected from the six choices 421a-421f by the player and a "normal house" 431 is constructed in a picture 410 of Fig. 4C.

[0047] Here, a corresponding relationship between an object and an element is not limited to a one-to-one relationship. A game may be configured in such a manner that two or more elements are needed to construct one object. For example, it is possible to design a game such that an object can be constructed only when two elements, e.g., a draft and materials are obtained.

[0048] In this embodiment, a predetermined attribute is defined for each object. It is possible to determine a character corresponding to a selected object out of plural kinds of characters prepared in advance in accordance with its attribute and to allow the determined character to appear in the diorama 202.

[0049] As a specific example, by correlating a weapon merchant (character) with a weapon store (object), a player character is allowed to purchase a weapon at a weapon store that has been constructed in the diorama 202. Similarly, by correlating fish (characters) with a pond (object), it is possible to allow the fish to live in a pond that has been constructed in the diorama 202.

[0050] With the appearance of a character in the diorama 202 in the above manner, it is possible to provide, in the game system, a different role-playing game executing means other than the role-playing game executing means 103 and to allow the different role-playing game executing means to proceed with a role-playing game in the diorama 202. This allows the player to play a game in a more enjoyable manner.

[0051] Next, an operation of the embodiment, which enables a role-playing game and a simulation game to be executed in parallel being correlated with each other, will be described in a simplified manner with reference to Figs. 5-10.

[0052] Fig. 5 shows an example of storage contents of the storing means 106.

[0053] As shown in Fig. 5, in addition to a game program 501 of a role-playing game and a game program 502 of a simulation game, at least a scenario file 503, a graphic file 504, a diorama table 505, an object-element correspondence table 506, an obtained element table 507, and an object table 508 are stored in the storing means 106.

[0054] The scenario file 503 consists of a plurality of sub-scenario files, and is referred to by the role-playing game executing means 103 that executes the game program 501.

[0055] The role-playing game executing means 103 refers to sub-scenario files one after another from a sub-scenario file that should be referred to first and proceeds with a role-playing game according to a sub-scenario file being referred to. In the role-playing game that is proceeding according to a sub-scenario file being referred to, the role-playing game executing means 103 generates an event and determines a sub-scenario file to be referred to next in accordance with an instruction that the player inputs for the event. It is preferable that the role-playing game executing means 103 presents a diorama 202 in an initial state to the player when the role-playing game proceeds according to the sub-scenario file that should be referred to first.

[0056] As a way of example, Fig. 6 shows how the sub-scenario files are referred to in a process of proceeding with a role-playing game.

[0057] In this embodiment, it is designed as for a predetermined sub-scenario file, an element is fixed in advance, and the element is provided in an event that occurs in a role-playing game according to the predetermined sub-scenario file concerned.

[0058] For example, it is possible to configure a game in such a manner that a predetermined element can be obtained when a player character has defeated an opponent character. Or a game may be configured in such a manner that a treasure box containing a predetermined element is prepared and a player character can obtain the element when the player has found the treasure box.

[0059] In the example of Fig. 6, it is shown that sub-scenario files 601 and 602 are the files that can obtain an element. Even with a sub-scenario file that can obtain an element such as the sub-scenario file 601, there may be a case where a player character cannot obtain the element depending on an instruction that the player in-

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puts for an event that occurs during a role-playing game according to the sub-scenario file. This is specifically explained in the following, i.e., Fig. 6 shows an example that during the role-playing game according to the sub-scenario 602, an event occurs in which an element can be obtained irrespective of whether a sub-scenario file 6021 or 6022 will be referred to next. Fig. 6 also shows an example that during the role-playing according to the sub-scenario 601, an event occurs in which the player character can obtain an element if a sub-scenario file 6011 is referred to next, but an element cannot be obtained if a sub-scenario file 6012 is referred to next.

[0060] Returning to Fig. 5, the obtained element table 507 is a table for storing the identifiers of elements that have been obtained by the player. For example, as shown in Fig. 7, identifiers 507a, 507b, 507c, ... of obtained elements are registered therein.

[0061] As shown in Fig. 7, the role-playing game executing means 103 stores identifiers 507a, 507b, 507c, ... of elements that have been obtained by the player (i.e., the player character) in the obtained element table 507. The obtained element table 507 is referred to by the simulation game executing means 104 that executes the game program 502.

[0062] As shown in Fig. 8, the object-element correspondence table 506 is a table in which identifiers 507a, 507b, 507c, ... of elements that are necessary to construct objects are stored for respective identifiers 506a, 506b, 506c, ... of thoseobjects. As shown in Fig. 9, the object table 508 is a table in which attributes 508a, 508b, 508c, ... of objects are stored for respective identifiers 506a, 506b, 506c, ... of those objects. The object-element correspondence table 506 and the object table 508 are also referred to by the simulation game executing means 104 that executes the game program 502.

[0063] In this embodiment, as described above, the diorama 202 is located at the center of the world 201 that is provided by the role-playing game executing means 103. The means for forming the diorama 202 according to instructions of the player is the simulation game executing means 104.

[0064] The simulation game executing means 104 arranges objects in the diorama 202 according to instructions of the player. A flow of this operation will be described in a simplified manner with reference to Fig. 10.

[0065] As shown in Fig. 10, when, a construction position 411 is specified by the player, for example, as shown in Fig. 4A (S1001), the simulation game executing means 104 refers to the object-element correspondence table 506 and the obtained element table 507 and identifies objects that can be constructed by using an obtained element (S1002).

[0066] Next, the simulation game executing means 104 presents the objects that were identified at step S1002 to the player by displaying those as choices 421a-421f in a selection window 420 in a manner shown in Fig. 4B (S1003). When the player places cursor C at one choice in the selection window 420 via the operating means 101, an introductionwindow 430 for introducing the contents of the choice is displayed as shown in Fig. 4B.

[0067] When one choice was selected via the operating means (S1004), the simulation game executing means 104 places a corresponding object 431, forexample, as shown in Fig. 4C (S1005). At this timing, the simulation game executing means 104 deletes the element identifier (e.g., the identifier 507a) corresponding to the placed object from the obtained element table 507 (S1006).

[0068] In the diorama table 505 as shown in Fig. 5, topographical information of the diorama 202 and information (identifiers, arrangement positions, etc.) of the objects arranged in the diorama 202 are stored. By referring to the diorama table 505, the simulation game executing means 104 may make judgments before placement of an object, whether or not the object can be placed therein, or after placement of the object, the simulation game executing means 104 may add other information to the object that is placed to the diorama table 505.

[0069] In the graphic file 504 as shown in Fig. 5, graphic data of characters, objects, elements, backgrounds, etc., are stored together with their identifiers. The graphic file 504 is referred to by the image generating means 105. Specifically, when the simulation game executing means 104 has specified identifiers and display positions of display subjects (objects, characters, etc.) to the image generating means 105, the image generating means 105 refers to the graphic file 504, generates a game picture, and allows the display means 107 to display it. A method for generating game pictures is same as conventional techniques and hence is not described here.

[0070] In this embodiment, the diorama 202 in which objects are arranged in such a manner as described above is evolved by the simulation game executing means 104 as time elapses even while a role-playing game progresses by the role-playing game executing means 103. That is, by referring to the object table 508, the simulation game executing means 104 allows a character corresponding to an object to appear in the diorama 202 after a lapse of a predetermined time in accordance with the attribute of the object.

[0071] In the embodiment, it maybe possible to provide a variety of outputs by varying characters to appear in accordance with not only the attribute of an object but also a position (considering relationships with neighboring objects, terrain, etc.) where the object has been constructed. Also in this case, a table to be referred to may be prepared in advance and referred to.

[0072] For example, in the case where fish is correlated with a pond, by further correlating a resident who likes fishing with a house that is constructed adjacent to the pond, it maybe possible to allow the resident to play fishing. Further, attributes may be made variable. For example, a game may be configured in such a manner

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that if a pond is constructed adjacent to a volcano, the pond may become a hot spring.

[0073] As described above, in the embodiment, the diorama 202 that is a world unique to the player is provided in the world 201 of a role-playing game and hence the player can enjoy the two kinds of games that are correlated with each other. Therefore, attractive and enjoyable games can be provided to the players even if they have experienced a great number of role-playing games.

[0074] The embodiment may be modified in such a manner as including a state of the diorama 202 as one of the final goals of the role-playing game. For example, a prosperity degree of the world may be introduced as a value and one of the final goals may be attained in the case where this value is equal to or more than a predetermined value. In this way, it is possible to guide the player how to develop the diorama 202. Viewed from a game manufacturer, it is possible to adjust contents of the state of the diorama 202 as a final goal, so as to decide, as a nature of the game, whether a point of the role-playing game is emphasized or conversely, a point of the simulation game is emphasized.

[0075] The embodiment may be modified in such a manner that a size of the diorama 202 is increased every time a predetermined condition is satisfied. For the player side, this enhances the pleasure of increasing the size of the diorama 202. In the case where a role-playing game executing means different from the role-playing game executing means 103 progresses a role-playing game in the diorama 202, the player can enjoy the role-playing game in a wider variety of manners.

[0076] The embodiment may be modified in such a manner that the player can freely edit the terrain of the diorama 202 in addition to constructing objects.

[0077] For example, an item (e.g., a magic wand) that enables editing the terrain is given to a player character. In this way, it is possible to construct a river 454 by digging a hole 451 as shown in a picture 450 of Fig. 11A, connecting holes gradually to form a trench 452 as shown in Fig. 11B, and construct a source 453 at the front end of the trench 452 as shown in Fig. 11C. In addition, a sub-game may be provided that enables the player character to enjoy fishing by the river 454 thus constructed.

[0078] By giving a player character an item that enables editing of the terrain, the player character is allowed to fight in consideration of the terrain in a fighting scene of defeating an opponent character.

[0079] For example, as shown in pictures 460 of Fig. 12, a player character digs a hole 462 in front of an opponent character 461, lures the opponent character 461, and buries the opponent character 461 alive when it falls into the hole 462. Pictures 470 of Fig. 13 show another example in which a player character rolls a rock 472 down to crush an opponent character 471. Pictures 480 of Fig. 14 show still another example in which a player character cuts down a tree 482 to crush an opponent character 481 under the tree 482.

[0080] As described above, in the invention, a world unique to a game player is provided in the world of a role-playing game. Therefore, the invention can provide a game that is attractive and enjoyable to even game players even if they have already experienced a large number of role-playing games.

Claims

1. An entertainment system for proceeding with a game according to operations of a player that are accepted through an operating device, comprising:

   role-playing game providing means for providing a game of such a type that the game proceeds according to a scenario as a player manipulates a character that is assigned to the player;
   simulation game providing means for providing a game of such a type that a world unique to the player is created by placing, in a virtual world, an object that is a component of the virtual world; and
   game control means for proceeding with the two games in parallel in such a manner that the two games are correlated with each other.

2. The entertainment system according to claim 1, wherein the simulation game providing means accepts an alteration request from the player regarding a terrain of the world created by the player, and provides the terrain thus altered.

3. The entertainment system according to claim 1, wherein the game control means enables the simulation game providing means to use elements that are necessary to place the object as a component of the world, the element being given to the player by the role-playing game providing means, and wherein the simulation game providing means presents the elements to the player in a selectable manner.

4. The entertainment system according to claim 3, wherein the object and the element that are necessary to place the object are in a one-to-one relationship or a one-to-plural relationship.

5. The entertainment system according to claim 3, wherein the simulation game providing means refers to, after placing the object in the virtual world in accordance with an operation of the player, data that correlates the object as a component of the virtual world with a character and allows the character corresponding to the object to appear.

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6. A storage medium being readable from an entertainment system, in which a program is stored for allowing the entertainment system to execute a process for proceeding with a game according to operations of a player, which are accepted through an operation device, the program allowing the entertainment system to execute:

a role-playing game executing process for providing a game of such a type that the game proceeds according to a scenario as a player manipulates a character that is assigned to the player;
a simulation game executing process for providing a game of such a type that a world unique to the player is created by placing, in a virtual world, an object that is a component of the virtual world; and
a game control process for proceeding with the two games in parallel in such a manner that the two games are correlated with each other.

7. The storage medium according to claim 6, wherein the simulation game executing process includes a step of accepting an alteration request from the player for a terrain of the world created by the player and providing the terrain thus altered.

8. The storage medium according to claim 6, wherein said game control process enables the simulation game executing process to use elements that are necessary to place the object, which are given to the player in the role-playing game executing process, and wherein the simulation game executing process presents the elements to the player in a selectable manner.

9. The storage medium according to claim 8, wherein the object and element that are necessary to place the object are in a one-to-one relationship or a one-to-plural relationship.

10. The storage medium according to claim 8, wherein the simulation game executing process refers to, after placing the object in the virtual world in accordance with an operation of the player, data that correlates the object as a component of the virtual world with a character and allows the character corresponding to the object to appear.

11. An entertainment system having a game executing means for reading out a program from a mounted storage medium, the entertainment system being connected to an operating device for receiving an operating instruction and to a display device for displaying an image, wherein,
said game executing means comprising:
a first game progressing means for allowing a character appearing in a game to act in accordance with the operating instruction received by the operation device, a predetermined element in the game becomes available for the player in the case where the character takes a predetermined action; and
a second game progressing means, wherein the element that becomes available in said first game progressing means is displayed in a selectable manner, and upon receipt of a selection, the element thus selected is placed in a virtual world that is generated in the entertainment system, so as to make a component of the virtual world.

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FIG. 1

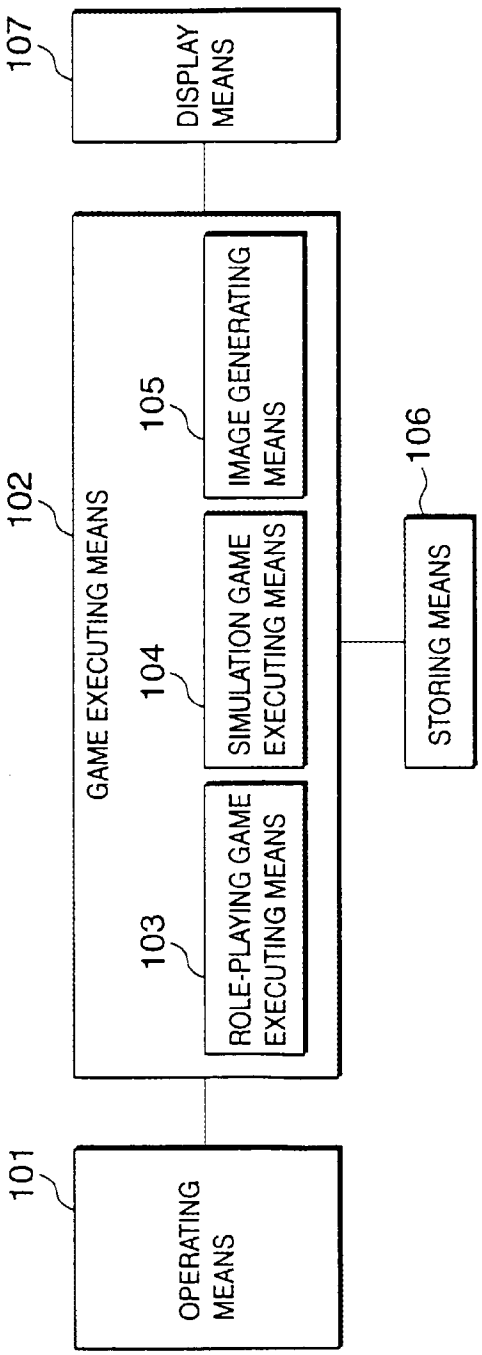

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FIG. 2

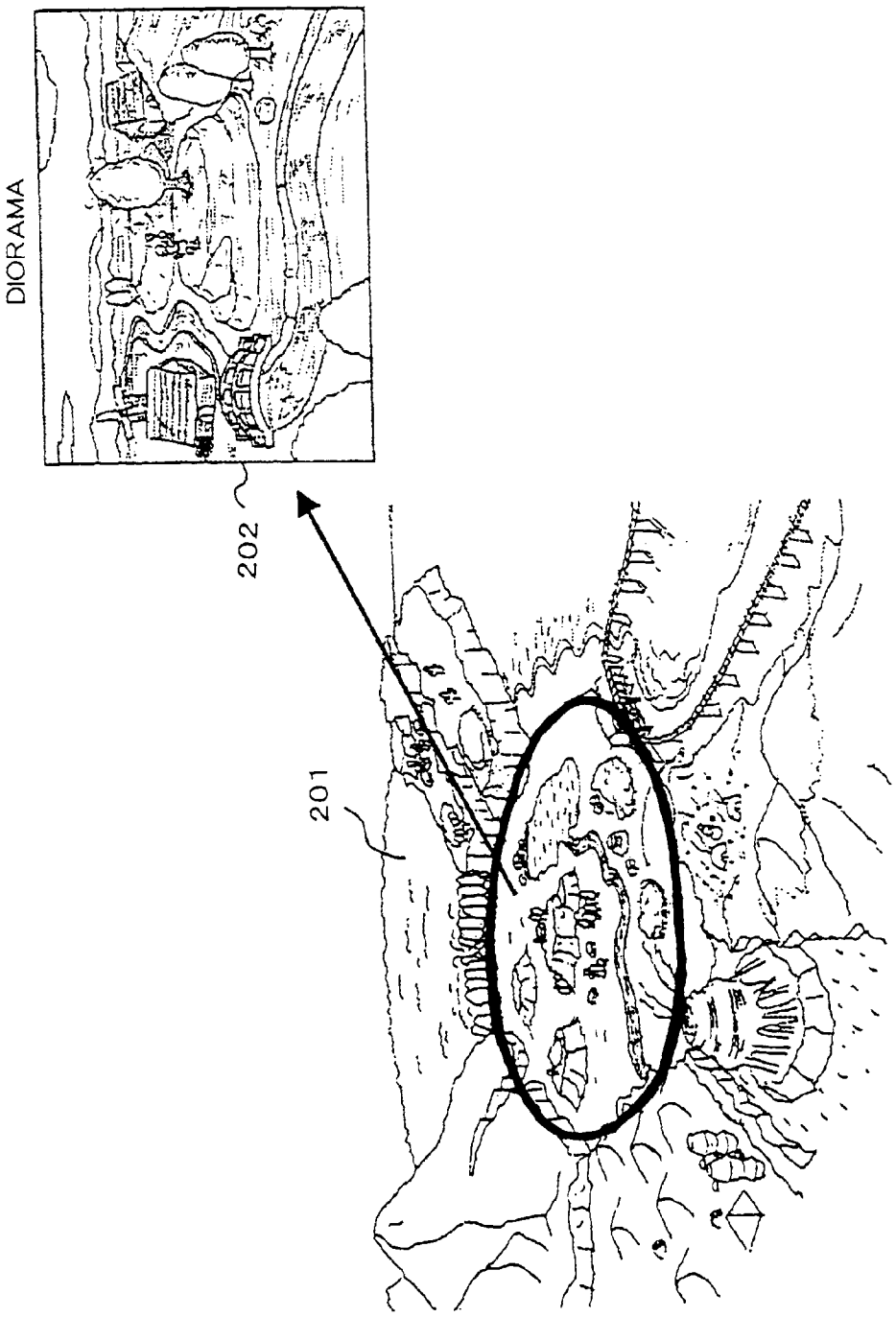

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FIG. 3

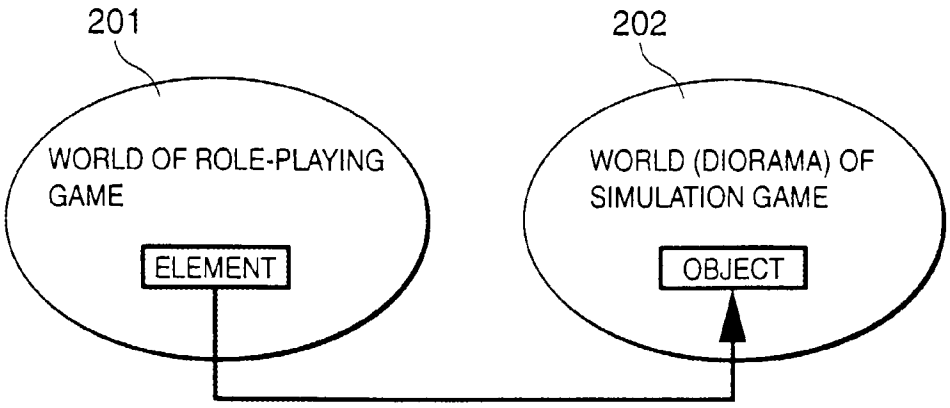

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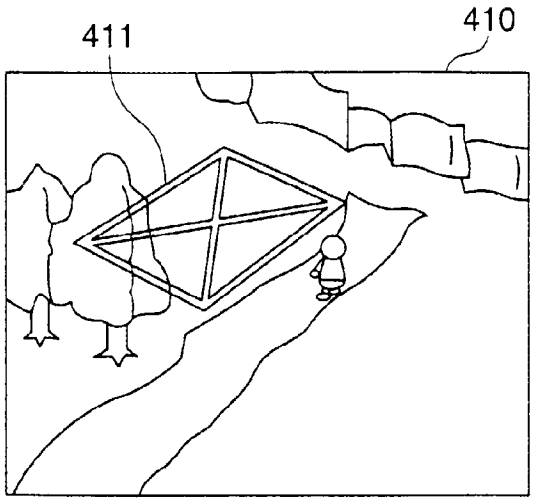
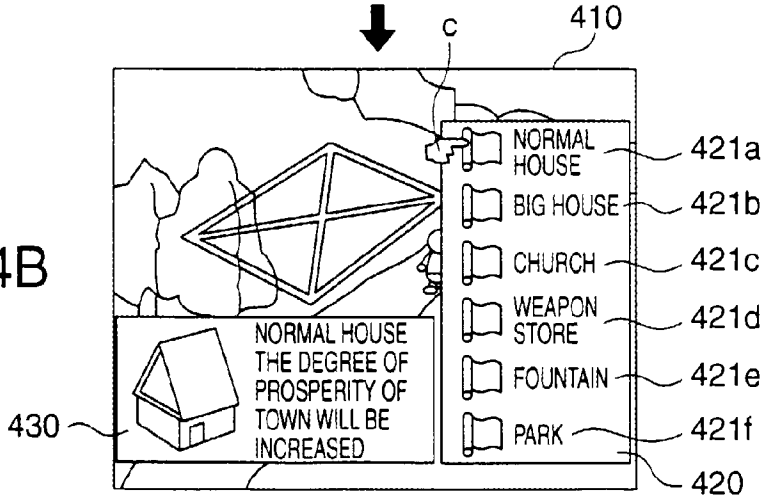
FIG. 4A



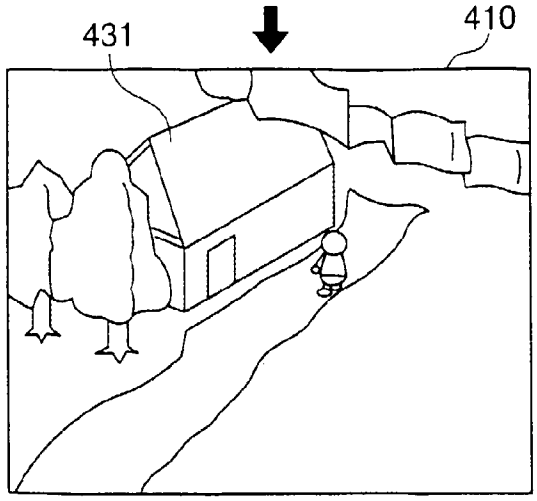
DETERMINATION OF CONSTRUCTION POSITION

FIG. 4B



SELECTION OF OBJECT

FIG. 4C



CONSTRUCTION OF OBJECT

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FIG. 5

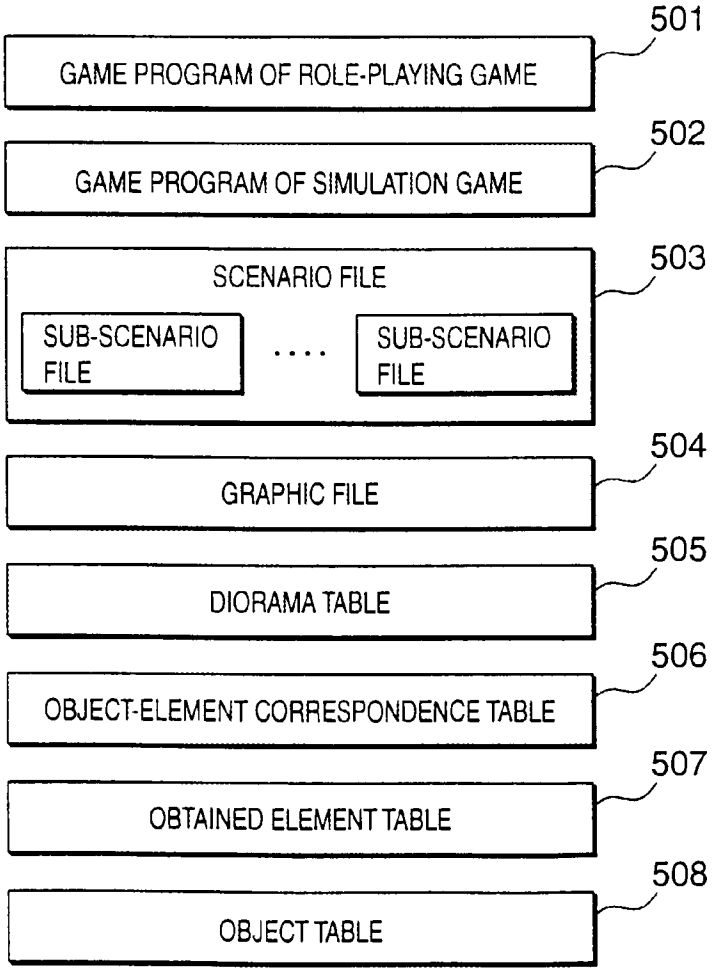

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FIG. 6

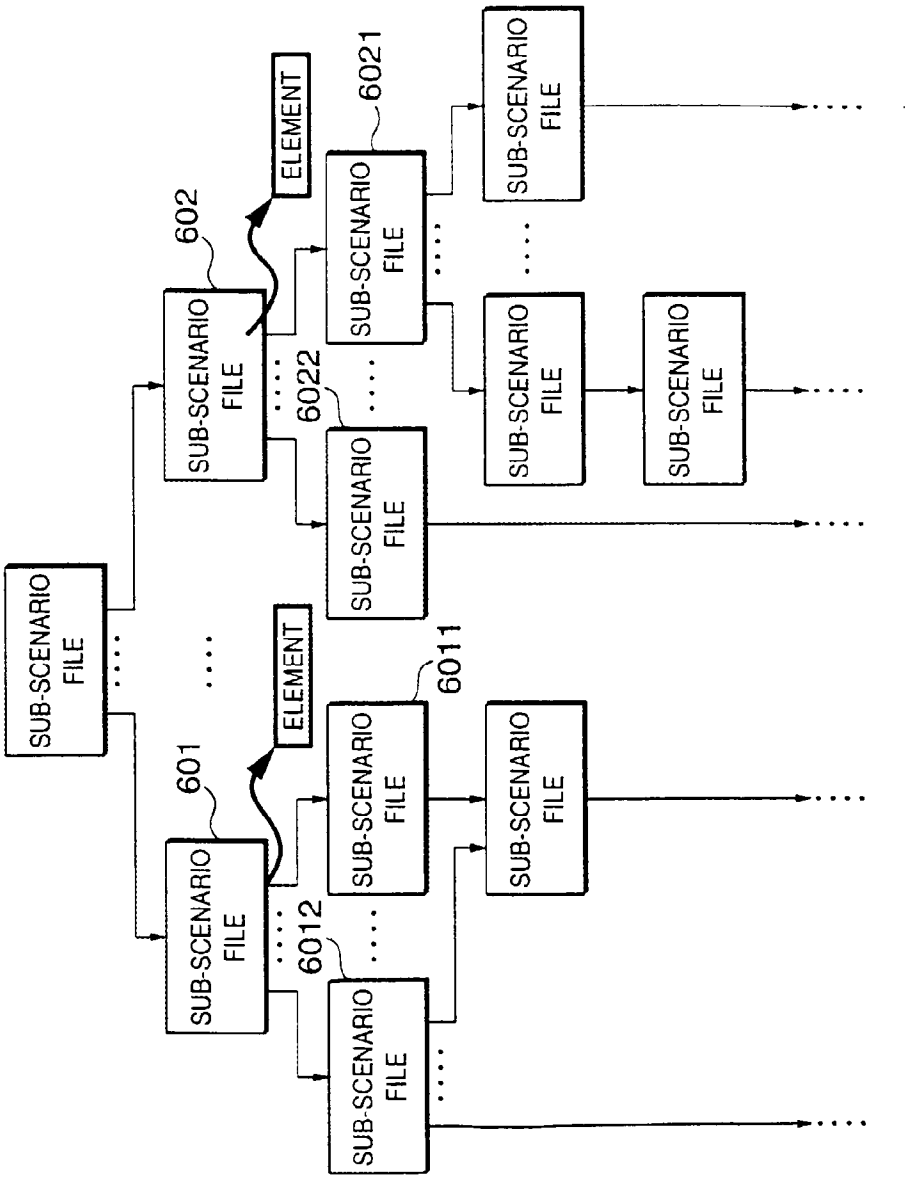

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FIG. 7

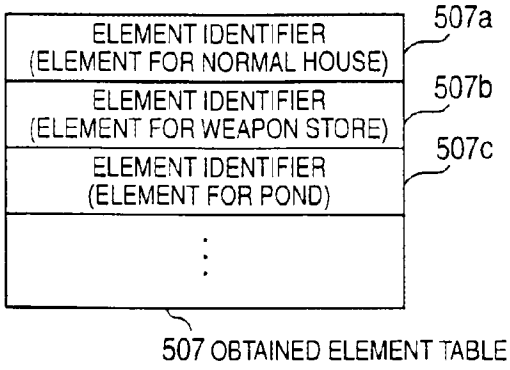

FIG. 8

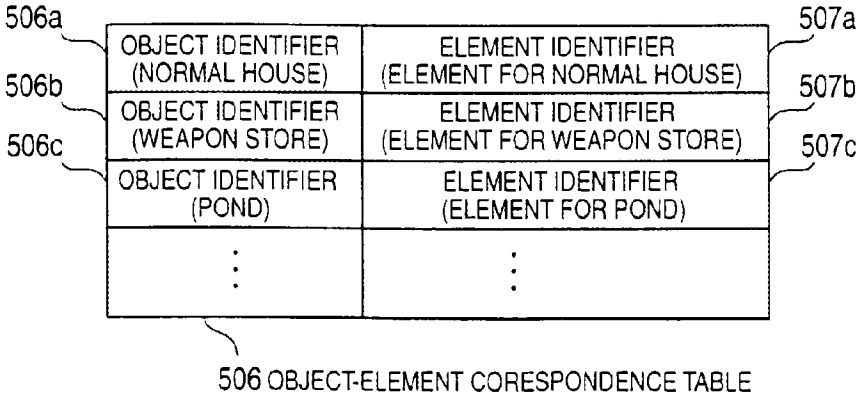

FIG. 9

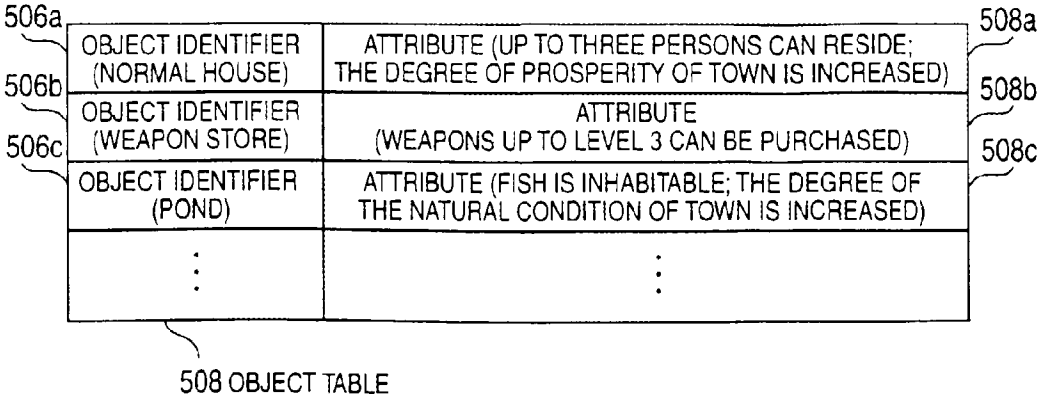

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FIG. 10

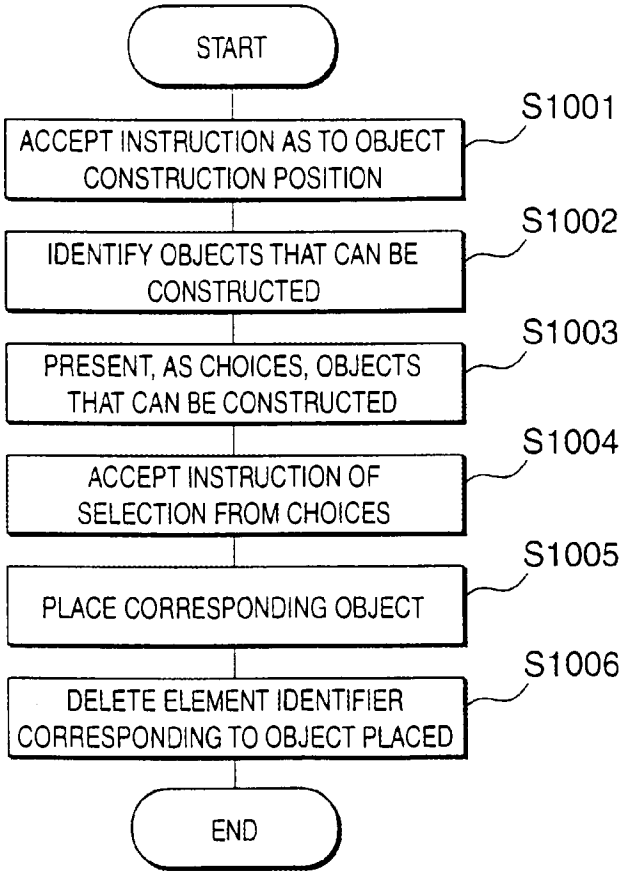

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FIG. 11A

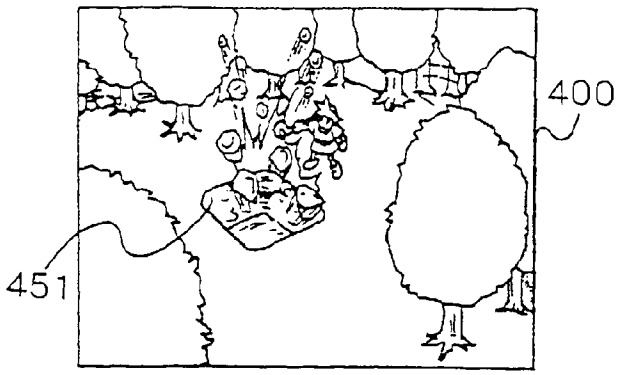

FIG. 11B

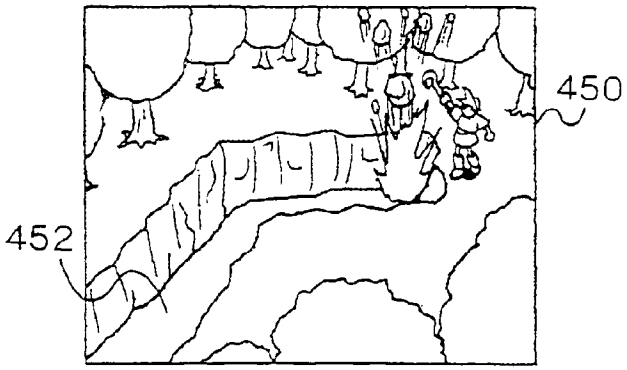

FIG. 11C

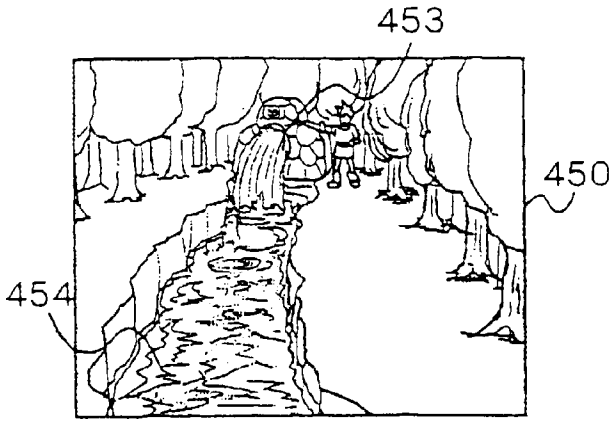

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FIG. 12

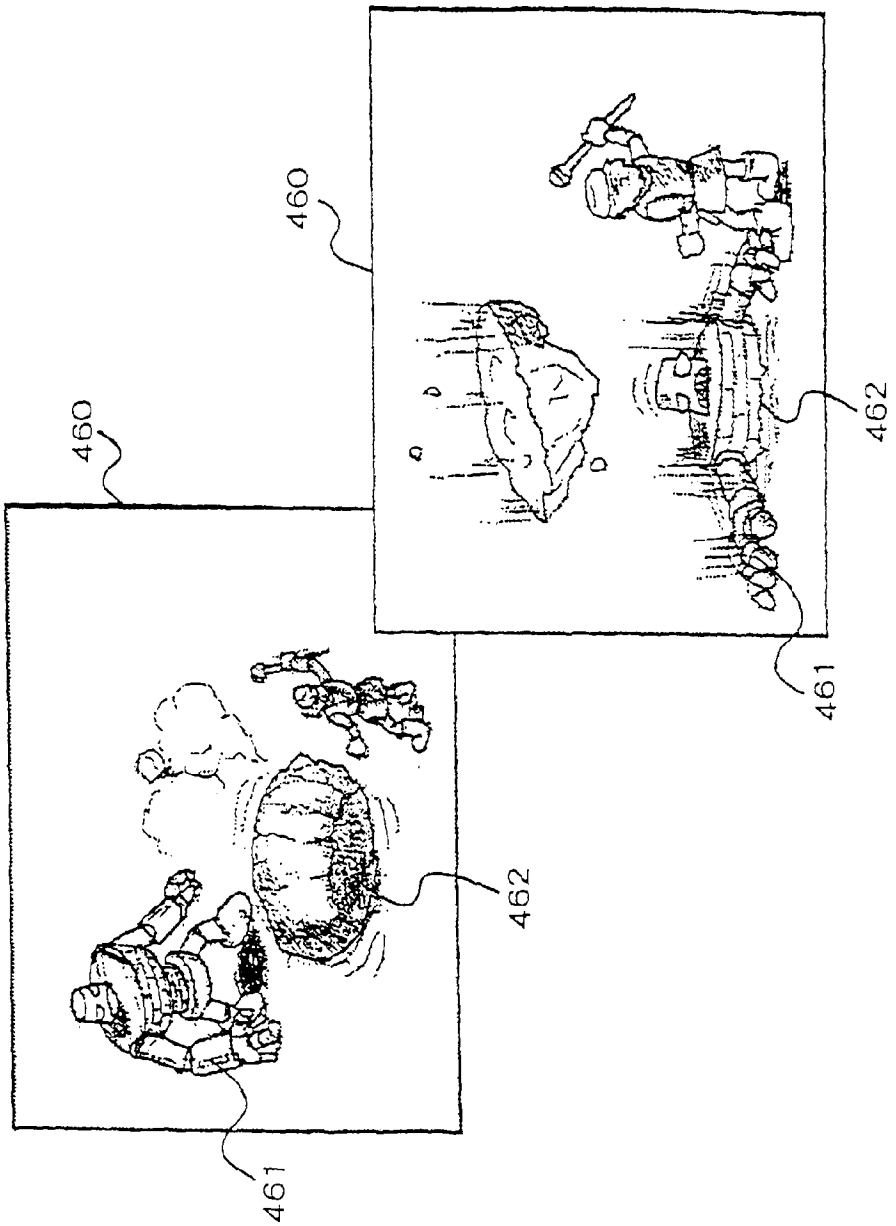

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FIG. 13

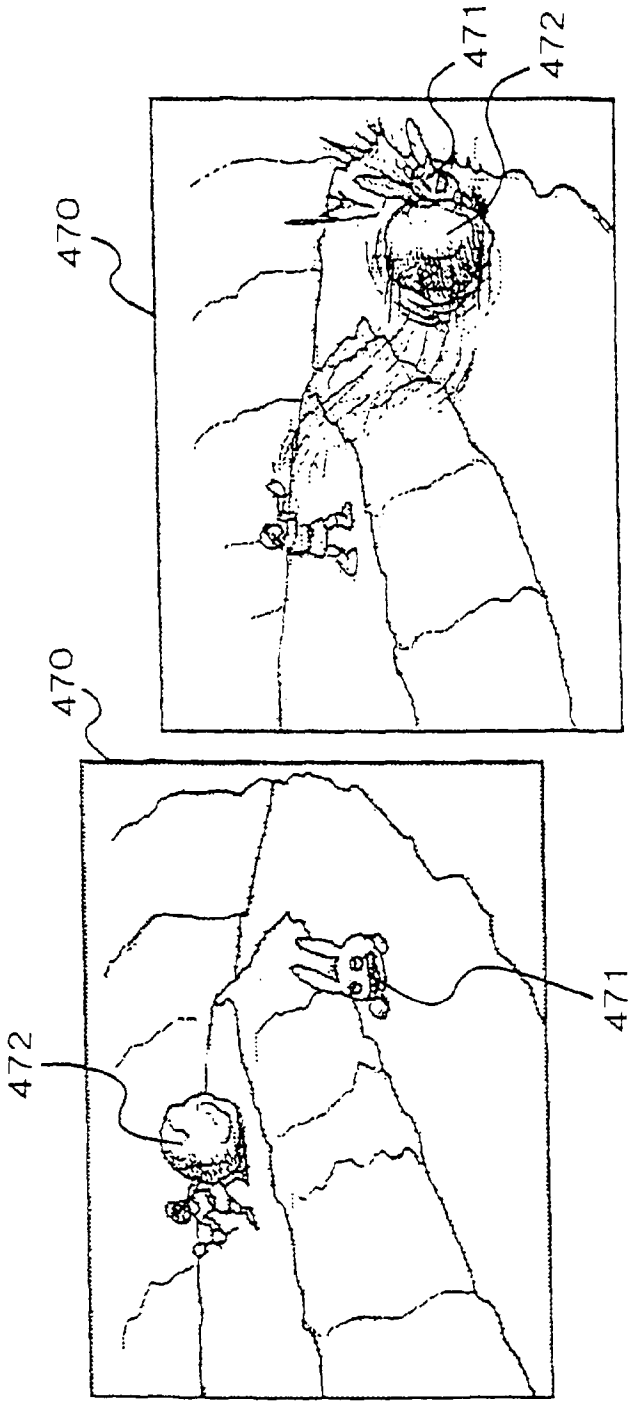

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FIG. 14

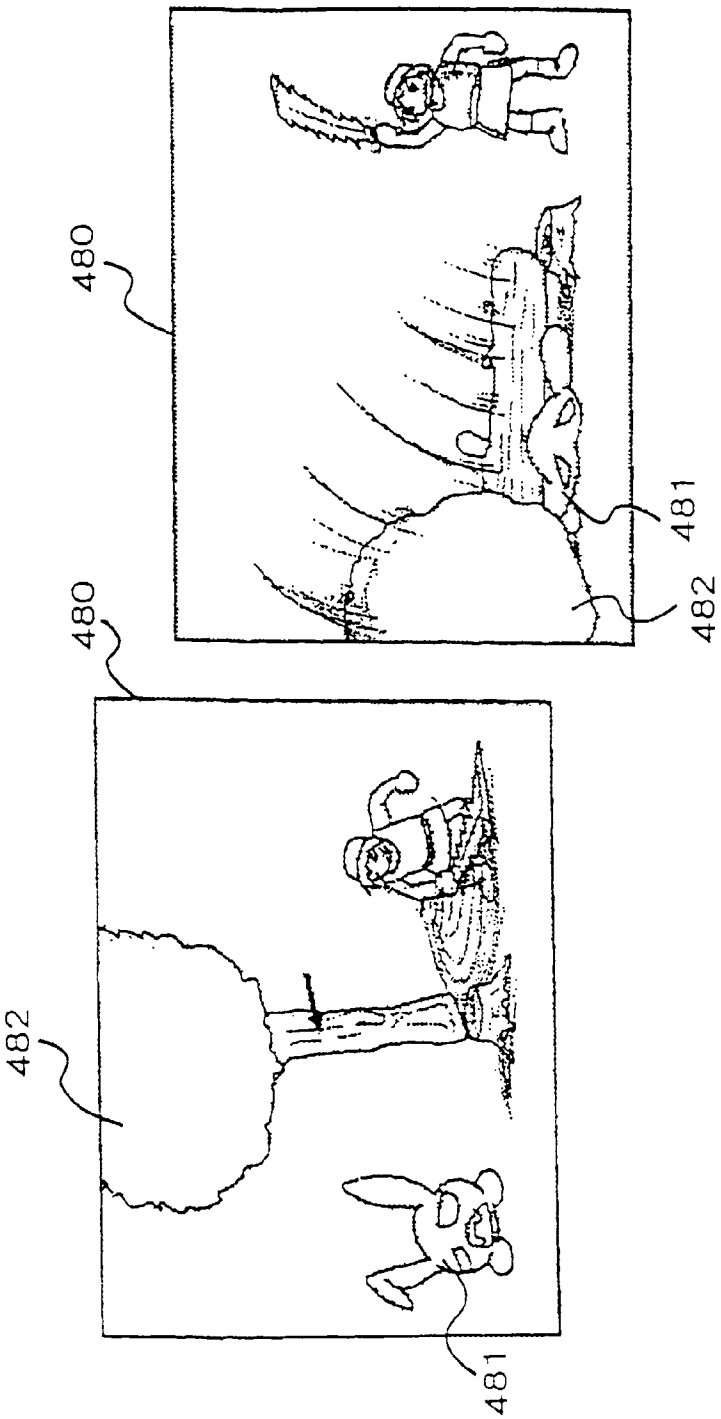

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FIG.15

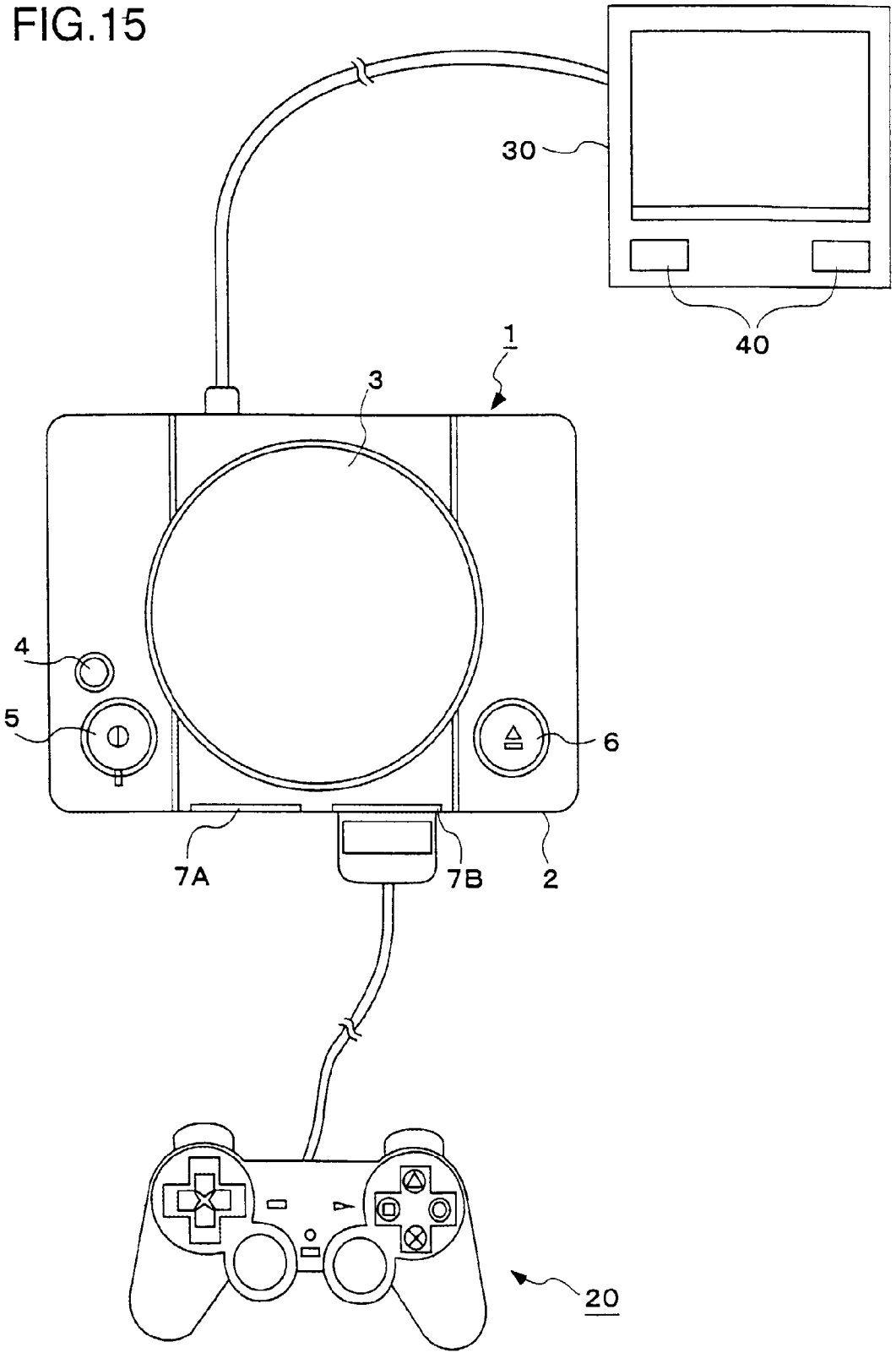

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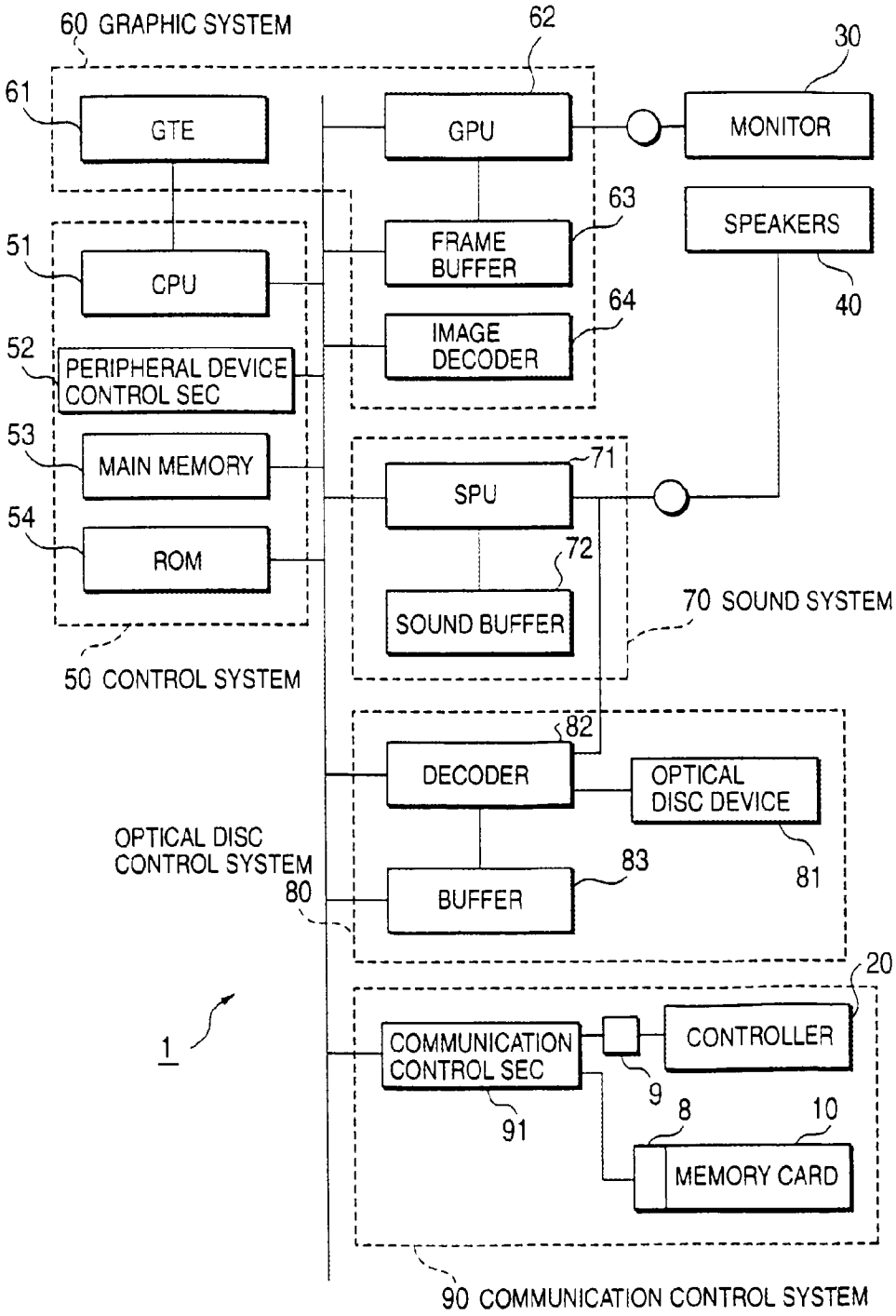
FIG. 16



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(71)Applicant	SQUARE ENIX CO LTD
(72)Inventor	SAITO TSUTOMU

(54)GAME DEVICE AND PROGRAM

(57)Abstract

PROBLEM TO BE SOLVED: To achieve game characteristics similar to network games reflecting a proceeding result of a game by another player in a stand-alone game even if that is a relatively small sized hardware structure.

SOLUTION: The same game is played in an own game device and another game device. The game is a stand-alone game which fundamentally dose not require simultaneity of the play and can proceed having no relation with each other. According to a game proceeding state of each game device, an enemy character 402 arranged in a virtual space 401 is knocked down and a door 403 with lock is unlocked. Every time a player character proceeds to a new layer, the layer part among unique dungeons 411 is produced. The own game device and the other game device can exchange game proceeding state information by mutually communicated and connected, for instance, a game proceeding state of the other game device can be reflected on the game proceeding sate of the own game device.

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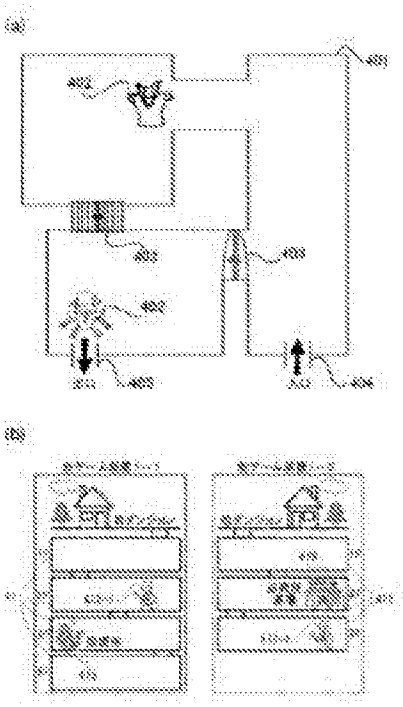

CLAIMS
DETAILED DESCRIPTION
DRAWINGS

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CLAIMS

[Claim(s)]

[Claim 1]

While it is possible to advance the game regardless of other game devices which perform the same game, it is a game device which a communication interface is carried out to a game device besides the above, and can receive data from a game device of these others,

A game data storage means which memorizes predetermined game data in which an advancing state of a game is shown,

A game proceeding means which advances the aforementioned game regardless of a game device besides the above according to operation of an input device by a player,

Based on an advance result of a game by the aforementioned game proceeding means, it is an updating means at the time of advance which updates game data memorized by the aforementioned game data storage means,

A game data receiving means which receives game data memorized in a game device of these others by a communication interface with a game device besides the above,

An after-reception updating means which updates game data in which the aforementioned game data receiving means was memorized by the aforementioned game data storage means based on game data received from a game device besides the above

A game device characterized by preparation ******.

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[Claim 2]
The aforementioned game data contains map associated data used as what differs in the contents according to an advancing state of the game among data relevant to a map in which the aforementioned game advances,
The aforementioned after-reception updating means is updated by contents according to an advancing state of a game which map associated data which received the aforementioned map associated data of the game data memorized by the aforementioned game data storage means from a game device besides the above shows.
The game device according to claim 1 characterized by things.
[Claim 3]
The aforementioned map contains a community map which arranges a disturbance object from which a state changes according to an advancing state of a game with the same form as a game which advances in a game device besides the above while blocking advance of a game of a player in the same position on a map in an initial state,
The aforementioned map associated data contains data in which a state of the aforementioned disturbance object is shown,
The aforementioned after-reception updating means a state of the aforementioned disturbance object which map associated data contained in game data memorized by the aforementioned game data storage means shows, A disturbance object state update means updated in the state of the aforementioned disturbance object which map associated data contained in game data received from a game device besides the above shows is included.
The game device according to claim 2 characterized by things.
[Claim 4]
Even if the aforementioned map is performing the same game, it contains a dungeon map in which a thing of a different form for every game device is generated,
The aforementioned map associated data contains data in which a form of the aforementioned dungeon map is shown,
The aforementioned after-reception updating means on a dungeon map which map associated data contained in game data memorized by the aforementioned game data storage means shows, A dungeon map which map associated data contained in game data

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which the aforementioned game data receiving means received shows is combined, and a dungeon map coupling means which makes the aforementioned game data storage means newly memorize map associated data in which the united dungeon map is shown is included.

The game device according to claim 2 characterized by things.

[Claim 5]

The aforementioned map contains an object arrangement map which arranges to a position an object chosen from among two or more kinds of objects according to advance of a game,

The aforementioned map associated data contains data in which a kind of object arranged at the aforementioned position of the aforementioned object arrangement map is shown,

In the aforementioned position of an object arrangement map which map associated data contained in game data in which the aforementioned after-reception updating means was memorized by the aforementioned game data storage means shows, When an object of a kind arranged at an object arrangement map which map associated data contained in game data which the aforementioned game data receiving means received shows is not arranged, An object arrangement means which arranges the kind of object to the aforementioned position of an object arrangement map which map associated data contained in game data memorized by the aforementioned game data storage means shows is included.

The game device according to claim 2 characterized by things.

[Claim 6]

While the aforementioned map is divided and formed in a plurality of regions and an acquired point in advance of a game in the game device concerned and an acquired point in advance of a game in other game devices are set as each region, Two or more region map in which jurisdiction is given to which game device side according to an acquired point for every region is included,

The aforementioned map associated data contains data in which an acquired point in advance of a game in the game device concerned, and a game device besides the above and a game device which has acquired jurisdiction are shown to each region of said two or more region map,

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The aforementioned after-reception updating means an acquired point of a game device besides the above for every region of two or more region map which map associated data contained in game data memorized by the aforementioned game data storage means shows, It updates to an acquired point of a game device besides the above which map associated data contained in game data which the aforementioned game data receiving means received shows, An update means according to region which updates jurisdiction for every region of two or more region map which map associated data contained in game data memorized by the aforementioned game data storage means according to an acquired point of the game device of updated others shows is included.

The game device according to claim 2 characterized by things.

[Claim 7]

Game data which makes it possible to make it update by the aforementioned after-reception updating means among game data memorized by the aforementioned game data storage means according to operation of an input device by a player, A data address means which can be updated to specify preliminarily before receiving game data from a game device besides the above,

It further has a data storage means which memorizes information which shows game data specified by the aforementioned data address means which can be updated and which can be updated,

The aforementioned after-reception updating means updates game data according to information memorized by the aforementioned data storage means which can be updated based on game data received from a game device besides the above among game data memorized by the aforementioned game data storage means.

A game device of a description in any 1 item of Claims 1-6 characterized by things.

[Claim 8]

A received-data memory means which memorizes game data which the aforementioned game data receiving means received from a game device besides the above separately from game data memorized by the aforementioned game data storage means,

Game data which makes it possible to make it update by the aforementioned after-reception updating means among game data memorized by the aforementioned game data storage means according to operation of an input device by a player, It further has a

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data address means which can be updated to specify after receiving game data from a game device besides the above,

The aforementioned after-reception updating means updates game data specified by the aforementioned data address means which can be updated based on game data memorized by the aforementioned received-data memory means among game data memorized by the aforementioned game data storage means.

A game device of a description in any 1 item of Claims 1-7 characterized by things.

[Claim 9]

When the aforementioned game is started, a state of the game device, An advance disabling control means controlled to advance disabling whose reception of game data from a game device besides the above by the aforementioned game data receiving means is enabled at least although advance of a game by the aforementioned game proceeding means is made impossible, When information which has predetermined privacy in the aforementioned advance disabling is input according to operation of an input device by a player, it further has a state control means which can be gone on to control in the state which enables advance of a game by the aforementioned game proceeding means from the advance disabling and which can be gone on.

A game device of a description in any 1 item of Claims 1-8 characterized by things.

[Claim 10]

Computer paraphernalia which a communication interface is carried out to computer paraphernalia besides the above, and can receive data from computer paraphernalia of these others while it is possible to advance the game regardless of other computer paraphernalia which perform the same game,

A game data storage means which memorizes predetermined game data in which an advancing state of a game is shown,

A game proceeding means which advances the aforementioned game regardless of computer paraphernalia besides the above according to operation of an input device by a player,

Based on an advance result of a game by the aforementioned game proceeding means, it is an updating means at the time of advance which updates game data memorized by the aforementioned game data storage means,

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a communication interface with computer paraphernalia besides the above -- the -- others -- a game data receiving hand of receiving game data memorized in computer paraphernalia -- and

An after-reception updating means which updates game data in which the aforementioned game data receiving means was memorized by the aforementioned game data storage means based on game data received from computer paraphernalia besides the above

A program making it function by carrying out.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[Field of the Invention]

[0001]

The present invention relates to the game device etc. which reflect the advancing state of the game in the game device of these others on advance of a game, advancing a game regardless of other game devices according to operation of the input device by a player.

[Background of the Invention]

[0002]

Conventionally as a form in the case of playing a video game by a plurality of players, a plurality of input devices are connected to a single video game device, and there is a thing to which each player operates a separate input device and makes each player character act in common virtual space. The communication interface of a plurality of game devices is mutually carried out via a network, and there is a network game which advances a game by cooperation of the player which operates the game device concerned.

[0003]

Since a plurality of players look at the same screen generally and the game of the former type can proceed a game, a big difference does not produce it to the game and game nature of a stand-alone type which can proceed a game only by a one player. Then,

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display a map original with a player on the screen which adopts a handheld game machine as the input device which each player operates and with which a handheld game machine is provided, and. The game which enabled it to go a mutual map back and forth is under the conditions that the player character of each player is certain (for example, see Patent Document 1).

[0004]

On the other hand, the player which the latter network game can cooperate in advance of a game of what can realize completely different game nature from the game of a stand-alone type, or can compete is restricted only to the player which is playing the game simultaneously. Then, the possession item of each player is registered into the server device, There are some in which it realizes a pseudo network game as the player which asks for the support from other players can use for the possession item of other players (those who are not playing simultaneously may be sufficient) registered into the server device (for example, see Patent Document 2).

[0005]

[Patent document 1] JP 2004 - 329662A

[Patent document 2] JP,3873075,B

[Description of the Invention]

[Problem to be solved by the invention]

[0006]

However, in the game of a Patent document 1, the simultaneity of the play by a plurality of players is searched for like a general network game. Even if there is discontinuation of a temporary game, for advance of a game, there must be a handheld game machine which other players use as an input device in activation status. on the other hand, by the false network game of a Patent document 2, although the simultaneity of the play by a plurality of players is not searched for, it is necessary to interpose a server device -- etc. -- the hardware resources of a fixed scale must be prepared.

[0007]

Even if the present invention is comparatively small-scale hardware organization, other players are the games of the stand-alone type which can proceed a game independently fundamentally, It aims at providing the game device which can realize game nature similar

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to the network game on which the advance result of the game by other players is reflected.
[Means for solving problem]
[0008]
The game device which requires the present invention for the first viewpoint of the present invention in order to achieve the above-mentioned object, While it is possible to advance the game regardless of other game devices which perform the same game, a game device which a communication interface is carried out to a game device besides the above, and can receive data from a game device of these others is characterized by comprising the following:
A game data storage means which memorizes predetermined game data in which an advancing state of a game is shown.
A game proceeding means which advances the aforementioned game regardless of a game device besides the above according to operation of an input device by a player.
Based on an advance result of a game by the aforementioned game proceeding means, it is an updating means at the time of advance which updates game data memorized by the aforementioned game data storage means.
The game data receiving means which receives the game data memorized in the game device of these others by the communication interface with a game device besides the above, An after-reception updating means which updates game data in which the aforementioned game data receiving means was memorized by the aforementioned game data storage means based on game data received from a game device besides the above.

[0009]
The above-mentioned game device is what has possible advancing a game regardless of other game devices which perform the same game (without requiring simultaneity). Although the predetermined game data in which the advancing state of a game is shown is memorized by the game data storage means here, The game data memorized by this game data storage means is updated based on the advance result of the game which advanced according to operation of the input device by a player regardless of other game devices. And even if it is advancing the game regardless of other game devices, without requiring simultaneity, the above-mentioned game device, Data is receivable from other

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game devices which can proceed a game independently, shine and are, and even if based on the game data received from other game devices, the game data memorized by the game data storage means is updated.

[0010]

It is a game of the stand-alone type which advances a game regardless of other game devices fundamentally by this, and it becomes possible to realize game nature similar to the network game on which the advance result of the game by other players (player which performs a game with other game devices) is reflected. It is not necessary to interpose a server device to advance of a game (even though the communication interface of the game devices is carried out via a server device). It twists playing only the role which mediates transmission and reception of data, and playing a role peculiar to advance of a game, and it is that and can realize pseudoly advance of the game by a plurality of players by comparatively small-scale hardware organization.

[0011]

The above-mentioned game device is good also as what is further provided with the game data sending means which transmits the game data memorized by the aforementioned game data storage means to the game device of these others, when the aforementioned game data receiving means receives game data from a game device besides the above. The game data transmitted from the aforementioned game data sending means is received by the game data receiving means with which a game device besides the above is provided, and makes the game data memorized by the game data storage means with which the game device of these others is provided update.

[0012]

In the above-mentioned game device, the aforementioned game data may contain the map associated data used as what differs in the contents according to the advancing state of the game among the data relevant to the map in which the aforementioned game advances. In this case, the aforementioned after-reception updating means shall be updated by the contents according to the advancing state of the game which the map associated data which received the aforementioned map associated data of the game data memorized by the aforementioned game data storage means from the game device besides the above shows.

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[0013]

In this case, The map associated data contained in the game data memorized by the game data storage means of the above-mentioned game device by the contents according to the advancing state which the map associated data contained in the game data which received the game independently fundamentally from other game devices which are running shows is updated, The situation of a map will change. Thus, the impression of being able to proceed a game by a plurality of players because the map in which the advancing state of a game is shown directly changes according to the advancing state of the game in other game devices becomes strong.

[0014]

With the above-mentioned game device, when the aforementioned game data is a thing containing the aforementioned map associated data, the aforementioned map, The disturbance object from which a state changes according to the advancing state of a game with the same form as the game which advances in a game device besides the above while blocking advance of the game of a player including the community map arranged in the same position on a map in an initial state the aforementioned map associated data, The data in which the state of the aforementioned disturbance object is shown may be included. In this case, the aforementioned after-reception updating means, The state of the aforementioned disturbance object which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, The disturbance object state update means updated in the state of the aforementioned disturbance object which the map associated data contained in the game data received from the game device besides the above shows shall be included.

[0015]

In this case, if the disturbance object is eliminated from the map in the game which was advancing in other game devices, The state of the disturbance object in the map associated data contained in the game data memorized by the game data storage means of the above-mentioned game device according to the map associated data contained in the game data received from the game device of these others, The state where the disturbance object was eliminated can also be made to update. Thereby, even if the player of the above-mentioned game device takes time in capture of a disturbance object, a

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disturbance object can be eliminated by cooperation of the player of other game devices, and a game can be advanced previously.

[0016]

The aforementioned disturbance object state update means, Rather than the state of the aforementioned disturbance object which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, When the direction of the state of the aforementioned disturbance object which the map associated data contained in the game data received from the game device besides the above shows is in the state advantageous to the game progress of a player, The state of the aforementioned disturbance object which the map associated data contained in the game data memorized by the aforementioned game data storage means shows shall be updated.

[0017]

Here the aforementioned map with the same form as the game which advances in a game device besides the above, Advance of a game is blocked in the state where any object is not arranged to the position of the map, either, and the community map in which disturbance of advance will be released by arranging a predetermined object to a position according to advance of a game may be included. In this case, the state where any object is not arranged, either can also consider it the state where the aforementioned disturbance object has been arranged.

[0018]

With the above-mentioned game device, when the aforementioned game data is a thing containing the aforementioned map associated data, the aforementioned map, The aforementioned map associated data may contain the data in which the form of the aforementioned dungeon map is shown including the dungeon map in which the thing of a form which is different for every game device even if it is performing the same game is generated. In this case, the aforementioned after-reception updating means, On the dungeon map which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, The dungeon map which the map associated data contained in the game data which the aforementioned game data receiving means received shows is combined, The dungeon map coupling means which makes the aforementioned game data storage means newly memorize the map associated

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data in which the united dungeon map is shown shall be included.

[0019]

In this case, although the dungeon map of a form which is different with the above-mentioned game device and other game devices will be generated, The dungeon map which the map associated data contained in the game data received from the game device of these others shows can be combined with the dungeon map generated with the above-mentioned game device. Thus, by a dungeon map being combined, the capture element in a game can be increased, or it can capture now easily, and can expand the width of advance of a game.

[0020]

The dungeon map generated in its game device with combination of the aforementioned dungeon map, for example, It may be tying with the dungeon map generated in the game device besides the above (a predetermined passage's etc. are formed), and extending the size of the whole dungeon map. Although the size of a dungeon map does not change between game devices on the other hand, in the dungeon map in which the way of a form which is different in each will be formed, It may be piling up the dungeon map generated in its game device with the dungeon map generated in the game device besides the above, and increasing the way on a dungeon map.

[0021]

With the above-mentioned game device, when the aforementioned game data is a thing containing the aforementioned map associated data, the aforementioned map, The object chosen from among two or more kinds of objects according to advance of a game including the object arrangement map arranged to a position the aforementioned map associated data, The data in which the kind of object arranged at the aforementioned position of the aforementioned object arrangement map is shown may be included. In this case, the aforementioned after-reception updating means, In the aforementioned position of the object arrangement map which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, When the object of the kind arranged at the object arrangement map which the map associated data contained in the game data which the aforementioned game data receiving means received shows is not arranged, The object arrangement means which arranges the kind

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of object to the aforementioned position of the object arrangement map which the map associated data contained in the game data memorized by the aforementioned game data storage means shows shall be included.

[0022]

In this case, although the object is arranged on the object arrangement map for every game device, The object arranged at the object arrangement map which the map associated data contained in the game data received from other game devices shows can be arranged also on the object arrangement map of the above-mentioned game device. Thereby, the player of a plurality of game devices which is advancing the game independently fundamentally can cooperate, and it can perform now arrangement of the object to an object arrangement map.

[0023]

The object of the kind which differs in the aforementioned object arrangement means from the object arranged at the object arrangement map which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, When arranged at the object arrangement map which the map associated data contained in the game data which the aforementioned game data receiving means received shows, It is not necessary to arrange the object of the kind arranged at the object arrangement map which the map associated data contained in the game data which the aforementioned game data receiving means received shows. Or it replaces with the object arranged at the object arrangement map which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, The object of the kind arranged at the object arrangement map which the map associated data contained in the game data which the aforementioned game data receiving means received shows may be arranged. Or it adds to the object arranged at the object arrangement map which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, The object of the kind arranged at the object arrangement map which the map associated data contained in the game data which the aforementioned game data receiving means received shows may also be arranged.

[0024]

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With the above-mentioned game device, when the aforementioned game data is a thing containing the aforementioned map associated data, the aforementioned map, While being divided and formed in a plurality of regions and setting the acquired point in advance of the game in the game device concerned, and the acquired point in advance of the game in other game devices as each region, Including two or more region map in which jurisdiction is given to which game device side according to the acquired point for every region, the aforementioned map associated data, The data in which the acquired point in advance of the game in the game device concerned, and a game device besides the above and the game device which has acquired jurisdiction are shown may be included to each region of above-mentioned two or more region map. In this case, the aforementioned after-reception updating means, The acquired point of a game device besides the above for every region of two or more region map which the map associated data contained in the game data memorized by the aforementioned game data storage means shows, It updates to the acquired point of a game device besides the above which the map associated data contained in the game data which the aforementioned game data receiving means received shows, The update means according to region which updates the jurisdiction for every region of two or more region map which the map associated data contained in the game data memorized by the aforementioned game data storage means according to the acquired point of the game device of the updated others shows shall be included.

[0025]

In this case, although a game is independently gone on with the above-mentioned game device and other game devices and the acquired point for every region of two or more region map is obtained, the game device which has acquired jurisdiction for every region whenever it transmits and receives game data by a communication interface can be updated. The competition in the game that the player of a plurality of game devices which is advancing the game independently fundamentally acquires the jurisdiction of each region by this is realizable.

[0026]

The game data which makes it possible to make the above-mentioned game device update by the aforementioned after-reception updating means among the game data

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memorized by the aforementioned game data storage means according to operation of the input device by a player, Before receiving game data from a game device besides the above, it may further have a data address means which can be updated to specify preliminarily, and the data storage means which memorizes the information which shows the game data specified by the aforementioned data address means which can be updated and which can be updated. In this case, the aforementioned after-reception updating means, The game data according to the information memorized by the aforementioned data storage means which can be updated shall be updated based on the game data received from the game device besides the above among the game data memorized by the aforementioned game data storage means.

[0027]

In this case, according to the game data received from the game device, only what the player of the above-mentioned game device specified preliminarily is updated among the game data memorized by the game data storage means of the above-mentioned game device. It can prevent the unexpected situation where the element to which the player was enjoying capture by this harder which has received the game data from other game devices will be captured etc. occurring.

[0028]

The received-data memory means by which the above-mentioned game device memorizes the game data which the aforementioned game data receiving means received from the game device besides the above separately from the game data memorized by the aforementioned game data storage means, The game data which makes it possible to make it update by the aforementioned after-reception updating means among the game data memorized by the aforementioned game data storage means according to operation of the input device by a player, It may further have a data address means which can be updated to specify after receiving game data from a game device besides the above. In this case, the aforementioned after-reception updating means, The game data specified by the aforementioned data address means which can be updated shall be updated based on the game data memorized by the aforementioned received-data memory means among the game data memorized by the aforementioned game data storage means.

[0029]

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In this case, according to the game data received from the game device, only what the player of the above-mentioned game device specified after reception of the game data is updated among the game data memorized by the game data storage means of the above-mentioned game device. It can prevent the unexpected situation where the element to which the player was enjoying capture by this harder which has received the game data from other game devices will be captured etc. occurring. Although it was the element which thought that a player would capture itself, if the player of other game devices is the already captured element, it will also become possible to perform selection that it will be made to reflect and a game will be advanced previously.

[0030]

When the aforementioned game is started, the above-mentioned game device the state of the game device, The advance disabling control means controlled to advance disabling whose reception of the game data from a game device besides the above by the aforementioned game data receiving means is enabled at least although advance of the game by the aforementioned game proceeding means is made impossible, When the information which has predetermined privacy in the aforementioned advance disabling is input according to operation of the input device by a player, It shall further have a state control means which can be gone on to control in the state which enables advance of the game by the aforementioned game proceeding means from the advance disabling and which can be gone on.

[0031]

In this case, since it will not be in the state which can be gone on if information with predetermined privacy is not input, other players do not advance a game freely with the above-mentioned game device. But even if it cannot go on a game, the player of other game devices can start the above-mentioned game device, and can make the above-mentioned game device receive the game data from the game device of these others. Thereby, those from which livelihood time differs can perform now a game's cooperation play (or competition play) of those who perform a game individually fundamentally, for example.

[0032]

In this case, the aforementioned after-reception updating means, When are controlled by

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the aforementioned advance disabling and the aforementioned game data receiving means receives game data from a game device besides the above, The game data memorized by the aforementioned game data storage means based on the received game data in the advance disabling is updated, without waiting to be controlled by the aforementioned state which can be gone on (by the aforementioned data address means which can be updated). When the game data which makes it possible to make it update is specified preliminarily, it is good also as what updates only the specified game data.

[0033]

When controlled by the aforementioned advance disabling on the other hand, it is good also as what makes it possible to only make the received-data memory means which receives the game data from a game device besides the above by the aforementioned game data receiving means, and with which the aforementioned game device is provided memorize. In this case, the aforementioned after-reception updating means is good also as what updates the game data memorized by the aforementioned game data storage means based on the game data memorized by the aforementioned received data, when controlled from the aforementioned advance disabling by the aforementioned state which can be gone on.

[0034]

In order to achieve the above-mentioned object, the program concerning the second viewpoint of the present invention, While it is possible to advance the game regardless of other computer paraphernalia which perform the same game, The computer paraphernalia which a communication interface is carried out to computer paraphernalia besides the above, and can receive data from the computer paraphernalia of these others, The game data storage means which memorizes the predetermined game data in which the advancing state of a game is shown, The game proceeding means which advances the aforementioned game regardless of computer paraphernalia besides the above according to operation of the input device by a player, Based on the advance result of the game by the aforementioned game proceeding means, the game data memorized by the aforementioned game data storage means at the time of advance to update An updating means, The game data receiving hand of receiving the game data memorized in the computer paraphernalia of these others by the communication interface with computer

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paraphernalia besides the above, And the aforementioned game data receiving means makes it function based on the game data received from computer paraphernalia besides the above as an after-reception updating means which updates the game data memorized by the aforementioned game data storage means.

[0035]

The program concerning the 2nd viewpoint of the above can be recorded on the recording medium in which computer reading is possible, and can be provided. The recording medium in which this computer reading is possible is good also as a recording medium which is removably constituted by the above-mentioned computer paraphernalia and is provided separately from the above-mentioned computer paraphernalia. The recording medium in which this computer reading is possible is good also as recording media, such as a hard disk unit which are provided in the above-mentioned computer paraphernalia and provided with the above-mentioned computer paraphernalia. From the server device which exists on a network, the program concerning the 2nd viewpoint of the above can superimpose the data signal on a subcarrier, and can also distribute it to the above-mentioned computer paraphernalia through a network.

[Best Mode of Carrying Out the Invention]

[0036]

Hereinafter, with reference to an accompanying drawing, it describes about an embodiment of the invention.

[0037]

Fig.1 is an outline view showing the composition of the game device 1 applied to the embodiment of this game system. Here, a portable game device is shown as an example of the game device 1. In Fig.1, it stores in the housing 18 and the game device 1 is constituted so that it may become a predetermined locating position about the two liquid crystal displays (LCD) 11 and 12.

[0038]

When arranging 1st liquid crystal display (hereafter referred to as "LCD") 11, and 2nd LCD12 up and down and storing it each other, The housing 18 comprises the lower housing 18a and the upper housing 18b, and the upper housing 18b is supported at a part of upper side of the lower housing 18a, enabling free rotation. The upper housing 18b has

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big plane shape for a while rather than the plane shape of 1st LCD11, and an opening is formed so that the display screen of 1st LCD11 may be exposed from a main surface on the other hand. The lower housing 18a is chosen more nearly oblong [the plane shape] than the upper housing 18b, While the opening which exposes the display screen of 2nd LCD12 to a lateral approximately center part is formed and the sound omission hole of the loudspeaker 15 is formed in either which sandwiches 2nd LCD12, the right and left which sandwich 2nd LCD12 are equipped with the operation switch part 14.

[0039]

The operation switch part 14 is provided with the following.

The operation switch (it is hereafter considered as the "A button") 14a and the operation switch (it is hereafter considered as the "B button") 14b of the lower housing 18a in the right of 2nd LCD12 with which a main surface is equipped on the other hand.

The turn signal indicator switch 14c of the lower housing 18a in the left of 2nd LCD12 with which a main surface is equipped on the other hand.

Start switch 14d.

The select switch 14e and the side surface switches 14f and 14g.

[0040]

The A button 14a and the B button 14b are used in order to input a predetermined instruction. The turn signal indicator switch 14c is used in order to input moving directions, such as an operational player object (this embodiment character) and a cursor, using the operation switch part 14 by a player. The turn signal indicator switch 14c is constituted by the arrow key, and can input a total of four directions of vertical and horizontal (let the turn signal indicator switch 14c be "the arrow key 14c" hereafter). The side surface switch (it is hereafter considered as the "L button") 14f and 14 g of side surface switches (it is hereafter considered as the "R button") are provided by the right and left of the upper side (upper side) in the lower housing 18a.

[0041]

The top surface of 2nd LCD12 is equipped with the touch panel 13 (broken-lines region in Fig.1). Which kind of a resistance film system, a optical type (infrared system), and electrostatic capacitance joint type may be sufficient as the touch panel 13, and when

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pressing operation, moving operation, or operation to stroke is carried out for the top surface with the stick 16 (or good also with a finger), it detects and outputs the coordinate position of the stick 16, for example. The touch panel 13 is used in order to input a predetermined instruction.

[0042]

The reception hole (two-point broken-lines region in Fig.1) for storing the stick 16 which operates the touch panel 13 if needed near the side surface of the upper housing 18b is formed. The stick 16 is stored by this reception hole. The cartridge insertion part (one-point broken-lines region in Fig.1) for equipping with the game cartridge 17 (it only describes as the cartridge 17 hereafter) which built in the memory (for example, ROM) which memorized the game program freely attachable/detachable is formed in a part of side surface of the lower housing 18a. The cartridge 17 is an information storage medium which memorizes a game program, for example, ROM or a non volatile semiconductor memory like a flash memory is used. The connector (refer to Fig.2) for electrically connecting with the cartridge 17 is built in the inside of a cartridge insertion part. The electronic circuit board which mounted several kinds of electronic components, such as CPU, is stored by the lower housing 18a (or the upper housing 18b is also good).

[0043]

Next, it describes about the circuit configuration of the game device 1. Fig.2 is a block diagram showing the circuit configuration of the game device 1. In Fig.2, the core based CPU 21 is mounted in the electronic circuit board stored by the housing 18. While the connector 28 for connecting with the cartridge 17 is connected to the core based CPU 21 via a predetermined bus, I/O interface (I/F) circuit 27, first graphics operation unit (1st GPU) 24, second graphics operation unit (2nd GPU) 26, and working RAM(WRAM) 22 and the communication port 29 are connected.

[0044]

The cartridge 17 is connected to the connector 28 freely attachable/detachable. The cartridge 17 is a storage medium for storing a game program, as mentioned above, and it mounts RAM172 which memorizes specifically ROM171 and backup data which memorize a game program so that rewriting is possible. The game program which the game program memorized by ROM171 of the cartridge 17 was loaded to WRAM22, and was

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loaded to the WRAM22 concerned is run by the core based CPU 21. The data for generating temporary data and image which are acquired by the core based CPU 21 running a game program is memorized by WRAM22. The game program which is the instruction group and data constellation of form which can be performed by the computer of the game device 1, especially the core based CPU 21 is recorded on ROM171. And this game program is appropriately read into WRAM22, and is run.

[0045]

The 1st video RAM (following "VRAM") 23 is connected to the 1GPU24, and the second video RAM (following "VRAM") 25 is connected to the 2GPU26. 1st GPU24 generates the 1st game image based on the data for generating the image memorized by WRAM22 according to the instruction from the core based CPU 21, and draws it to 1st VRAM23. 2nd GPU26 generates the 2nd game image based on the data for generating the image memorized by WRAM22 according to the instruction from the core based CPU 21, and draws it to 2nd VRAM25. The 1VRAM23 and 2nd VRAM25 are prepared by two frames, respectively, and the object for deployment of drawing data and the object for the reading of image data are alternately switched for every frame period.

[0046]

1st GPU24 is connected to 1st LCD11 and 2nd GPU26 is connected to 2nd LCD12. 1st GPU24 outputs the 1st game image drawn by 1st VRAM23 according to the instruction from the core based CPU 21 to 1st LCD11. And 1st LCD11 displays the 1st game image output from the 1GPU24. 2nd GPU26 outputs the 2nd game image drawn by 2nd VRAM25 according to the instruction from the core based CPU 21 to 2nd LCD12. And 2nd LCD12 displays the 2nd game image output from the 2GPU26.

[0047]

The touch panel 13, the operation switch part 14, and the loudspeaker 15 are connected to the I/F circuit 27. The I/F circuit 27 is a circuit which delivers the data between external I/O equipment, such as the touch panel 13, the operation switch part 14, and the loudspeaker 15, and the core based CPU 21. The loudspeaker 15 is arranged in the interior position of a sound omission hole mentioned above, and outputs the sound generated according to the game under execution.

[0048]

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The touch panel 13 (the device driver for touch panels is included) has a coordinate system to which it corresponds to the coordinate system of 2nd VRAM25, and outputs the coordinate data in which it corresponds to the position input by the stick 16 etc. (instruction) to the predetermined register provided by WRAM22. For example, the resolution of the display screen of 2nd LCD12 is 256dotx192dot, and the detection accuracy of the touch panel 13 is also 256dotx192dot to which it corresponded to the display screen. The detection accuracy of the touch panel 13 may be lower than the resolution of the display screen of 2nd LCD12, and may be high.

[0049]

The communication port 29 transmits and receives an external device and information, including other game devices, a non-portable game machine, or a server device. It can connect by other game devices and peer to peer (Peer-to-Peer) one which are in prescribed area from the communication port 29, and the game device 1 can transmit and receive information. That is, it can communicate among a plurality of game devices in prescribed area, without through a server.

[0050]

In order to simplify the description in the state of the game device 1, advance of a game, etc., in the following here the game concerned, The game device 1 concerned operated by the one player (it is hereafter considered as a "self-player"). It describes as what is performed by between (hereinafter, it being considered as "the self-game device 1-1"), and the 2 persons of the game device 1 (it is hereafter considered as "the other game devices 1-2") operated by other players (it is hereafter considered as "other players"). Although described about information, processing, etc. which relate only to the game device 1-1 in addition to the description concerning a communication interface, it is each of the self-game device 1-1 and the other game devices 1-2, and information does not differ from the composition concerning processing.

[0051]

Next, in Fig.3, the figure of transition of the state (301-303) of equipment is shown, and the description about each state is carried out. In performing a game in the self-game device 1-1 and the other game devices 1-2, the operation for putting a power supply into each game device 1 which is in the state (it is hereafter considered as an "OFF state")

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(301) where a power supply is not on by the self-player and other players, first is made. If each game device 1 is turned on, about input operation, it changes to the state (it is hereafter considered as "equipment activation status") (302) which can only enter a password, and can also change to an OFF state again by intercepting a power supply from this state. In equipment activation status, the communication interface of the communication interface with other game devices 1 cannot be carried out to other game devices 1 by operating the game device 1 in the equipment activation status concerned of a possible thing.

[0052]

In the game device 1 in equipment activation status, the transition to a state (it is hereafter considered as "login states") (303) for a game to be performed in the game device 1 on the other hand, becomes possible by the input operation of a password being made by the player from the operation switch part 14. Only the self-player which operates the game device 1 concerned gets to know this password. Namely, although other players can turn on the game device 1 concerned, they cannot eventually make the game device 1 concerned change to login states. In login states, game progress can be carried out by operation of a player and a communication interface with other game devices 1 can also be established now. The game device 1 in login states can change to equipment activation status again by logoff operation by a player. In the self-game device 1-1 and the other game devices 1-2 (however, there must be one side in login states) which are in the equipment activation status or login states in which a communication interface is possible so that it may illustrate, A communication interface will be carried out and the advancing state of the game concerning the other game devices 1-2 will be reflected by exchanging the information concerning a game mutually to the advancing state of the game performed with the self-game device 1-1.

[0053]

Then, about the game performed in the self-game device 1-1, the figure which expressed the flow of the game typically is shown in Fig.4, and it describes below. The game concerned performed with the self-game device 1-1 is RPG (Role Playing Game), and will operate by operation of the operation switch part 14 by a self-player in the virtual space which requires the player character of 1 for the game concerned. In the self-game device

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1-1 which was in login states by the input (304) of the password in equipment activation status (302), a self-player will choose the game to advance first (305). In this selection, a self-player as a game advanced in the self-game device 1-1, Also in the other game devices 1-2, the original composition will choose by which a game shall be advanced between the game progress (306) in the same virtual space (it is hereafter considered as "community virtual space"), or the game progress (307) in a dungeon.

[0054]

The typical figure is shown and explained in full detail to Fig.5 (a) about community virtual space here. As shown in Fig.5 (a), the community virtual space 401, From the entrance 404 which is an entrance of the community virtual space 401 to the exit 405 which is the exit. The door (it is hereafter considered as "a door with a key") 403 which will obstruct movement of a player character and which has required the key, and the enemy character 402 are arranged to the position of virtual space. Such various kinds of composition will become the same also in the other game devices 1-2.

[0055]

However, it is arranged as what obstructs movement of a player character in this way, Which door 403 with a key is unlocked depending on the player which operates the game device 1 about the door 403 with a key and the enemy character 402 as composition of the community virtual space 401 differs from which enemy character 402 is pushed down. Therefore, the advancing states of the game by a player differ between each game device 1.

[0056]

Then, about a dungeon, the typical figure is shown and explained in full detail to Fig.5 (b). A dungeon constitutes the layered structure which connected the class 411 in in-series, as shown in Fig.5 (b). In a dungeon, the virtual space used as composition unique as shown in Fig.5 (b), whenever the player character 412 moves to the class 411 who moved till then and as for whom things are not, the enemy character which will exist there, and the institution 413 are generated. Thus, as a result of a player's advancing a game, the composition of the virtual space of the dungeon concerning each game device 1 becomes a different thing, and the advancing states of a game also differ.

[0057]

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The 3F class's 411 working in the dungeon of the self-game device 1-1 shown in Fig.5 (b) in the institution 413 here, for example, Or there are two or more kinds of things in the dungeon of the other game devices 1-2 called the 2F class's 411 killer technique exercise hall, and the role and effect which are given to the player character 412 also differ from each other in a game, respectively. The player character 412 (it is hereafter considered as "the self-player character 412-1".) applied to a self-player in a working with the role and effect about the player character 412 concerning other players, it is considered as "the other player characters 412-2". to -- although an effect is not expressed directly, it is a place where the item which can express a higher effect with the thing with other items to combine is obtained. in a killer technique exercise hall, it is a place where it is possible to make predetermined operation of the self-player character 412-1 in a game which will express a prominent effect especially in the battle of an enemy character permit.

[0058]

Thus, the community virtual space 401 and the dungeon which became composition of being mutually different, as a result of the game progress by the self-player and other players, The composition in the virtual space as each advancing state can be made to reflect mutually by performing a communication interface and exchanging those information in the self-game device 1-1 and the other game devices 1-2 now. At the time of a communication interface, it is between players and exchange of a message or an item is also attained.

[0059]

Next, it describes below about the information memorized by WRAM22 which is the information concerning advance of the game concerned performed in the self-game device 1-1. That Fig.6 is shown is information concerning advance of a game memorized by WRAM22 of the self-game device 1-1.

[0060]

The enemy character information 501 and the door information 502 with a key are memorized as information concerning the community virtual space 401 by WRAM22 of the self-game device 1-1. As information concerning each class 411 of the dungeon (it is hereafter considered as a "self-dungeon") in the self-game device 1-1 about a dungeon, The self-dungeon hierarchies 511-514 as information concerning each class 411 of the

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dungeon (it is hereafter considered as "other dungeons") in the other game devices 1-2, The passage information 531 is memorized, respectively as information about the passage where the other dungeon hierarchies 521-524 connect a self-dungeon and other dungeons. In the game of the self-game device 1-1, the possession item information 541 is memorized as information concerning the item which the player character 412 possesses, respectively.

[0061]

it -- in addition, the community virtual space 401 and the dungeon concerning the game of the other game devices 1-2 are reflected on the game of the self-game device 1-1 how -- as information concerning that selection, The transfer item information 553 is memorized as the message information 552 and information concerning the item to transfer, respectively as information which requires the composition selection information 551 for the message for transmitting to the other game devices 1-2. The other game information 561 is also memorized by WRAM22 as what memorizes temporarily the information otherwise received from the other game devices 1-2, such as the community virtual space 401 concerning the game of the other game devices 1-2, and a dungeon. Hereinafter, each information is explained in full detail.

[0062]

The enemy character information 501 is information about the existence of the existence of the enemy character 402 arranged in the community virtual space 401, and is updated by pushing down the enemy character 402 in the game progress in the community virtual space 401 concerned. The door information 502 with a key is information about whether the door 403 with a key arranged in the community virtual space 401 is unlocked, and in game progress, whenever they are unlocked, it is updated.

[0063]

By moving to the class 411 whom the self-dungeon hierarchies 511-514 are memorized as information about the composition for every class 411 concerning a self-dungeon, and the player character 412 has not moved till then, The region according to the class 411 concerned in the self-dungeon hierarchies 511-514 will be updated. For example, if the class 411 of 4F in a self-dungeon has not moved, the self-dungeon hierarchy 514 concerning the information about the class 411 of 4F will be updated because the player

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character 412 moves to the class 411 concerned.

[0064]

The other dungeon hierarchies 521-524 are memorized as information about the composition for every class 411 concerning other dungeons, and are updated by receiving the information about the dungeon concerning the game of the other game devices 1-2.

[0065]

The passage information 531 has memorized the information about in which class 411 a self-dungeon and other dungeons are connected, The other dungeon hierarchies 521-524 which were received from the other game devices 1-2, and were memorized to WRAM22 are made to reflect to a self-dungeon, and when newly connecting the same class 411, it updates.

[0066]

The possession item information 541 is memorized as information about the item which the self-player character 412-1 possesses. An item can be got by pushing down an enemy character and the possession item information 541 will be updated by it.

[0067]

The composition selection information 551 is information which was input by the player, where reflection carries out and which starts a way. The composition selection information 551 is the community virtual space 401 concerning the game in the other game devices 1-2. The community virtual space 401 which starts the game in the self-game device 1-1 in the composition of (hereinafter, considering it as "the other community virtual space 401-2"). It memorizes as information about where the passage which connects how you make it reflected selectively, a self-dungeon, and other dungeons to the composition of (hereinafter, considering it as "the self-community virtual space 401-1") is installed. The details about the composition selection information 551 are mentioned below.

[0068]

The message information 552 and the transfer item information 553 are information transmitted to the other game devices 1-2 at the time of a communication interface. It memorizes as information about the item chosen in order that the message information 552 might transfer the information about a message, and the transfer item information 553 to the other player characters 412-2 out of the item which the self-player character

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412-1 possesses.

[0069]

The other game information 561 is information (it is hereafter considered as "other game progress status information") about the advancing state of the game concerning the game of the other game devices 1-2, is received from the other game devices 1-2 at the time of a communication interface, and is updated for every time of the communication interface concerned. The other game information 561 is referred to in the case of updating of the enemy character information 501 and the door information 502 with a key based on the other game information 561 in the case and the composition selection information 551 of updating of the other dungeon hierarchies 521-524.

[0070]

Next, it describes about transfer of the information at the time of the communication interface between the game devices 1. The self-game device 1-1 and the other game devices 1-2, The enemy character information 501 and door information 502 with a key which will start the composition of the community virtual space 401 memorized by each WRAM22 if a communication interface is carried out. (Hereinafter, it being considered as "community virtual space configuration information") and the self-dungeon hierarchies 511-514 (it is hereafter considered as "dungeon configuration information") concerning the composition of a dungeon will be exchanged mutually. In addition, each player can also exchange the message information 552 as a message for making the transfer item information 553 and a partner read as an item which the player character 412 possesses. Although these community virtual space configuration information and dungeon configuration information are memorized as the other game information 561 of WRAM22 and you eventually make it reflected in the self-community virtual space 401-1 and a self-dungeon based on it, It is chosen by the input operation of a player what it does the reflection concerned, and it is determined.

[0071]

However, since such selection by a player cannot be performed when the self-game device 1-1 is equipment activation status. Before a player asks for what kind of selection or makes a state change from login states to equipment activation status, it chooses the composition concerned preliminarily (it is hereafter considered as "reservation selection"),

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and makes the composition selection information 551 of WRAM22 memorize. The transfer item information 553 and the message information 552 can also be made to memorize with this reservation selection. When a communication interface with the other game devices 1-2 is established, and community virtual space configuration information and dungeon configuration information, And the transfer item information 553 and the message information 552 are exchanged for the other game devices 1-2, and composition is made to reflect to the self-community virtual space 401-1 from the community virtual space configuration information and dungeon configuration information, and the reservation selection memorized by the composition selection information 551.

[0072]

Next, it describes, respectively about the reflection to the self-community virtual space 401-1 and a self-dungeon. About the reflection to the self-community virtual space 401-1, As composition in the self-community virtual space 401-1 and the other community virtual space 401-2, The existence of the existence used as what is changed after [of the enemy character 402 and the door 403 with a key which are arranged in a similar manner before the game progress in the community virtual space 401, respectively] game progress will be reflected. That is, in the self-community virtual space 401-1, if some are different in the other community virtual space 401-2 and composition, it will be reflected every enemy character 402 and door 403 with a key. What the self-player chose as desired composition eventually makes it reflected in this reflection.

[0073]

About reflection of a dungeon, it is carried out by the respectively same class 411 in a self-dungeon and other dungeons being connected by a passage. That is, in the class to whom reflection of the dungeon was performed, a player character can be moved now also to the dungeon which was generated in the other game devices 1-2 in addition to the dungeon generated from the first in the self-game device 1-1, and the size of a dungeon will be extended. A self-player is determined by selection of a desired place which class 411 is connected. If attached to the example about reflection of these community virtual space 401 and a dungeon, it mentions below.

[0074]

When other game progress information is received from the other game devices 1-2, a

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player makes reservation selection and reflection according to other game progress information is performed to the above-mentioned community virtual space 401 and dungeon only about the contents memorized by the composition selection information 551. Which composition is made to reflect? And if the self-game device 1-1 is in login states, it will choose about how reflection of the composition of the community virtual space 401 and the dungeon which are reflected concerned is carried out after the communication interface concerning reflection. That is, about the contents chosen by operation of the operation switch part when the player wanted to perform reflection according to other game progress information afterwards, subsequent reflection is performed according to the selection also by the contents which were not reflected at the time of reception of other game progress information.

[0075]

Next, about processing of the core based CPU 21 in the game concerned performed with the self-game device 1-1, while referring to Fig.7, it describes. It describes about the processing about reflection of the community virtual space 401 and a dungeon, and transfer of the information concerning it, and omits a detailed description about game progress processing especially here.

[0076]

First, it describes about the starting processing of the core based CPU 21 which is shown in Fig.7 (a) and which is performed with the self-game device 1-1. In the self-game device 1-1, if a game is started, the core based CPU 21 will judge whether the proper password input for changing to login states was detected (Step S101). If judged with proper password input having been detected, the core based CPU 21 will put processing into a main process (Step S102). The details of processing of the core based CPU 21 in a main process are mentioned below.

[0077]

In Step S101, it is not judged with proper password input having been detected, Or if processing returns from a main process, the core based CPU 21 will judge whether in the communication port 29 which it has in the self-game device 1-1, the information for establishing the communication interface from the other game devices 1-2 was received (Step S103). If it judges that it was received by the information for establishing a

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communication interface, the core based CPU 21 will put processing into communication interface processing (Step S104). The details of processing of the core based CPU 21 in communication interface processing are mentioned below.

[0078]

It is not judged with the information for establishing a communication interface having been received in Step S103, Or if processing returns from the communication interface processing in Step S104, the core based CPU 21 will judge whether the input of the purport that starting processing is ended was detected in the self-game device 1-1 (Step S105). If the input of the purport that starting processing is ended is detected, the core based CPU 21 will end the starting processing concerned, otherwise, will return processing to Step S101 again.

[0079]

Next, it describes about the main process of the core based CPU 21 which is shown in Fig.7 (b) and which is performed with the self-game device 1-1. If processing is put into a main process, the core based CPU 21 will be memorized by WRAM22, and also it will judge whether the input for making the game information 561 reflect was detected (Step S111). If judged with the input for making it reflected having been detected, the core based CPU 21 will put processing into reflection processing (Step S112). The details of processing of the core based CPU 21 in reflection processing are mentioned below.

[0080]

It is not judged with there having been an input for making it reflected in Step S111, Or if the processing in Step S112 returns from reflection processing, the core based CPU 21 will judge whether the input for making preparations of a communication interface to the other game devices 1-2 by a self-player was detected (Step S113). If judged with the input for preparing a communication interface having been detected, the core based CPU 21, Using the information (it is hereafter considered as "item message information") which carries out selection of the item transferred to other players, and creation of a message to a self-player (Step S114), and starts it at them, The transfer item information 553 and the message information 552 which are memorized by WRAM22 are updated, respectively (Step S115). Using information that there are not an item which selection of an item and/or creation of a message do not have to be carried out, respectively, is not necessarily

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replaced with them, and is transferred to other players by a player at this time, and a message, The item information 553 and the message information 552 which are memorized by WRAM22 are updated with a NULL value, respectively.

[0081]

If item message information is updated, in Step S115 the core based CPU 21, The information that transmitted the information for establishing a communication interface with the other game devices 1-2 by the communication port 29 of the self-game device 1-1, and it was received in the other game devices 1-2, by receiving from the other game devices 1-2, The communication interface between the game devices 1 is established (Step S116).

[0082]

In Step S113, if not judged with the input for preparing a communication interface having been detected, the core based CPU 21 judges whether the information for establishing the communication interface from the other game devices 1-2 was received (Step S117). In Step S116, if judged with the information for a communication interface being established or establishing the communication interface from the other game devices 1-2 in Step S117 having been received, the core based CPU 21 will put processing into communication interface processing (Step S118).

[0083]

In Step S117, if it is not judged with the information for establishing a communication interface having been received or processing returns from communication interface processing, the core based CPU 21 will put processing into game progress processing (Step S119). If processing returns from game progress processing, the core based CPU 21 will judge whether the input for logging out of a game by a self-player was detected (Step S120). If judged with the input for logging out having been detected, the core based CPU 21, Make selection of composition of starting the self-community virtual space 401-1 and a self-dungeon, and item message information input into a self-player (Step S121), and using those information, The composition selection information 551, the message information 552, and the transfer item information 553 which are memorized by WRAM22 are updated, respectively (Step S122), and processing is again returned to Step S103. Also in Step S122, like Step S115, by a player, The composition selection information 551,

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the message information 552, and the transfer item information 553 concerning what all of selection of composition and the input concerning item message information did not have to be carried out, among those was not chosen and created which are memorized by WRAM22 are updated by the NULL value. In Step S120, if not judged with the input for logging out of a game having been detected, the core based CPU 21 returns processing to starting processing (Fig.7 (a)) again.

[0084]

Next, it describes about the communication interface processing of the core based CPU 21 which is shown in Fig.7 (c) and which is performed with the self-game device 1-1 (since same processing is performed also in the other game devices 1-2, the description about the communication interface processing in the other game devices 1-2 is omitted). If processing shifts to communication interface processing, the core based CPU 21 will check that receive other game progress status information, and the information on the game in the self-game device 1-1 is received by the communication port 29 in the other game devices 1-2 (Step S131).

[0085]

Then, by the other game progress status information received from the other game devices 1-2, the core based CPU 21 updates the game information 561 memorized by WRAM22, ranks next and updates the other dungeon hierarchies 521-524 based on the game information 561 concerned (Step S132). Then, the core based CPU 21 transmits the message information 552 and the transfer item information 553 to WRAM22 (Step S133), It was received and also the possession item information 541 concerning the self-game device 1-1 is updated based on the transfer item information 553 concerning the game device 1-2 (Step S134). If it was received and also there is the message information 552 concerning the game device 1-2, although it will be displayed on LCD 11 and 12 as what can be recognized as a message to a self-player, Since processing of the core based CPU 21 concerning the display does not have a direct relation to the present invention, a detailed description is omitted.

[0086]

If an update process is carried out, the possession item information 541 in Step S134 the core based CPU 21, The message information 552 and the transfer item information 553

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are updated with a NULL value to WRAM22 already transmitted to the other game devices 1-2 (Step S135), and processing is put into reflection processing (Step S136).

[0087]

Next, it describes about the reflection processing of the core based CPU 21 which is shown in Fig.7 (d) and which is performed with the self-game device 1-1. If processing is put into reflection processing, it will judge [whether the information which starts selection of composition at the composition selection information 551 is memorized by WARM22, and the core based CPU 21 is in it, and] (Step S141). If not judged with the composition selection information 551 being memorized, the core based CPU 21 judges whether the self-game devices 1-1 are login states (Step S142). If judged with their being login states, the core based CPU 21, To the player, received in Step S131, and also it is contained in the game information 561, It makes it choose which composition to be made to reflect to the composition of the self-community virtual space 401-1 among the composition of the other community virtual space 401-2 (Step S143), and updates the composition selection information 551 to WRAM22 based on the selection (Step S144).

[0088]

It is judged with the information which starts selection of composition at the composition selection information 551 being memorized in Step S141, Or if the composition selection information 551 is updated, in Step S144 the core based CPU 21, Based on the composition selection information 551 concerned and the other game information 561, the enemy character information 501 memorized by WRAM22, the door information 502 with a key, and the passage information 531 are updated (Step S145). If processing concerning the updating concerned is finished, the core based CPU 21 will update the composition selection information 551 memorized by WRAM22 with a NULL value (Step S146), and will return processing to communication interface processing (Fig.7 (c)) again. If processing is returned to communication interface processing, the core based CPU 21 will return processing to a main process (Fig.7 (b)) continuously.

[0089]

Next, in Fig.8 and Fig.9, the mimetic diagram of the specific community virtual space 401 and a dungeon is shown and described about the community virtual space 401 and the dungeon concerning the self-game device 1-1 which are reflected by the thing with the

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other game devices 1-2 to do for a communication interface.

[0090]

What is shown in Fig.8 is the mimetic diagram which expressed specifically the self-community virtual space 401-1 as a result on which the self-community virtual space 401-1, the other community virtual space 401-2, and they were reflected. The community virtual space 401 shown in Fig.8 (a) and Fig.8 (b), From the original community virtual space 401 shown in Fig.5 (a), some doors 403 with a key are unlocked, some enemy characters 402 are pushed down because each player advances a game, and things show that it is in the state where they stopped existing from the community virtual space 401.

[0091]

Here, in the self-community virtual space 401-1, the composition which can be reflected from the other community virtual space 401-2 is door 403with key-B, and enemy character 402-A. And although it is different composition also about the existence of enemy character 402-B, the target character 402-B concerned which exists in the other community virtual space 401-2 cannot be made to exist again in the self-community virtual space 401-1 in the game concerned.

[0092]

That is, a self-player will perform selection of reflection or any composition not making one of composition reflect on which the composition of door 403with key-B and enemy character 402-A is reflected in selection of composition. In this selection, when choosing reflection of making door 403with key-B of the self-community virtual space 401-1 unlock, the composition selection information 551 of WRAM22 is updated by the information on the purport which shows door 403with key-B unlocking so that it may illustrate to Fig.7 (a). And as shown in Fig.8 (c), the self-community virtual space 401-1 as a result made to reflect will change with selections of reflecting only unlocking of door 403with key-B from the composition in the other community virtual space 401-2.

[0093]

Before this reflection, by door 403with key-A and door 403with key-B in the self-community virtual space 401-1, although the self-player character 412-1 was not able to be moved near the enemy character 402-A, As shown in Fig.7 (c), it becomes possible by making unlocking of door 403with key-B reflect. If the self-player character 412-1 moves

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near the enemy character 402-A, it will become possible to carry out a battle. If the enemy character 402-A concerned can be pushed down by the battle, as shown in Fig.7 (d), it will become possible to move the self-player character 412-1 to the exit of the self-community virtual space 401-1.

[0094]

In selection of the composition of Step S121 shown in Fig.7 (b), Since the other game information 561 is selections in the state where WRAM22 does not memorize, composition to make it reflecting will be preliminarily chosen from the self-community virtual space 401-1 like selection of the composition in the above-mentioned step S143 in this case.

[0095]

next, the self-game device 1-1 and the other game devices 1-2 in which being shown in Fig.9 was shown in Fig.5 (b) -- the dungeon concerning the self-game device 1-1 by having made the dungeon concerning each game reflect is expressed. About reflection of a dungeon, it is made by connecting the class 411 same comrades (in Fig.9, he is the class 411 of 2F) by the passage 801 so that it may illustrate. The portion (it is hereafter considered as a "self-dungeon portion") of the dungeon (it is hereafter considered as a "self-dungeon") concerning the game of the self-game device 1-1 in this reflected dungeon, It is in the state where they were connected even after a communication interface, and the portion (it is hereafter considered as "other dungeon portions") of the dungeon (it is hereafter considered as "other dungeons") concerning the game of the other game devices 1-2 will be maintained in the self-game device 1-1 (also setting to the other game devices 1-2 the same).

[0096]

By a self-dungeon and other dungeons being mutually connected by the passage 801, the self-player character 412-1 becomes movable to the class 411 of 2F concerning other dungeon portions. The self-player character 412-1 which became movable such is movable to the institution 413 (here killer technique exercise hall) in other dungeon portions by carrying out reflection of a dungeon. By this, the predetermined effect according to the institution 413 concerned can be given now to the self-player character 412-1 in the institution 413 which was not in the self-dungeon before reflection.

[0097]

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But by having made the class 411 with a new self-dungeon portion move the self-player character 412-1 in a self-dungeon, as a result of advancing a game, Even if the class 411 is generated, about the new class 411 concerned, it is not reflected to other dungeons till the next communication interface.

[0098]

As described above, the game concerning this embodiment is what has possible going on independently each other, without a plurality of game devices 1 (the self-game device 1-1 and the other game devices 1-2) taking the simultaneity of a play. This information will be updated by the result in which the player of the game device 1 concerned advanced the game regardless of other game devices by operation of the touch panel 13 or the operation switch part 14 although the variety of information according to the advancing state of the game is memorized by WRAM22 of the game device 1. But even if other game progress status information can be received from other game devices where the game device 1 advanced the game regardless of this, and shone and which were, in addition it is based on game progress status information, the information according to the advancing state of the game memorized by WRAM22 is updated.

[0099]

It is a game of the stand-alone type which advances a game regardless of other game devices fundamentally by this, and it becomes possible to realize game nature similar to the network game on which the advance result of the game by other players is reflected. Since it is not necessary to interpose a server device to the advance of a game other than the game device 1 of each player, advance of the game by a plurality of players is pseudoly realizable by comparatively small-scale hardware organization.

[0100]

To the information about the advancing state of the game in which WRAM22 of the self-game device 1-1 memorizes, and other game progress status information is reflected, for example, The information 511-531 about the information 501 and 502 about the community virtual space 401 and a dungeon is included, and the situation of the map which is the moving space of a player character will change. Thus, the impression of being able to proceed a game by a plurality of players because the map in which the advancing state of a game is shown directly changes according to the advancing state of the game in

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the other game devices 1-1 becomes strong.

[0101]

The enemy character 402 and the door 403 with a key which are arranged in the community virtual space 401, It is the information on which it received from the other game devices 1-2, and also can reflect game progress status information, Even if the player of the self-game device 1-1 takes time in capture (push down the enemy character 402, or a key should come to hand and unlock the door 403) of these disturbing elements, a disturbing element can be eliminated by cooperation of the player of other game devices, and a game can be advanced previously. On the other hand, by reflection of a dungeon, while the moving space of a player character spreads, Since the institution of the dungeon generated in the other game devices 1-2 can also be used, the capture element in a game can be increased, or it can capture now easily, and can expand the width of advance of a game.

[0102]

When the contents to which the player of the self-game device 1-1 is not carrying out reservation selection receive other game progress status information from the other game devices 1-2, the advancing state of the game in the other game devices 1-2 is not reflected. For this reason, it can prevent the unexpected situation where the element to which the player was enjoying capture harder which has received the game progress status information from the other game devices 1-2 will be captured etc. occurring. But since the player of the self-game device 1-1 chose the contents reflected a posteriori to the timing after reception of other game progress status information, thought that a player would push down an enemy character itself, for example, but. If the player of other game devices had pushed down, it will also become possible to perform selection that it will be made to reflect and a game will be advanced previously.

[0103]

Since a password must be entered and it must be considered as login states in order for a player to perform a game with the self-game device 1-1, other players do not advance a game freely with the game device 1-1. But even if it cannot go on a game, the player of the other game devices 1-2 is starting the self-game device 1-1 to make equipment activation status, and can make the self-game device 1-1 receive the other game progress

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status information from the other game devices 1-2. Although those from which livelihood time differs (for example, parent and child etc.) perform a game individually fundamentally by this, for example, the cooperation play of a game can be performed.

[0104]

The present invention is not limited to the above-mentioned embodiment, but various deformation and application are possible for it. Hereinafter, it describes about the deformation mode of the above-mentioned embodiment applicable to the present invention.

[0105]

According to the above-mentioned embodiment, the enemy character 402 and the door 403 with a key have been arranged in the community virtual space 401, and advance of the player character was blocked by these. And the disturbance over advance of a player character was eliminated by pushing down the enemy character 402 or unlocking the door 403 with a key. On the other hand, blocking advance of a player character in the community virtual space 401, It is good also as what eliminates the disturbance over advance of the player character by the river or a cliff by carrying out calling it a river and a cliff, advancing a game, and constructing a pons over a river, or covering a ladder over a cliff.

[0106]

According to the above-mentioned embodiment, the same class in a self-dungeon and other dungeons was connected with reflection of the dungeon by the passage, and the size of the dungeon used as the moving space of a player character was being extended. On the other hand, when the dungeon in which the way of a different form for every game device was formed shall be generated. It is good also as piling up the map of the dungeon generated in the self-game device 1-1 with the map of the dungeon generated in the other game devices 1-2, and increasing the way on the map in a dungeon.

[0107]

Although carried out by attaching reflection of the game situation in the above-mentioned embodiment to the game situation of the community virtual space 401 and a dungeon, It is good also as a thing [in / for this / the self-game device 1-1 and the other game devices 1-2] which each player can perform also about the game situation in the town

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planning game which performs original town planning in predetermined virtual space. Here, a town planning game, the advancing state of the game, and its reflection are explained in full detail below.

[0108]

First, a town planning game is described with the typical figure shown in Fig.10. The virtual space similarly used with the self-game device 1-1 and the other game devices 1-2 in the town planning game concerned, As shown in Fig.10 (a), the partition 1002 divided with the road 1001 used as the position and size in virtual space, the road 1001, and the broken lines exists in common. The building 1003 will be established in the partition 1002 every partition 1002 concerned.

[0109]

Here, the road 1001 is a range which can move the player character 412. The building 1003 will comprise two or more kinds, and the role carried out to the player character 412 which take and is in the town planning game concerned will differ from the effect to take for every kind of the. The building 1003 installed every partition 1002 straddles, and it does not install the partition 1002.

[0110]

Then, in Fig.10 (b), Fig.10 (c), and 10 (d), the typical figure of the virtual space concerning the town planning game of the self-game device 1-1 and the other game devices 1-2 is shown, and it describes about reflection of the situation of the game, and a game situation. It is the typical figure of the virtual space (it is hereafter considered as "self-town planning space") concerning the town planning game in the self-game device 1-1 which is shown in Fig.10 (b), and building 1003-A and building 1003-B are installed. It is the typical figure of the virtual space (it is hereafter considered as "other town planning space") concerning the town planning game in the other game devices 1-2 which is shown in Fig.10 (c) on the other hand, and building 1003-C-F is installed. It turns out that these buildings 1003 are different in the road 1001 arranged like the virtual space concerning the town planning game of the self-game device 1-1 and the other game devices 1-2, and it has become the arrangement which differs with the self-game device 1-1 and the other game devices 1-2.

[0111]

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Building 1003-C in other town planning space and F are the buildings 1003 which are not arranged on self-town planning space, and, as for building 1003-B on self-town planning space where building 1003-E is arranged in the same partition 1002 as it, the building 1003 of the kind is arranged. It is building 1003-D of other town planning space, building 1003-A of self-town planning space, and what has the same kind of the partition 1002 and building 1003. At this time, self-town planning space as a result of reflection is shown in Fig.10 (d).

[0112]

Here, according to the metaphor of the reflection shown in Fig.10 (d), the reflection concerning building 1003-G arranges 1003-C of other town planning space to the partition 1002 where the building 1003 is not arranged before reflection. Reflection concerning building 1003-H is taken as new building 1003-H (building of 2 stories which set the function of the first floor and building 1003-D for the function of building 1003-A on the second floor) combining 1003-A of self-town planning space, and building 1003-D of other town planning space. The reflection concerning building 1003-I is replaced with building 1003-B arranged before reflection, and arranges 1003-E of other town planning space. But the building which oneself arranged can also be left intact in the partition where the building 1003 which oneself already arranged is arranged, without arranging the building which other players arranged.

[0113]

In these partitions 1002 where the building 1003 is not arranged like, The building 1003 of town planning space can be arranged except that it is arranged in the partition 1002, and in the partition 1002 where the building 1003 is already arranged, it is arranged in the partition, and also the building 1003 of town planning space is replaced with it, and is arranged, or it can further combine with it and can arrange. Arranging combining this building 1003 is arranging the building 1003 of a plurality of kinds in piles to the same partition 1002. On the other hand, although building 1003-F of other town planning space can also be reflected to the partition 1002 of self-town planning space, it can also be carried out to your not making it reflected by selection of a self-player like the example shown in Fig.10 (d).

[0114]

In this case, although the building 1003 is arranged to each partition 1002 of virtual space for every game device, the building 1003 which it received from other game devices, and also other players which game progress status information shows have arranged can be arranged as it is also to self-town planning space. It can proceed now by this obtaining the cooperation from other players which are advancing fundamentally arrangement of the building to the virtual space in a town planning game for the game independently.

[0115]

A plurality of players can participate and the jurisdiction of each region can apply the present invention also to the game which shall be given to which player according to the point for every region gained because each player advances a game to each region on the map divided into a plurality of regions. For example, acquisition of the point for every region shall be gained because he can proceed a game individually for every game device. The game for gaining the point can apply various games known conventionally, such as a mini game set up for every region.

[0116]

When the communication interface of the game devices of the player which has participated in this game is carried out, the data of the acquired point for every region of each player shall be exchanged. And after exchanging the data of the acquired point for every region, in each game device, the player which newly acquires jurisdiction for every region shall be determined according to the acquired point of the player which has the present jurisdiction, and each player. In order to change the player which has jurisdiction about a certain region, it is good also considering the acquired point of the player which newly acquires jurisdiction carrying out by N times (N is a bigger constant than 1) the acquired point of the player which had acquired jurisdiction until now as conditions.

[0117]

In this case, although a plurality of game devices run a game independently each other and the acquired point for every region of a map is obtained, the player which has acquired jurisdiction for every region whenever it exchanges the data of the acquired point of each player by a communication interface can be updated. The competition in the game that the player of a plurality of game devices which is advancing the game independently fundamentally acquires the jurisdiction of each region by this is realizable.

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[0118]
Although the game concerning the above-mentioned embodiment has described about reflection of the game situation concerning the game device 1 which consists of 2, it may make the game situation which starts many of a plurality of game devices 1 from 2 reflect mutually in the false network game concerned. At this time, the number of the game devices 1 which can reflect a game situation may be restricted according to capacity memorizable to WRAM22 of the game device 1.
[0119]
In reflecting the game situation concerning each game device 1 in the above-mentioned embodiment, had transmitted and received the information which starts a game situation directly by establishing the communication interface by peer to peer ones between the game devices 1, but. It is good also as what transmits and receives the information which establishes a communication interface and starts a game situation by an infrastructure regardless of radio or a cable there. It is good also as what can exchange that game situation by attaching the information concerning this game situation to e-mail.
[0120]
According to the above-mentioned embodiment, in two display devices called 1st LCD11 and the 2LCD12 and the game device 1 provided with a pointing device called the touch panel 13, the case where the false network game system concerning the present invention should be performed was described as an example. However, if it has a display device which displays the image of a game at least, and an input device into which a player can input an instruction, in computer paraphernalia other than game device 1, it is good also as what performs the game to which the present invention is applied. The computer paraphernalia which perform the false network game system to which the present invention is applied do not ask whether it may be a general aviation like a personal computer, and they are whether to be portable and a non-portable type with a game special-purpose machine, either. A cellular phone is also applicable as computer paraphernalia which perform the game to which invention is applied.
[0121]
In the above-mentioned embodiment, the program and data concerning a false network game system should be stored in the game cartridge 17, and should be distributed. When

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the game device 1 communicates by being connected with the server device which exists on an external network, the program and data concerning a game system are stored in the hard disk unit which a server device has, and it is good also as what is distributed to the game device 1 via a network. In the game device 1, the program and data which the wireless interface part 29 received from the server device, For example, it can save by having ROMs (for example, flash memory etc.) which can rewrite the information memorized at it or the cartridge 17 containing such a ROM, and can load to the game device 1 WRAM22 at the time of execution.

[0122]

But the recording medium which stores these programs and data, According to the form of the computer paraphernalia used as a plat form instead of what is restricted to such a thing, optical and/or magnetic disk drives (a flexible disk, CD-ROM, DVD-ROM, etc.) are also applicable. When making computer paraphernalia provided with a hard disk unit into a plat form, these programs and data may be preliminarily stored in a hard disk unit, and may be distributed.

[Brief Description of the Drawings]

[0123]

A [FIG. 1] It is the figure showing the appearance of the game device used for the false network game system concerning an embodiment of the invention.

A [FIG. 2] It is a block diagram showing the composition of the game device used for the false network game system concerning an embodiment of the invention.

A [FIG. 3] It is the figure showing the change state of a game device.

A [FIG. 4] It is the figure showing selection of space concerning game progress typically.

A [FIG. 5] It is the figure showing space concerning game progress typically.

A [FIG. 6] It is the figure showing the composition of the variety of information memorized by WRAM22.

A [FIG. 7] It is a flow chart which shows processing of the game device 1 concerning a false network game system.

A [FIG. 8] It is the figure showing the example of the game progress concerning community virtual space.

A [FIG. 9] It is the figure showing the example of the game progress concerning a

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dungeon.

A [FIG. 10] It is the figure showing the example of the game progress concerning a town planning game.

[Explanations of letters or numerals]

[0124]

1 Game device

13 Touch panel

14 Operation switch part

11 The 1st LCD

12 The 2nd LCD

21 Core based CPU

22 WRAM

24 The 1st GPU

26 The 2nd GPU

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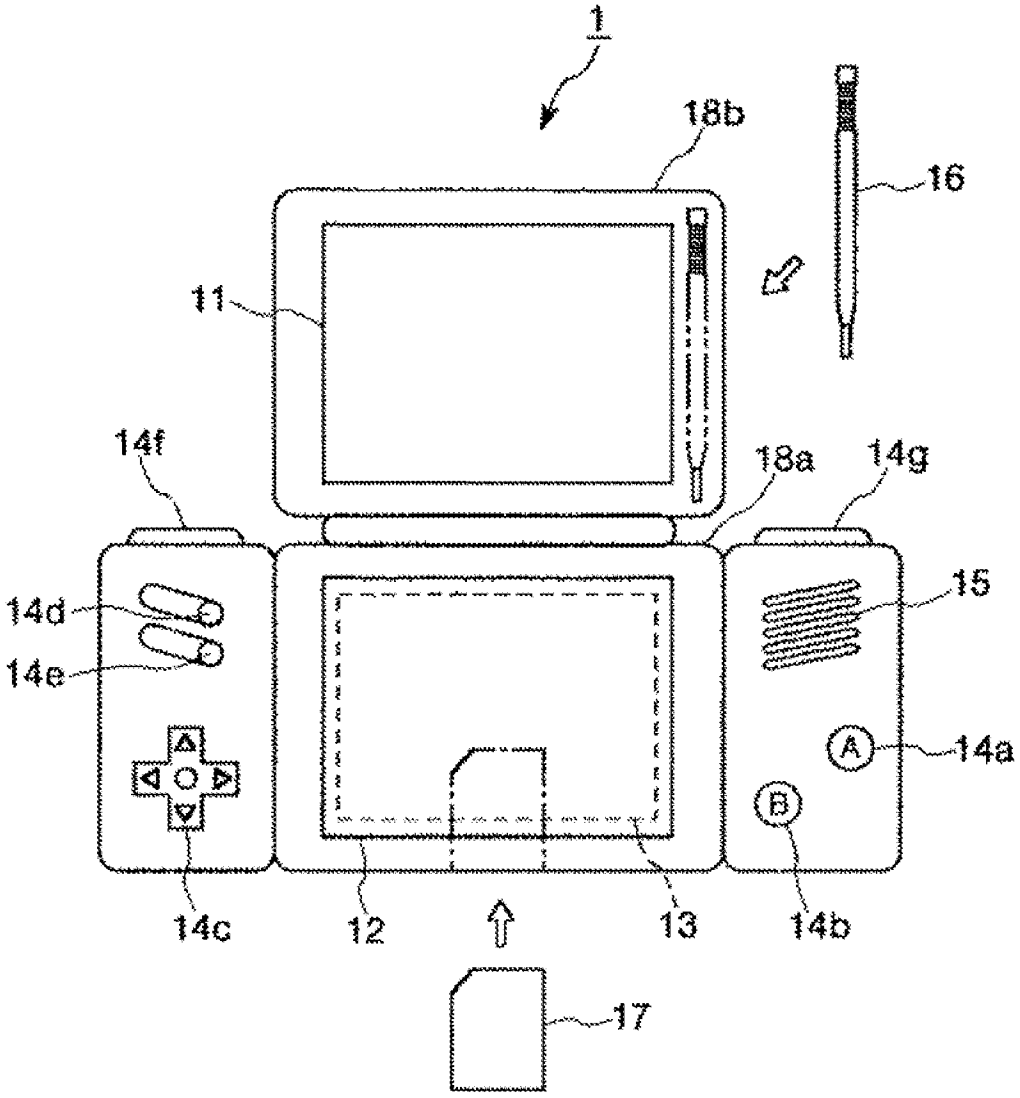
DRAWINGS



A [FIG. 1]

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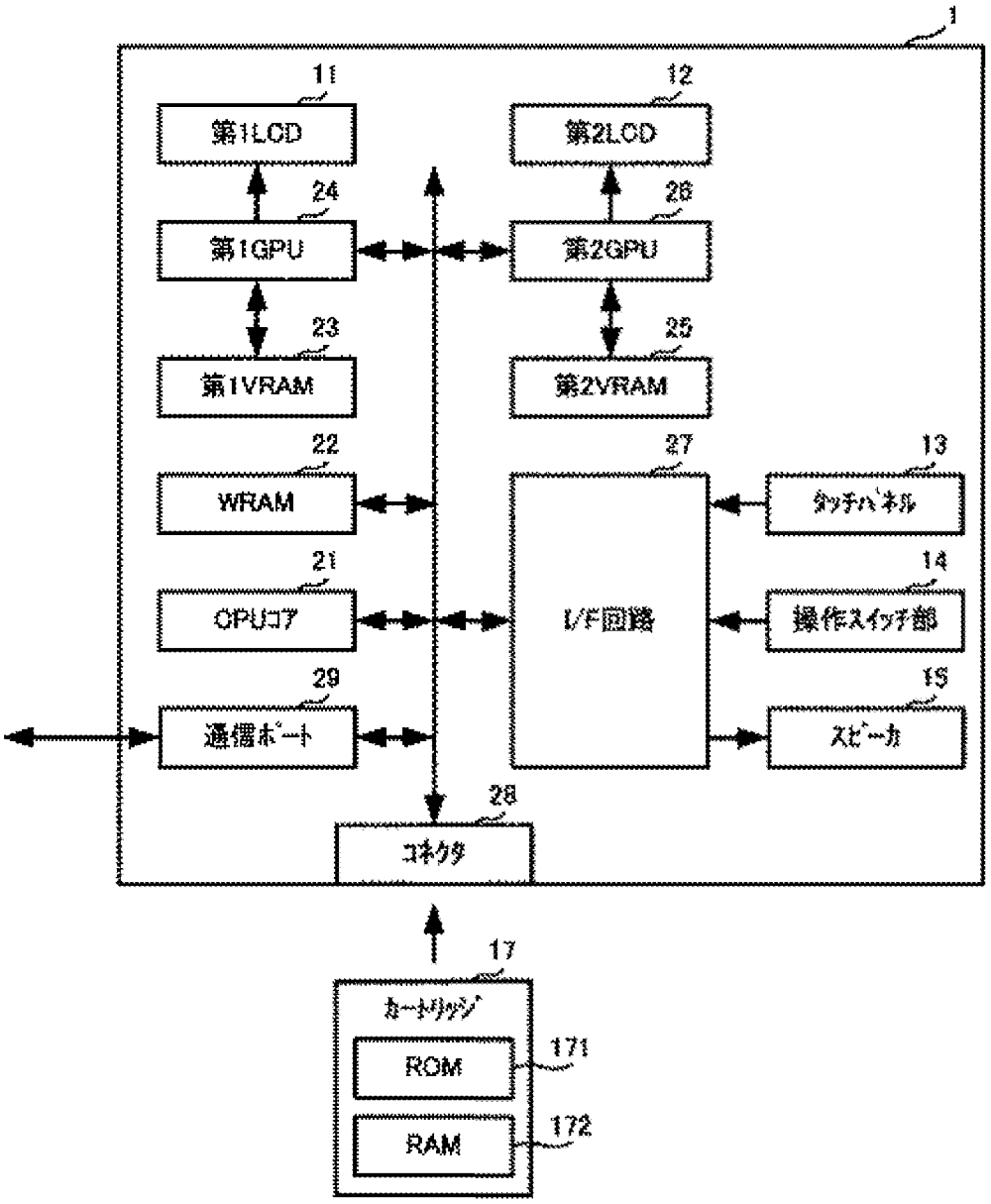

A [FIG. 2]

A [FIG. 3]

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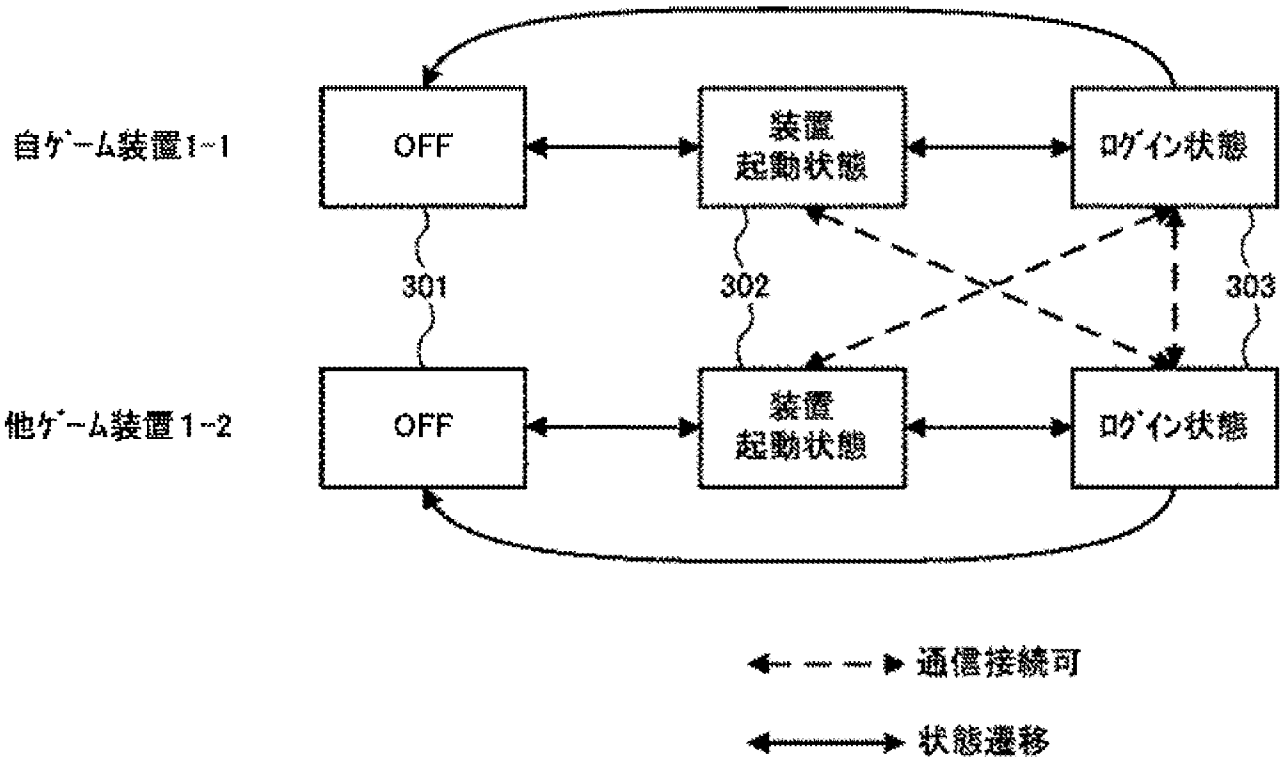

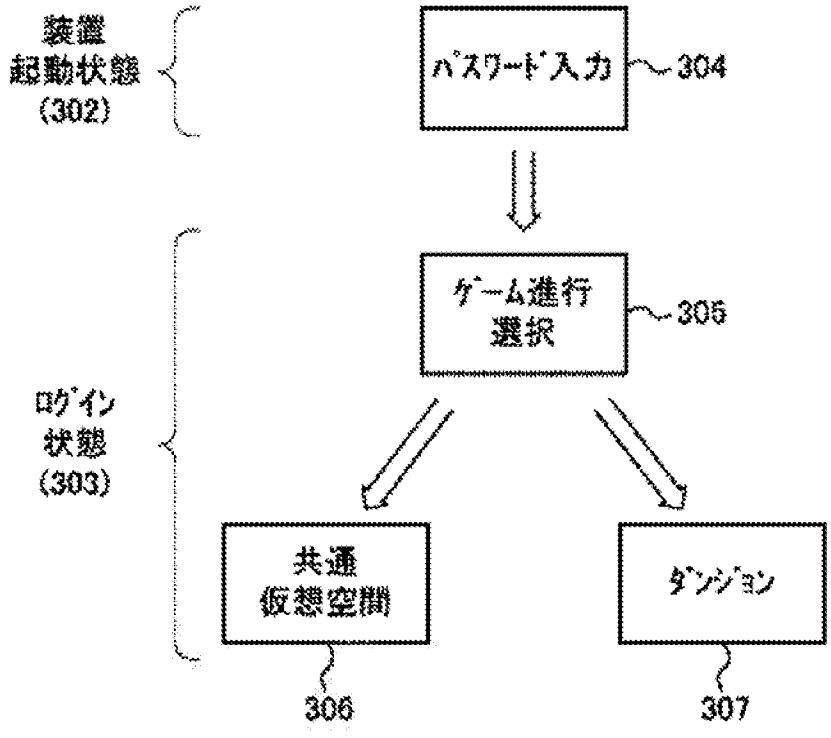

A [FIG. 4]

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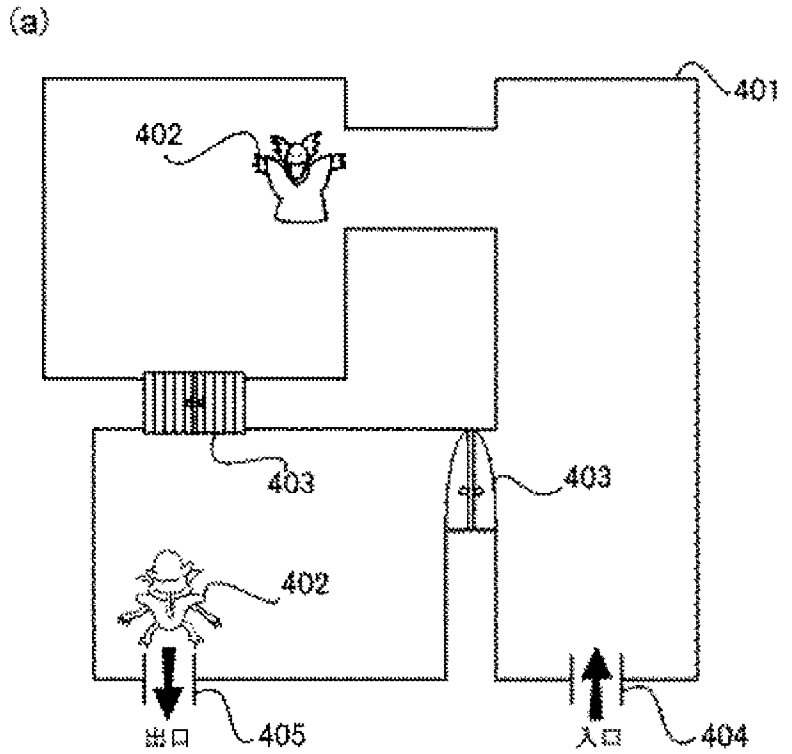

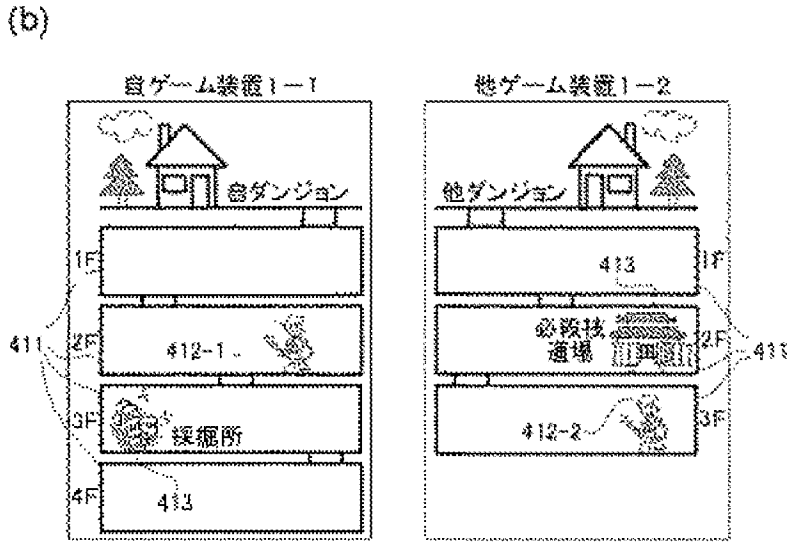

A [FIG. 5]

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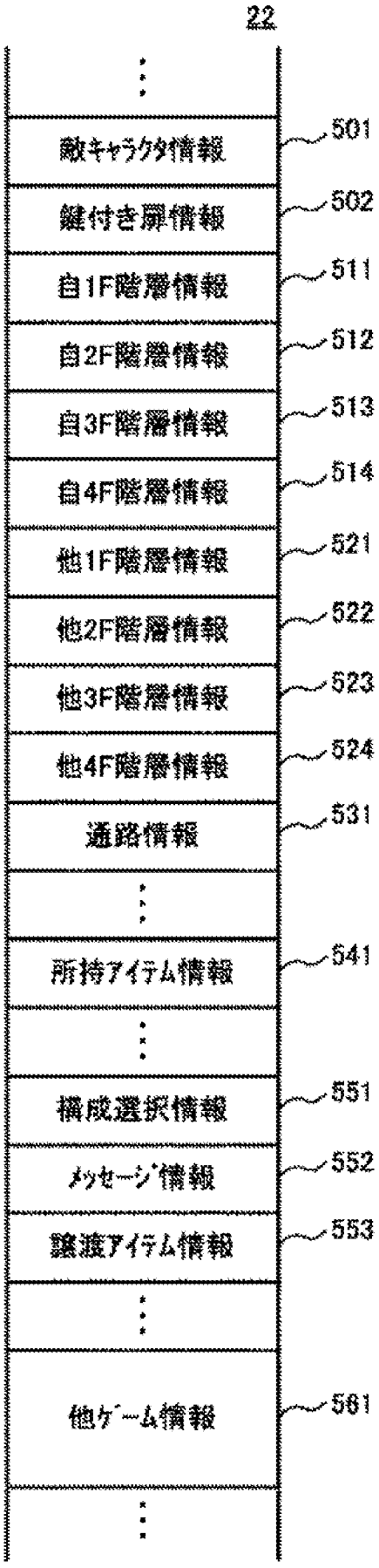
22
敵キャラクタ情報
501
鍵付き扉情報
502
自1F階層情報
511
自2F階層情報
512
自3F階層情報
513
自4F階層情報
514
他1F階層情報
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他2F階層情報
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他3F階層情報
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524
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531
所持アイテム情報
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構成選択情報
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メッセージ情報
552
譲渡アイテム情報
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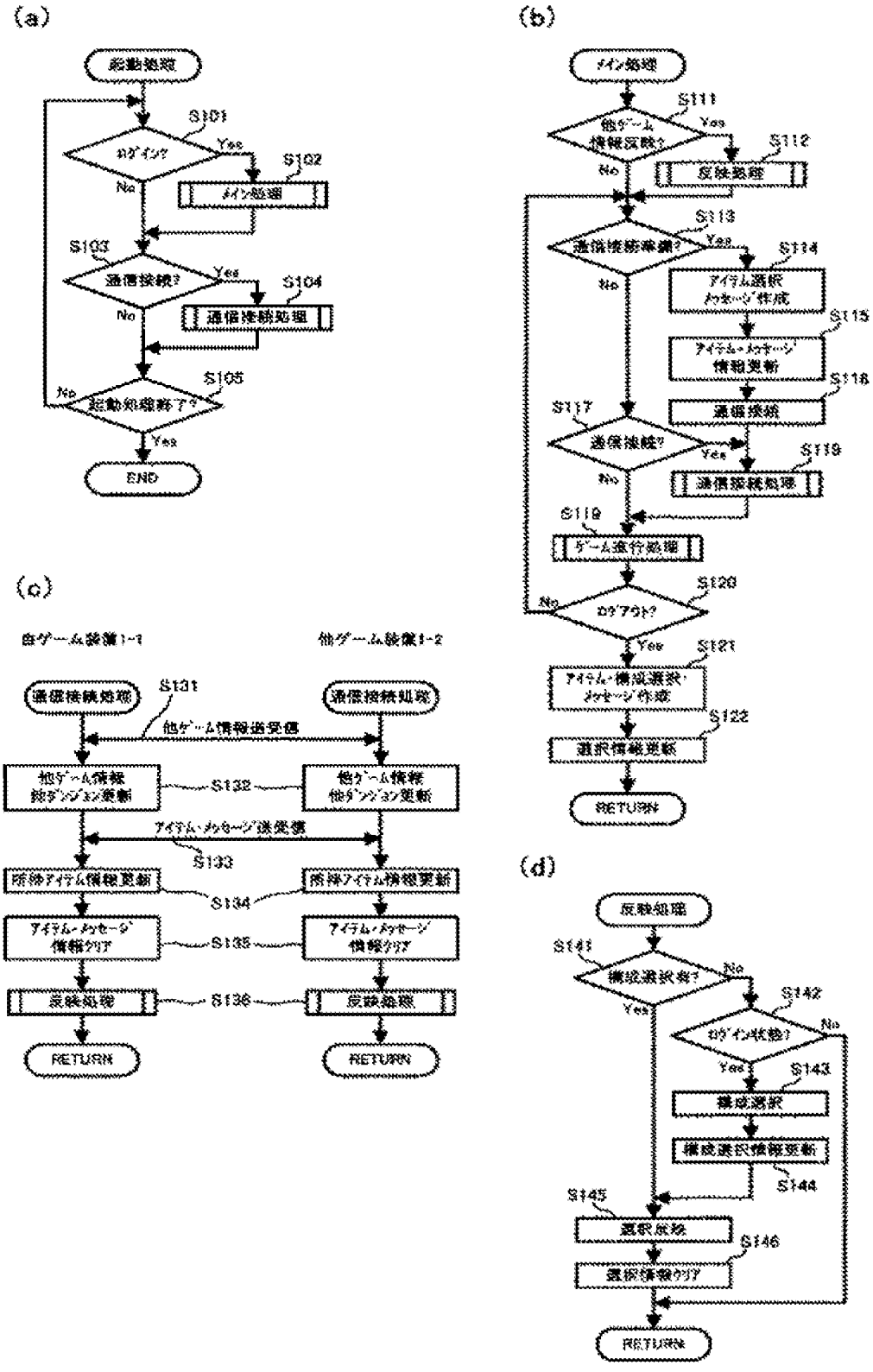
A [FIG. 6]



A [FIG. 7]

A [FIG. 8]

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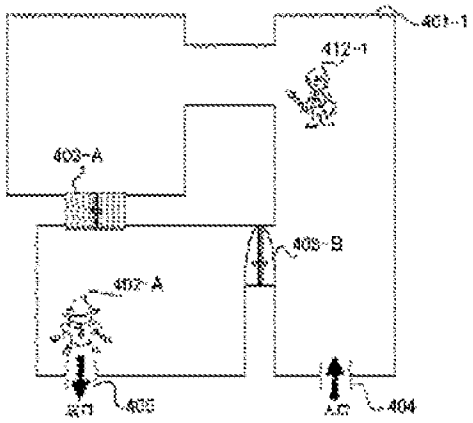
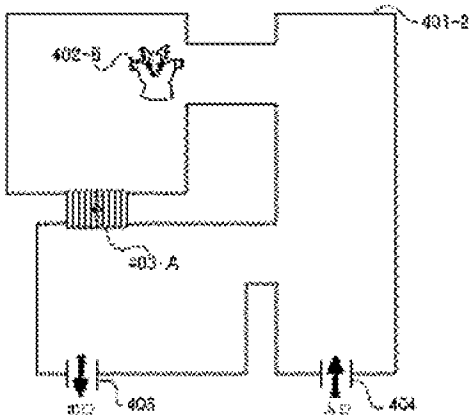
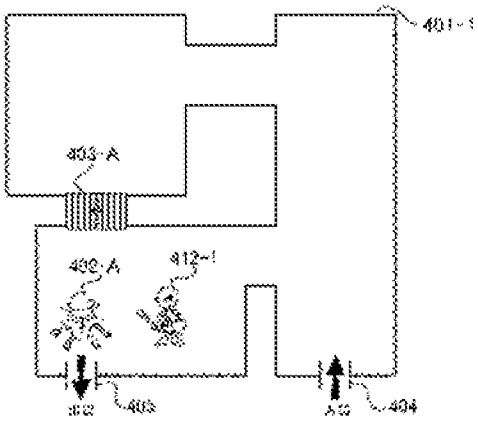
(a) 自ゲーム装置1－1



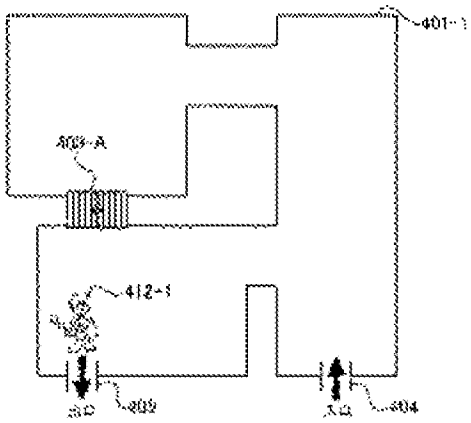
(b) 他ゲーム装置1－2

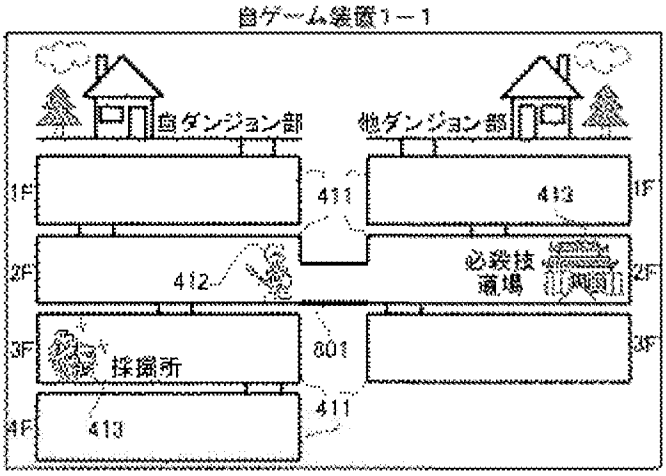


(c) 自ゲーム装置1－1



(d) 自ゲーム装置1－1





A [FIG. 9]

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A [FIG. 10]

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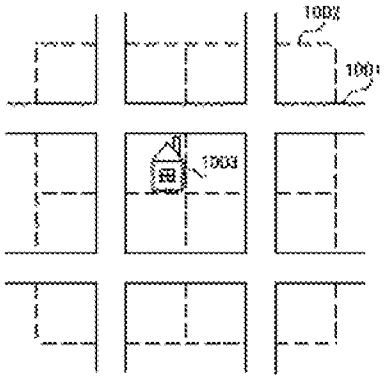
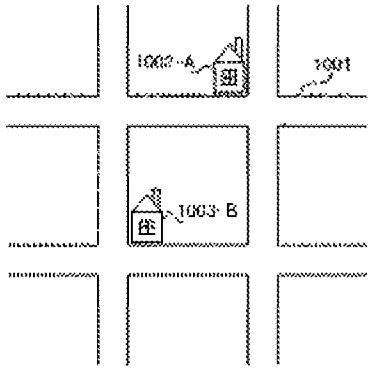
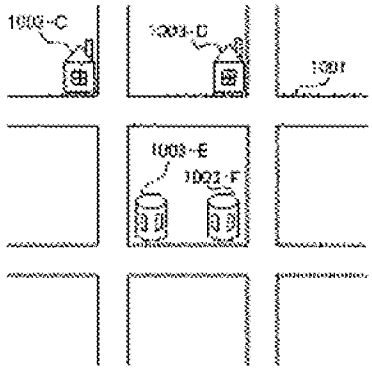
(a)



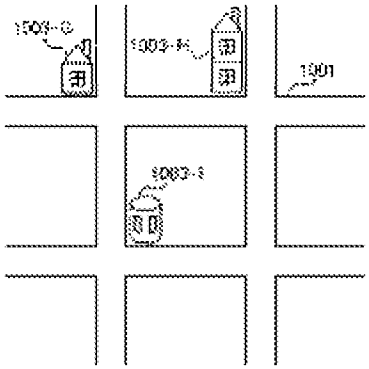
(b) 自ゲーム装置１－１



(c) 他ゲーム装置１－２



(d) 自ゲーム装置１－１



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(71)出願人　308033283
株式会社スクウェア・エニックス
東京都渋谷区代々木三丁目２２番７号
(74)代理人　100104916
弁理士　古溝　聡
(72)発明者　齋藤　力
東京都渋谷区代々木三丁目２２番７号　株式会社スクウェア・エニックス内

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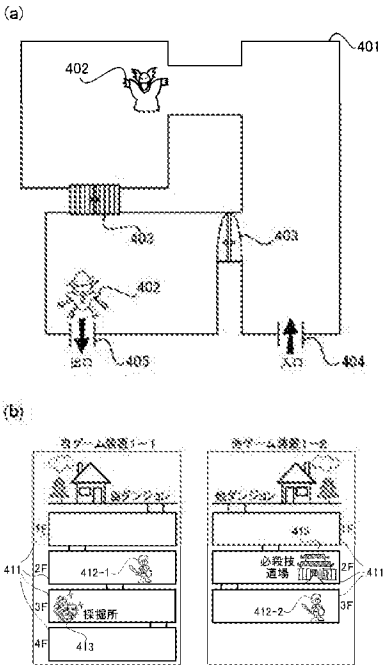
CC03

(54)【発明の名称】ゲーム装置及びプログラム

(57)【要約】
【課題】比較的小規模なハードウェア構成であっても、スタンドアロン型のゲームで他のプレイヤによるゲームの進行結果を反映させるネットワークゲームに類似したゲーム性を実現する。
【解決手段】自ゲーム装置と他ゲーム装置で同じゲームが実行される。このゲームは、基本的にはプレイの同時性が必要なく、互いに無関係に進行できるスタンドアロン型のゲームであって、ゲーム装置毎のゲームの進行状況に応じて、仮想空間４０１に配置された敵キャラクタ４０２が倒され、鍵付き扉４０３が解錠される。また、プレイヤキャラクタが新たな階層に進む度にユニークなダンジョン４１１のうちの当該階層の部分が生成される。自ゲーム装置と他ゲーム装置は、互いに通信接続してゲーム進行状況情報をやりとりすることができ、例えば、自ゲーム装置のゲームの進行状況に他ゲーム装置のゲームの進行状況を反映させることができる。
【選択図】図５



【特許請求の範囲】
【請求項１】
同一のゲームを実行する他のゲーム装置とは無関係に該ゲームを進行させることが可能であるとともに、前記他のゲーム装置と通信接続して該他のゲーム装置からデータを受信することが可能なゲーム装置であって、
ゲームの進行状況を示す所定のゲームデータを記憶するゲームデータ記憶手段と、
プレイヤによる入力装置の操作に従って、前記他のゲーム装置とは無関係に前記ゲームを進行するゲーム進行手段と、
前記ゲーム進行手段によるゲームの進行結果に基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する進行時データ更新手段と、
前記他のゲーム装置との通信接続により該他のゲーム装置において記憶されているゲームデータを受信するゲームデータ受信手段と、
前記ゲームデータ受信手段が前記他のゲーム装置から受信したゲームデータに基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する受信後データ更新手段と
を備えることを特徴とするゲーム装置。
【請求項２】
前記ゲームデータは、前記ゲームが進行されるマップに関連するデータのうちで該ゲームの進行状況に応じて内容が異なるものとなるマップ関連データを含み、
前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されたゲームデータのうちの前記マップ関連データを、前記他のゲーム装置から受信したマップ関連データが示すゲームの進行状況に応じた内容に更新する
ことを特徴とする請求項１に記載のゲーム装置。
【請求項３】
前記マップは、前記他のゲーム装置において進行されるゲームと同じ形態で、プレイヤのゲームの進行を妨害するとともにゲームの進行状況に応じて状態が変化する妨害オブジェクトを初期状態においてマップ上の同じ位置に配置している共通マップを含み、
前記マップ関連データは、前記妨害オブジェクトの状態を示すデータを含み、
前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す前記妨害オブジェクトの状態を、前記他のゲーム装置から受信したゲームデータに含まれるマップ関連データが示す前記妨害オブジェクトの状態に更新する妨害オブジェクト状態更新手段を含む
ことを特徴とする請求項２に記載のゲーム装置。
【請求項４】
前記マップは、同一のゲームを実行していてもゲーム装置毎に異なる形態のものが生成されるダンジョンマップを含み、
前記マップ関連データは、前記ダンジョンマップの形態を示すデータを含み、
前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すダンジョンマップに、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すダンジョンマップを結合し、該結合したダンジョンマップを示すマップ関連データを、前記ゲームデータ記憶手段に新たに記憶させるダンジョンマップ結合手段を含む
ことを特徴とする請求項２に記載のゲーム装置。
【請求項５】
前記マップは、複数種類のオブジェクトのうちからゲームの進行に応じて選択されたオブジェクトを所定の位置に配置するオブジェクト配置マップを含み、
前記マップ関連データは、前記オブジェクト配置マップの前記所定の位置に配置されたオブジェクトの種類を示すデータを含み、
前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すオブジェクト配置マップの前記所定の位置において

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、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されている種類のオブジェクトが配置されていないときに、該種類のオブジェクトを前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すオブジェクト配置マップの前記所定の位置に配置するオブジェクト配置手段を含む

ことを特徴とする請求項２に記載のゲーム装置。

【請求項６】

前記マップは、複数の領域に分かれて形成され、当該ゲーム装置でのゲームの進行における獲得ポイントと他のゲーム装置でのゲームの進行における獲得ポイントとが各領域に設定されるとともに、領域毎の獲得ポイントに応じて何れかのゲーム装置側に支配権が付与される複数領域マップを含み、

前記マップ関連データは、前記複数領域マップの各領域に対して当該ゲーム装置及び前記他のゲーム装置でのゲームの進行における獲得ポイントと、支配権を獲得しているゲーム装置とを示すデータとを含み、

前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す複数領域マップの領域毎の前記他のゲーム装置の獲得ポイントを、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示す前記他のゲーム装置の獲得ポイントに更新し、該更新した他のゲーム装置の獲得ポイントに応じて前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す複数領域マップの領域毎の支配権を更新する領域別更新手段を含む

ことを特徴とする請求項２に記載のゲーム装置。

【請求項７】

プレイヤによる入力装置の操作に従って、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記受信後データ更新手段により更新させることを可能とするゲームデータを、前記他のゲーム装置からゲームデータを受信する前に予め指定する更新可能データ指定手段と、

前記更新可能データ指定手段によって指定されたゲームデータを示す情報を記憶する更新可能データ記憶手段とをさらに備え、

前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記更新可能データ記憶手段に記憶されている情報に応じたゲームデータを、前記他のゲーム装置から受信したゲームデータに基づいて更新する

ことを特徴とする請求項１乃至６のいずれか１項に記載のゲーム装置。

【請求項８】

前記ゲームデータ受信手段が前記他のゲーム装置から受信したゲームデータを、前記ゲームデータ記憶手段に記憶されているゲームデータとは別に記憶する受信データ記憶手段と、

プレイヤによる入力装置の操作に従って、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記受信後データ更新手段により更新させることを可能とするゲームデータを、前記他のゲーム装置からゲームデータを受信した後に指定する更新可能データ指定手段とをさらに備え、

前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記更新可能データ指定手段により指定されたゲームデータを、前記受信データ記憶手段に記憶されているゲームデータに基づいて更新する

ことを特徴とする請求項１乃至７のいずれか１項に記載のゲーム装置。

【請求項９】

前記ゲームを起動したときにおいて、該ゲーム装置の状態を、前記ゲーム進行手段によるゲームの進行は不可能とするが少なくとも前記ゲームデータ受信手段による前記他のゲーム装置からのゲームデータの受信は可能とする進行不能状態に制御する進行不能状態制御手段と、

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プレイヤによる入力装置の操作に従って、前記進行不能状態において所定の秘匿性のある情報が入力されたときに、該進行不能状態から前記ゲーム進行手段によるゲームの進行を可能とする進行可能状態に制御する進行可能状態制御手段とをさらに備える
ことを特徴とする請求項１乃至８のいずれか１項に記載のゲーム装置。
【請求項１０】
同一のゲームを実行する他のコンピュータ装置とは無関係に該ゲームを進行させることが可能であるとともに、前記他のコンピュータ装置と通信接続して該他のコンピュータ装置からデータを受信することが可能なコンピュータ装置を、
ゲームの進行状況を示す所定のゲームデータを記憶するゲームデータ記憶手段、
プレイヤによる入力装置の操作に従って、前記他のコンピュータ装置とは無関係に前記ゲームを進行するゲーム進行手段、
前記ゲーム進行手段によるゲームの進行結果に基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する進行時データ更新手段、
前記他のコンピュータ装置との通信接続により該他のコンピュータ装置において記憶されているゲームデータを受信するゲームデータ受信手、及び、
前記ゲームデータ受信手段が前記他のコンピュータ装置から受信したゲームデータに基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する受信後データ更新手段
として機能させることを特徴とするプログラム。
【発明の詳細な説明】
【技術分野】
【０００１】
本発明は、プレイヤによる入力装置の操作に従って他のゲーム装置とは無関係にゲームを進行させつつ、該他のゲーム装置におけるゲームの進行状況をゲームの進行に反映させるゲーム装置等に関する。
【背景技術】
【０００２】
従来より、複数のプレイヤでビデオゲームをプレイする場合の形態としては、単一のビデオゲーム装置に複数の入力装置を接続し、各プレイヤが別々の入力装置を操作して各々のプレイヤキャラクタを共通の仮想空間で行動させるものがある。また、複数のゲーム装置を、ネットワークを介して相互に通信接続させ、当該ゲーム装置を操作するプレイヤの協力によりゲームを進行させるネットワークゲームがある。
【０００３】
前者のタイプのゲームは、一般に、複数のプレイヤが同じ画面を見てゲームを進めるので、一人のプレイヤだけでゲームを進めるスタンドアロン型のゲームとゲーム性に大きな差異が生じない。そこで、各プレイヤが操作する入力装置に携帯ゲーム機を採用し、携帯ゲーム機が備える画面にプレイヤ独自のマップを表示すると共に、各プレイヤのプレイヤキャラクタが一定の条件の下に互いのマップを行き来することができるようにしたゲームがある（例えば、特許文献１参照）。
【０００４】
一方、後者のネットワークゲームは、スタンドアロン型のゲームとは全く異なるゲーム性を実現することができるものの、ゲームの進行において協力したり競争したりすることができるプレイヤは、同時にゲームをプレイしているプレイヤだけに限られる。そこで、各プレイヤの所持アイテムをサーバ装置に登録しておき、他のプレイヤからの支援を求めるプレイヤがサーバ装置に登録された他のプレイヤ（同時にプレイしていない者でもよい）の所持アイテムを利用できるようにして擬似的なネットワークゲームを実現するものがある（例えば、特許文献２参照）。
【０００５】
【特許文献１】特開２００４－３２９６６２号公報
【特許文献２】特許３８７３０７５号公報

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【発明の開示】
【発明が解決しようとする課題】
【０００６】
しかしながら、特許文献１のゲームでは、一般的なネットワークゲームと同様に複数のプレイヤによるプレイの同時性が求められる。一時的なゲームの中断はあっても、ゲームの進行のためには、他のプレイヤが入力装置として使用する携帯ゲーム機は起動状態になければならない。一方、特許文献２の疑似ネットワークゲームでは、複数のプレイヤによるプレイの同時性は求められないものの、サーバ装置を介在させる必要があるなど、一定規模のハードウェア資源を用意しなければならない。
【０００７】
本発明は、比較的小規模なハードウェア構成であっても、他のプレイヤとは基本的に無関係にゲームを進めるスタンドアロン型のゲームで、他のプレイヤによるゲームの進行結果を反映させるネットワークゲームに類似したゲーム性を実現することができるゲーム装置を提供することを目的とする。
【課題を解決するための手段】
【０００８】
上記目的を達成するため、本発明の第１の観点にかかるゲーム装置は、同一のゲームを実行する他のゲーム装置とは無関係に該ゲームを進行させることが可能であるとともに、前記他のゲーム装置と通信接続して該他のゲーム装置からデータを受信することが可能なゲーム装置であって、ゲームの進行状況を示す所定のゲームデータを記憶するゲームデータ記憶手段と、プレイヤによる入力装置の操作に従って、前記他のゲーム装置とは無関係に前記ゲームを進行するゲーム進行手段と、前記ゲーム進行手段によるゲームの進行結果に基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する進行時データ更新手段と、前記他のゲーム装置との通信接続により該他のゲーム装置において記憶されているゲームデータを受信するゲームデータ受信手段と、前記ゲームデータ受信手段が前記他のゲーム装置から受信したゲームデータに基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する受信後データ更新手段とを備えることを特徴とする。
【０００９】
上記ゲーム装置は、同一のゲームを実行する他のゲーム装置とは無関係に（同時性を要することなく）ゲームを進行させることが可能なものとなっている。ここで、ゲームの進行状況を示す所定のゲームデータがゲームデータ記憶手段に記憶されるが、このゲームデータ記憶手段に記憶されているゲームデータは、他のゲーム装置とは無関係にプレイヤによる入力装置の操作に従って進行されたゲームの進行結果に基づいて更新される。そして、上記ゲーム装置は、他のゲーム装置とは無関係に、同時性を要することなくゲームを進めていても、無関係にゲームが進められている他のゲーム装置からデータを受信することができ、他のゲーム装置から受信したゲームデータに基づいても、ゲームデータ記憶手段に記憶されているゲームデータが更新される。
【００１０】
これにより、基本的には他のゲーム装置とは無関係にゲームを進行させるスタンドアロン型のゲームで、他のプレイヤ（他のゲーム装置でゲームを行うプレイヤ）によるゲームの進行結果を反映させるネットワークゲームに類似したゲーム性を実現することが可能となる。また、ゲームの進行にサーバ装置を介在させる必要がない（サーバ装置を介してゲーム装置同士が通信接続されるにしても、データの送受信を仲介する役割だけを担うのであって、ゲームの進行に特有の役割を担うことはない）ので、比較的小規模なハードウェア構成で複数のプレイヤによるゲームの進行を擬似的に実現することができるものとなる。
【００１１】
なお、上記ゲーム装置は、前記ゲームデータ受信手段により前記他のゲーム装置からゲームデータを受信するときに、前記ゲームデータ記憶手段に記憶されているゲームデータを該他のゲーム装置に送信するゲームデータ送信手段をさらに備えるものとしてもよい。

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前記ゲームデータ送信手段から送信されたゲームデータは、前記他のゲーム装置が備えるゲームデータ受信手段によって受信され、該他のゲーム装置が備えるゲームデータ記憶手段に記憶されているゲームデータを更新させるものとなる。

【００１２】

上記ゲーム装置において、前記ゲームデータは、前記ゲームが進行されるマップに関連するデータのうちで該ゲームの進行状況に応じて内容が異なるものとなるマップ関連データを含むものであってもよい。この場合において、前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されたゲームデータのうちの前記マップ関連データを、前記他のゲーム装置から受信したマップ関連データが示すゲームの進行状況に応じた内容に更新するものとすることができる。

【００１３】

この場合には、基本的には無関係にゲームを進行している他のゲーム装置から受信したゲームデータに含まれるマップ関連データが示す進行状況に応じた内容で上記ゲーム装置のゲームデータ記憶手段に記憶されているゲームデータに含まれるマップ関連データが更新され、マップの状況が変わってくることとなる。このようにゲームの進行状況を直接的に示すマップが他のゲーム装置でのゲームの進行状況に応じて変わることで、複数のプレイヤによりゲームが進められることの印象が強くなる。

【００１４】

上記ゲーム装置で前記ゲームデータが前記マップ関連データを含むものである場合において、前記マップは、前記他のゲーム装置において進行されるゲームと同じ形態で、プレイヤのゲームの進行を妨害するとともにゲームの進行状況に応じて状態が変化する妨害オブジェクトを初期状態においてマップ上の同じ位置に配置している共通マップを含み、前記マップ関連データは、前記妨害オブジェクトの状態を示すデータを含むものであってもよい。この場合には、前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す前記妨害オブジェクトの状態を、前記他のゲーム装置から受信したゲームデータに含まれるマップ関連データが示す前記妨害オブジェクトの状態に更新する妨害オブジェクト状態更新手段を含むものとすることができる。

【００１５】

この場合には、他のゲーム装置において進行されていたゲームでマップから妨害オブジェクトが排除されていれば、該他のゲーム装置から受信したゲームデータに含まれるマップ関連データに従って上記ゲーム装置のゲームデータ記憶手段に記憶されているゲームデータに含まれるマップ関連データにおける妨害オブジェクトの状態を、該妨害オブジェクトが排除された状態に更新させることもできる。これにより、上記ゲーム装置のプレイヤが妨害オブジェクトの攻略に手間取っても、他のゲーム装置のプレイヤの協力で妨害オブジェクトを排除してゲームを先に進行させることができるようになる。

【００１６】

なお、前記妨害オブジェクト状態更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す前記妨害オブジェクトの状態よりも、前記他のゲーム装置から受信したゲームデータに含まれるマップ関連データが示す前記妨害オブジェクトの状態の方がプレイヤのゲーム進行にとって有利な状態となっているときに、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す前記妨害オブジェクトの状態を更新するものとすることができる。

【００１７】

ここで、前記マップは、前記他のゲーム装置において進行されるゲームと同じ形態で、該マップの所定の位置に何らのオブジェクトも配置しない状態でゲームの進行が妨害され、ゲームの進行に応じて所定のオブジェクトを所定の位置に配置することで進行の妨害が解除されることとなる共通マップを含むものであってもよい。この場合、何らのオブジェクトも配置されていない状態が前記妨害オブジェクトの配置された状態とも考えることができる。

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【００１８】
上記ゲーム装置で前記ゲームデータが前記マップ関連データを含むものである場合において、前記マップは、同一のゲームを実行していてもゲーム装置毎に異なる形態のものが生成されるダンジョンマップを含み、前記マップ関連データは、前記ダンジョンマップの形態を示すデータを含むものであってもよい。この場合には、前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すダンジョンマップに、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すダンジョンマップを結合し、該結合したダンジョンマップを示すマップ関連データを、前記ゲームデータ記憶手段に新たに記憶させるダンジョンマップ結合手段を含むものとすることができる。

【００１９】
この場合には、上記ゲーム装置と他のゲーム装置とでは異なる形態のダンジョンマップが生成されることとなるが、該他のゲーム装置から受信したゲームデータに含まれるマップ関連データが示すダンジョンマップを、上記ゲーム装置で生成されたダンジョンマップに結合させることができる。このようにダンジョンマップが結合されることで、ゲームにおける攻略要素を増やしたり、攻略を容易にしたりすることができるようになり、ゲームの進行の幅を広げることができる。

【００２０】
なお、前記ダンジョンマップの結合とは、例えば、自らのゲーム装置において生成されたダンジョンマップを、前記他のゲーム装置において生成されたダンジョンマップと（所定の通路などを形成することで）繋げ、ダンジョンマップ全体の大きさを拡張することであってもよい。一方、ゲーム装置間でダンジョンマップの大きさは変わらないが、それぞれに異なる形態の道が形成されることとなるダンジョンマップでは、自らのゲーム装置において生成されたダンジョンマップを、前記他のゲーム装置において生成されたダンジョンマップと重ね、ダンジョンマップ上の道を増やすことであってもよい。

【００２１】
上記ゲーム装置で前記ゲームデータが前記マップ関連データを含むものである場合において、前記マップは、複数種類のオブジェクトのうちからゲームの進行に応じて選択されたオブジェクトを所定の位置に配置するオブジェクト配置マップを含み、前記マップ関連データは、前記オブジェクト配置マップの前記所定の位置に配置されたオブジェクトの種類を示すデータを含むものであってもよい。この場合には、前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すオブジェクト配置マップの前記所定の位置において、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されている種類のオブジェクトが配置されていないときに、該種類のオブジェクトを前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すオブジェクト配置マップの前記所定の位置に配置するオブジェクト配置手段を含むものとすることができる。

【００２２】
この場合には、ゲーム装置毎にオブジェクト配置マップにオブジェクトを配置していくが、他のゲーム装置から受信したゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されているオブジェクトを、上記ゲーム装置のオブジェクト配置マップにも配置させることができる。これにより、オブジェクト配置マップへのオブジェクトの配置を，基本的には無関係にゲームを進めている複数のゲーム装置のプレイヤが協力して行うことができるようになる。

【００２３】
なお、前記オブジェクト配置手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されていたオブジェクトとは異なる種類のオブジェクトが、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されている場

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合には、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されている種類のオブジェクトを配置しなくてもよい。或いは、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されていたオブジェクトに代えて、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されている種類のオブジェクトを配置してもよい。或いは、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されていたオブジェクトに加えて、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示すオブジェクト配置マップに配置されている種類のオブジェクトをも配置してもよい。

【００２４】

上記ゲーム装置で前記ゲームデータが前記マップ関連データを含むものである場合において、前記マップは、複数の領域に分かれて形成され、当該ゲーム装置でのゲームの進行における獲得ポイントと他のゲーム装置でのゲームの進行における獲得ポイントとが各領域に設定されるとともに、領域毎の獲得ポイントに応じて何れかのゲーム装置側に支配権が付与される複数領域マップを含み、前記マップ関連データは、前記複数領域マップの各領域に対して当該ゲーム装置及び前記他のゲーム装置でのゲームの進行における獲得ポイントと、支配権を獲得しているゲーム装置とを示すデータとを含むものであってもよい。この場合には、前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す複数領域マップの領域毎の前記他のゲーム装置の獲得ポイントを、前記ゲームデータ受信手段が受信したゲームデータに含まれるマップ関連データが示す前記他のゲーム装置の獲得ポイントに更新し、該更新した他のゲーム装置の獲得ポイントに応じて前記ゲームデータ記憶手段に記憶されていたゲームデータに含まれるマップ関連データが示す複数領域マップの領域毎の支配権を更新する領域別更新手段を含むものとすることができる。

【００２５】

この場合には、上記ゲーム装置と他のゲーム装置とで無関係にゲームを進行して複数領域マップの領域毎の獲得ポイントを得ていくが、通信接続によりゲームデータを送受信する度に領域毎に支配権を得ているゲーム装置を更新することができるようになる。これにより、基本的には無関係にゲームを進めている複数のゲーム装置のプレイヤが各領域の支配権を獲得するというゲームにおける競争を実現することができる。

【００２６】

上記ゲーム装置は、プレイヤによる入力装置の操作に従って、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記受信後データ更新手段により更新させることを可能とするゲームデータを、前記他のゲーム装置からゲームデータを受信する前に予め指定する更新可能データ指定手段と、前記更新可能データ指定手段によって指定されたゲームデータを示す情報を記憶する更新可能データ記憶手段とをさらに備えていてもよい。この場合において、前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記更新可能データ記憶手段に記憶されている情報に応じたゲームデータを、前記他のゲーム装置から受信したゲームデータに基づいて更新するものとすることができる。

【００２７】

この場合には、上記ゲーム装置のゲームデータ記憶手段に記憶されているゲームデータのうちでゲーム装置から受信したゲームデータに従って更新されるのは、上記ゲーム装置のプレイヤが予め指定したものに限られる。これにより、他のゲーム装置からのゲームデータを受信してしまったがために、プレイヤが攻略を楽しんでいた要素が攻略されてしまっている等といった不測の事態が生じるのを防ぐことができる。

【００２８】

上記ゲーム装置は、前記ゲームデータ受信手段が前記他のゲーム装置から受信したゲームデータを、前記ゲームデータ記憶手段に記憶されているゲームデータとは別に記憶する

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受信データ記憶手段と、プレイヤによる入力装置の操作に従って、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記受信後データ更新手段により更新させることを可能とするゲームデータを、前記他のゲーム装置からゲームデータを受信した後に指定する更新可能データ指定手段とをさらに備えていてもよい。この場合において、前記受信後データ更新手段は、前記ゲームデータ記憶手段に記憶されているゲームデータのうちで前記更新可能データ指定手段により指定されたゲームデータを、前記受信データ記憶手段に記憶されているゲームデータに基づいて更新するものとすることができる。

【００２９】

この場合には、上記ゲーム装置のゲームデータ記憶手段に記憶されているゲームデータのうちでゲーム装置から受信したゲームデータに従って更新されるのは、該ゲームデータの受信後に上記ゲーム装置のプレイヤが指定したものに限られる。これにより、他のゲーム装置からのゲームデータを受信してしまったがために、プレイヤが攻略を楽しんでいた要素が攻略されてしまっている等といった不測の事態が生じるのを防ぐことができる。また、プレイヤが自ら攻略しようと思っていた要素であったか、他のゲーム装置のプレイヤが既に攻略していた要素であれば、それを反映させてゲームを先に進行させようという選択を行うことも可能になる。

【００３０】

上記ゲーム装置は、前記ゲームを起動したときにおいて、該ゲーム装置の状態を、前記ゲーム進行手段によるゲームの進行は不可能とするが少なくとも前記ゲームデータ受信手段による前記他のゲーム装置からのゲームデータの受信は可能とする進行不能状態に制御する進行不能状態制御手段と、プレイヤによる入力装置の操作に従って、前記進行不能状態において所定の秘匿性のある情報が入力されたときに、該進行不能状態から前記ゲーム進行手段によるゲームの進行を可能とする進行可能状態に制御する進行可能状態制御手段とをさらに備えるものとすることができる。

【００３１】

この場合には、所定の秘匿性のある情報を入力しなければ進行可能状態とはならないので、他のプレイヤが上記ゲーム装置で勝手にゲームを進行してしまうことはない。もっとも、ゲームを進行することはできなくても、他のゲーム装置のプレイヤが上記ゲーム装置を起動して該他のゲーム装置からのゲームデータを上記ゲーム装置に受信させることはできる。これにより、例えば、生活時間の異なる者同士が基本的には個別にゲームを行う者の、ゲームの協力プレイ（或いは、対戦プレイ）を行うことができるようになる。

【００３２】

この場合において、前記受信後データ更新手段は、前記進行不能状態に制御されているときにおいて前記ゲームデータ受信手段により前記他のゲーム装置からゲームデータを受信した場合に、前記進行可能状態に制御されるのを待つことなく該進行不能状態のまま該受信したゲームデータに基づいて前記ゲームデータ記憶手段に記憶されたゲームデータを更新する（前記更新可能データ指定手段によって更新させることを可能とするゲームデータが予め指定される場合には、該指定されたゲームデータのみを更新する）ものとしてもよい。

【００３３】

一方、前記進行不能状態に制御されているときには、前記ゲームデータ受信手段による前記他のゲーム装置からのゲームデータを受信し、前記ゲーム装置が備える受信データ記憶手段に記憶させることのみを可能とするものとしてもよい。この場合、前記受信後データ更新手段は、前記進行不能状態から前記進行可能状態に制御されたときに、前記受信データに記憶されているゲームデータに基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新するものとしてもよい。

【００３４】

上記目的を達成するため、本発明の第２の観点にかかるプログラムは、同一のゲームを実行する他のコンピュータ装置とは無関係に該ゲームを進行させることが可能であるとともに、前記他のコンピュータ装置と通信接続して該他のコンピュータ装置からデータを受

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信することが可能なコンピュータ装置を、ゲームの進行状況を示す所定のゲームデータを記憶するゲームデータ記憶手段、プレイヤによる入力装置の操作に従って、前記他のコンピュータ装置とは無関係に前記ゲームを進行するゲーム進行手段、前記ゲーム進行手段によるゲームの進行結果に基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する進行時データ更新手段、前記他のコンピュータ装置との通信接続により該他のコンピュータ装置において記憶されているゲームデータを受信するゲームデータ受信手、及び、前記ゲームデータ受信手段が前記他のコンピュータ装置から受信したゲームデータに基づいて、前記ゲームデータ記憶手段に記憶されたゲームデータを更新する受信後データ更新手段として機能させることを特徴とする。

【００３５】

上記第２の観点にかかるプログラムは、コンピュータ読み取り可能な記録媒体に記録して提供することができる。このコンピュータ読み取り可能な記録媒体は、上記コンピュータ装置に着脱可能に構成され、上記コンピュータ装置とは別個に提供される記録媒体としてもよい。このコンピュータ読み取り可能な記録媒体は、上記コンピュータ装置内に設けられ、上記コンピュータ装置と共に提供される固定ディスク装置などの記録媒体としてもよい。上記第２の観点にかかるプログラムは、ネットワーク上に存在するサーバ装置から、そのデータ信号を搬送波に重畳して、ネットワークを通じて上記コンピュータ装置に配信することもできる。

【発明を実施するための最良の形態】

【００３６】

以下、添付図面を参照して、本発明の実施の形態について説明する。

【００３７】

図１は、このゲームシステムの実施の形態に適用されるゲーム装置１の構成を示す外観図である。ここでは、ゲーム装置１の一例として、携帯ゲーム装置を示す。図１において、ゲーム装置１は、２つの液晶表示器（ＬＣＤ）１１及び１２を所定の配置位置となるように、ハウジング１８に収納して構成される。

【００３８】

第１液晶表示器（以下、「ＬＣＤ」とする）１１及び第２ＬＣＤ１２を互いに上下に配置して収納する場合は、ハウジング１８が下部ハウジング１８ａ及び上部ハウジング１８ｂから構成され、上部ハウジング１８ｂが下部ハウジング１８ａの上辺の一部で回動自在に支持される。上部ハウジング１８ｂは、第１ＬＣＤ１１の平面形状よりも少し大きな平面形状を有し、一方主面から第１ＬＣＤ１１の表示画面を露出するように開口部が形成される。下部ハウジング１８ａは、その平面形状が上部ハウジング１８ｂよりも横長に選ばれ、横方向の略中央部に第２ＬＣＤ１２の表示画面を露出する開口部が形成され、第２ＬＣＤ１２を挟む何れか一方にスピーカ１５の音抜き孔が形成されるとともに、第２ＬＣＤ１２を挟む左右に操作スイッチ部１４が装着される。

【００３９】

操作スイッチ部１４は、第２ＬＣＤ１２の右横における下部ハウジング１８ａの一方主面に装着される動作スイッチ（以下、「Ａボタン」とする）１４ａ及び動作スイッチ（以下、「Ｂボタン」とする）１４ｂと、第２ＬＣＤ１２の左横における下部ハウジング１８ａの一方主面に装着される方向指示スイッチ１４ｃと、スタートスイッチ１４ｄと、セレクトスイッチ１４ｅと、側面スイッチ１４ｆ及び１４ｇとを含む。

【００４０】

Ａボタン１４ａ及びＢボタン１４ｂは、所定の指示を入力するために用いられる。方向指示スイッチ１４ｃは、プレイヤによって操作スイッチ部１４を用いて操作可能なプレイヤオブジェクト（この実施の形態では、キャラクタ）やカーソルなどの移動方向を入力するために用いられる。方向指示スイッチ１４ｃは、十字キーにより構成され、上下左右の合計４方向の入力を行うことができる（以下、方向指示スイッチ１４ｃは、「十字キー１４ｃ」とする）。側面スイッチ（以下、「Ｌボタン」とする）１４ｆ及び側面スイッチ（以下、「Ｒボタン」とする）１４ｇは、下部ハウジング１８ａにおける上部面（上部側面

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）の左右に設けられる。

【００４１】

第２ＬＣＤ１２の上面には、タッチパネル１３（図１における破線領域）が装着される。タッチパネル１３は、例えば、抵抗膜方式，光学式（赤外線方式），静電容量結合式の何れの種類でもよく、その上面をスティック１６（または指でも可）で押圧操作、移動操作、または撫でる操作をしたとき、スティック１６の座標位置を検出して出力するものである。タッチパネル１３は、所定の指示を入力するために用いられる。

【００４２】

上部ハウジング１８ｂの側面近傍には、必要に応じてタッチパネル１３を操作するスティック１６を収納するための収納孔（図１における二点破線領域）が形成される。この収納孔には、スティック１６が収納される。下部ハウジング１８ａの側面の一部には、ゲームプログラムを記憶したメモリ（例えば、ＲＯＭ）を内蔵したゲームカートリッジ１７（以下，単にカートリッジ１７と記載する）を着脱自在に装着するためのカートリッジ挿入部（図１における一点破線領域）が形成される。カートリッジ１７は、ゲームプログラムを記憶する情報記憶媒体であり、例えば、ＲＯＭまたはフラッシュメモリのような不揮発性半導体メモリが用いられる。カートリッジ挿入部の内部には、カートリッジ１７と電気的に接続するためのコネクタ（図２参照）が内蔵される。さらに、下部ハウジング１８ａ（または上部ハウジング１８ｂでも可）には，ＣＰＵ等の各種電子部品を実装した電子回路基板が収納される。

【００４３】

次に、ゲーム装置１の回路構成について説明する。図２は、ゲーム装置１の回路構成を示すブロック図である。図２において、ハウジング１８に収納される電子回路基板には、ＣＰＵコア２１が実装される。ＣＰＵコア２１には、所定のバスを介して、カートリッジ１７と接続するためのコネクタ２８が接続されるとともに、入出力インターフェース（Ｉ／Ｆ）回路２７、第１のグラフィック処理ユニット（第１ＧＰＵ）２４、第２のグラフィック処理ユニット（第２ＧＰＵ）２６、ワーキングＲＡＭ（ＷＲＡＭ）２２、及び通信ポート２９が接続される。

【００４４】

コネクタ２８には、カートリッジ１７が着脱自在に接続される。カートリッジ１７は、上述したようにゲームプログラムを格納するための記憶媒体であり、具体的には、ゲームプログラムを記憶するＲＯＭ１７１とバックアップデータを書き換え可能に記憶するＲＡＭ１７２とを搭載する。カートリッジ１７のＲＯＭ１７１に記憶されたゲームプログラムは、ＷＲＡＭ２２にロードされ，当該ＷＲＡＭ２２にロードされたゲームプログラムがＣＰＵコア２１によって実行される。ＣＰＵコア２１がゲームプログラムを実行して得られる一時的なデータや画像を生成するためのデータがＷＲＡＭ２２に記憶される。ＲＯＭ１７１には、ゲーム装置１のコンピュータ、特にＣＰＵコア２１によって実行可能な形式の命令群及びデータ群であるゲームプログラムが記録される。そして、このゲームプログラムは、ＷＲＡＭ２２に適宜読み込まれ実行される。

【００４５】

第１ＧＰＵ２４には、第１ビデオＲＡＭ（以下「ＶＲＡＭ」）２３が接続され、第２ＧＰＵ２６には、第２のビデオＲＡＭ（以下「ＶＲＡＭ」）２５が接続される。第１ＧＰＵ２４は、ＣＰＵコア２１からの指示に応じて、ＷＲＡＭ２２に記憶される画像を生成するためのデータに基づいて第１ゲーム画像を生成し、第１ＶＲＡＭ２３に描画する。第２ＧＰＵ２６は、ＣＰＵコア２１からの指示に応じて，ＷＲＡＭ２２に記憶される画像を生成するためのデータに基づいて第２ゲーム画像を生成し、第２ＶＲＡＭ２５に描画する。第１ＶＲＡＭ２３、第２ＶＲＡＭ２５は、それぞれ２フレーム分用意され、画データの展開用と画像データの読み出し用が１フレーム期間毎に交互に切り替えられる。

【００４６】

第１ＧＰＵ２４が第１ＬＣＤ１１に接続され、第２ＧＰＵ２６が第２ＬＣＤ１２に接続される。第１ＧＰＵ２４は、ＣＰＵコア２１からの指示に応じて第１ＶＲＡＭ２３に描画

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された第１ゲーム画像を第１ＬＣＤ１１に出力する。そして、第１ＬＣＤ１１は、第１ＧＰＵ２４から出力された第１ゲーム画像を表示する。第２ＧＰＵ２６は、ＣＰＵコア２１からの指示に応じて第２ＶＲＡＭ２５に描画された第２ゲーム画像を第２ＬＣＤ１２に出力する。そして、第２ＬＣＤ１２は、第２ＧＰＵ２６から出力された第２ゲーム画像を表示する。

【００４７】

Ｉ／Ｆ回路２７には、タッチパネル１３、操作スイッチ部１４、及びスピーカ１５が接続される。Ｉ／Ｆ回路２７は、タッチパネル１３，操作スイッチ部１４、及びスピーカ１５等の外部入出力装置とＣＰＵコア２１との間のデータの受け渡しを行う回路である。スピーカ１５は、上述した音抜き孔の内側位置に配置され、実行中のゲームに応じて生成される音声を出力する。

【００４８】

タッチパネル１３（タッチパネル用のデバイスドライバを含む）は、第２ＶＲＡＭ２５の座標系に対応する座標系を有し、スティック１６等によって入力（指示）された位置に対応する座標データをＷＲＡＭ２２に設けられる所定のレジスタに出力するものである。例えば、第２ＬＣＤ１２の表示画面の解像度は２５６ｄｏｔ×１９２ｄｏｔであり、タッチパネル１３の検出精度も表示画面に対応した２５６ｄｏｔ×１９２ｄｏｔである。なお、タッチパネル１３の検出精度は、第２ＬＣＤ１２の表示画面の解像度よりも低いものであってもよいし、高いものであってもよい。

【００４９】

通信ポート２９は、他のゲーム装置、据え置き型ゲーム機、或いはサーバ装置などの外部装置と情報を送受信する。なお、ゲーム装置１は、通信ポート２９から所定エリア内にある他のゲーム装置とピアツーピア（Peer-to-Peer）で接続し、情報を送受信することができる。つまり、所定エリア内にある複数のゲーム装置間では、サーバーを介さずに通信を行うことができる。

【００５０】

ここで、以下において、ゲーム装置１の状態及びゲームの進行等における説明を簡易化するために、当該ゲームは，一人のプレイヤ（以下，「自プレイヤ」とする）によって操作される当該ゲーム装置１（以下、「自ゲーム装置１－１」とする）、及び他のプレイヤ（以下、「他プレイヤ」とする）によって操作されるゲーム装置１（以下，「他ゲーム装置１－２」とする）の二者間によって行われるものとして説明する。また、通信接続に係る説明以外においては、ゲーム装置１－１のみに係る情報及び処理等について説明をするが、自ゲーム装置１－１及び他ゲーム装置１－２のそれぞれで、情報，及び処理に係る構成が異なるものではない。

【００５１】

次に、図３において、装置の状態（３０１～３０３）の遷移の図を示して、それぞれの状態に関しての説明をする。自ゲーム装置１－１及び他ゲーム装置１－２においてゲームが実行されるにあたって、まず、自プレイヤ及び他プレイヤによって、電源の入っていない状態（以下、「ＯＦＦ状態」とする）（３０１）にある，それぞれのゲーム装置１に電源を入れるための操作がなされる。それぞれのゲーム装置１に電源が入ると、入力操作に関してはパスワードの入力のみが可能な状態（以下、「装置起動状態」とする）（３０２）へと遷移され，この状態から電源を遮断することで，再びＯＦＦ状態へと遷移することもできる。装置起動状態においては、他のゲーム装置１との通信接続は可能であるものの、当該装置起動状態にあるゲーム装置１を操作することによって、他のゲーム装置１と通信接続することはできない。

【００５２】

一方，ゲーム装置１においてゲームが実行されるための状態（以下，「ログイン状態」とする）（３０３）への遷移は、装置起動状態にあるゲーム装置１において、プレイヤによって操作スイッチ部１４からパスワードの入力操作がなされることで可能となる。このパスワードは、当該ゲーム装置１を操作する自プレイヤのみが知るものである。すなわち

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、他のプレイヤは、当該ゲーム装置１の電源を入れることはできるが、当該ゲーム装置１をログイン状態へと遷移させることはできないことになる。ログイン状態においては、プレイヤの操作により、ゲーム進行がされ、他のゲーム装置１との通信接続も確立することができるようになる。ログイン状態にあるゲーム装置１は、プレイヤによるログオフ操作によって、再び装置起動状態へと遷移することができる。図示するように、通信接続が可能な、装置起動状態またはログイン状態にある、自ゲーム装置１－１及び他ゲーム装置１－２（ただし、一方は必ずログイン状態になければならない）において、通信接続がされ、ゲームに係る情報を相互に交換することで、他ゲーム装置１－２に係るゲームの進行状況が自ゲーム装置１－１で実行されるゲームの進行状況へと反映されることとなる。

【００５３】

続いて、自ゲーム装置１－１において実行されるゲームについて、図４にゲームの流れを模式的に表した図を示して以下に説明する。自ゲーム装置１－１で実行される当該ゲームは、ＲＰＧ（Role Playing Game）であり、自プレイヤによる操作スイッチ部１４の操作によって、１のプレイヤキャラクタが当該ゲームに係る仮想空間内において動作されることになる。まず初めに、自プレイヤは、装置起動状態（３０２）におけるパスワードの入力（３０４）によりログイン状態となった自ゲーム装置１－１において、進行させるゲームを選択することになる（３０５）。この選択において、自プレイヤは、自ゲーム装置１－１において進行させるゲームとして、他ゲーム装置１－２においても当初の構成が同じである仮想空間（以下、「共通仮想空間」とする）でのゲーム進行（３０６）、あるいは、ダンジョンでのゲーム進行（３０７）のどちらでゲームを進行させるかを選択することになる。

【００５４】

ここで共通仮想空間について、図５（ａ）に、その模式的な図を示して詳述する。図５（ａ）に示すように、共通仮想空間４０１は、その共通仮想空間４０１の入り口である入り口４０４から、その出口である出口４０５に至るまでに、プレイヤキャラクタの移動を阻むこととなる、鍵のかかっている扉（以下、「鍵付き扉」とする）４０３、及び敵キャラクタ４０２を、仮想空間の所定の位置に配置してある。このような各種の構成は、他ゲーム装置１－２においても同様のものとなる。

【００５５】

ただし、このようにプレイヤキャラクタの移動を阻むものとして配置される、共通仮想空間４０１の構成としての鍵付き扉４０３及び敵キャラクタ４０２について、ゲーム装置１を操作するプレイヤによっては、どの鍵付き扉４０３を解錠するか、あるいは、どの敵キャラクタ４０２を倒すかは異なるものとなる。よって、プレイヤによるゲームの進行状況は、各ゲーム装置１間では異なるものとなる。

【００５６】

続いてダンジョンについて、図５（ｂ）に、その模式的な図を示して詳述する。ダンジョンは、図５（ｂ）に示すように、階層４１１を直列的に繋いだ、階層構造を成すものである。ダンジョンには、図５（ｂ）に示すように、プレイヤキャラクタ４１２がそれまで移動したことない階層４１１へと移動する度に、ユニークな構成となる仮想空間、及びそこに存在することとなる敵キャラクタ、及び、施設４１３を生成するものである。このように、プレイヤがゲームを進行させた結果、それぞれのゲーム装置１に係るダンジョンの仮想空間の構成は、異なるものとなり、ゲームの進行状況もまた異なるものとなる。

【００５７】

ここで、施設４１３とは、例えば、図５（ｂ）に示される、自ゲーム装置１－１のダンジョンにおける、３Ｆ階層４１１の採掘場、あるいは、他ゲーム装置１－２のダンジョンにおける、２Ｆ階層４１１の必殺技道場といった、複数種類のものがあり、ゲームにおいて、プレイヤキャラクタ４１２に与える役割及び効果もそれぞれ異なるものとなる。その役割及び効果とは、採掘場においては、自プレイヤに係るプレイヤキャラクタ４１２（以下、「自プレイヤキャラクタ４１２－１」とする。また、他プレイヤに係るプレイヤキャラクタ４１２については、「他プレイヤキャラクタ４１２－２」とする。）に対し、直接

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的に効果を表すものではないが、他のアイテムとの組み合わせることで、より高い効果を表すことができるアイテムが得られる場所である。また、必殺技道場では、ゲームにおける、特に敵キャラクタのバトルにおいて、顕著な効果を表すこととなる自プレイヤキャラクタ４１２－１の所定の動作を、許容させることが可能な場所である。

【００５８】

このように、自プレイヤ及び他プレイヤによるゲーム進行の結果、相互に異なる構成となった共通仮想空間４０１及びダンジョンは、自ゲーム装置１－１及び他ゲーム装置１－２において、通信接続を行い、それらの情報を交換することによって、それぞれの進行状況としての仮想空間における構成を、相互に反映させることができるようになる。また、通信接続時においては、プレイヤ相互間で、メッセージやアイテムの交換も可能となる。

【００５９】

次に、自ゲーム装置１－１において実行される当該ゲームの進行に係る情報である、ＷＲＡＭ２２に記憶される情報について以下に説明する。図６において示されるのは、自ゲーム装置１－１のＷＲＡＭ２２に記憶される、ゲームの進行に係る情報である。

【００６０】

自ゲーム装置１－１のＷＲＡＭ２２には、共通仮想空間４０１に係る情報として、敵キャラクタ情報５０１及び鍵付き扉情報５０２が記憶される。また、ダンジョンに関しての、自ゲーム装置１－１におけるダンジョン（以下、「自ダンジョン」とする）の各階層４１１に係る情報として、自ダンジョン階層情報５１１～５１４が、他ゲーム装置１－２におけるダンジョン（以下、「他ダンジョン」とする）の各階層４１１に係る情報として、他ダンジョン階層情報５２１～５２４が、自ダンジョンと他ダンジョンとを繋ぐ通路に関する情報として、通路情報５３１が、それぞれ記憶される。さらに、自ゲーム装置１－１のゲームにおいて、プレイヤキャラクタ４１２の所持しているアイテムに係る情報として、所持アイテム情報５４１が、それぞれ記憶されている。

【００６１】

またそれに加えて、他ゲーム装置１－２のゲームに係る共通仮想空間４０１及びダンジョンを、自ゲーム装置１－１のゲームにどのように反映させるかの選択に係る情報として、構成選択情報５５１が、他ゲーム装置１－２へ送信するためのメッセージに係る情報としてメッセージ情報５５２、譲渡するアイテムに係る情報として譲渡アイテム情報５５３が、それぞれ記憶される。他に、他ゲーム装置１－２のゲームに係る共通仮想空間４０１及びダンジョン等の、他ゲーム装置１－２から受信した情報を一時的に記憶するものとして、他ゲーム情報５６１もＷＲＡＭ２２に記憶される。以下、それぞれの情報について詳述する。

【００６２】

敵キャラクタ情報５０１は、共通仮想空間４０１において配置されている、敵キャラクタ４０２の存在の有無に関する情報であり、当該共通仮想空間４０１におけるゲーム進行において、敵キャラクタ４０２が倒されることによって更新される。また、鍵付き扉情報５０２は、共通仮想空間４０１において配置されている、鍵付き扉４０３が解錠されているか否かに関する情報であり、ゲーム進行において、それらが解錠される毎に更新される。

【００６３】

自ダンジョン階層情報５１１～５１４は、自ダンジョンに係る各階層４１１毎の構成に関する情報として記憶されており、プレイヤキャラクタ４１２がそれまで移動したことのない階層４１１へと移動することによって、自ダンジョン階層情報５１１～５１４における、当該階層４１１に応じた領域が更新されることになる。例えば、自ダンジョンにおける４Ｆの階層４１１が未移動であれば、当該階層４１１へプレイヤキャラクタ４１２が移動することで、４Ｆの階層４１１についての情報に係る自ダンジョン階層情報５１４が更新されることになる。

【００６４】

他ダンジョン階層情報５２１～５２４は、他ダンジョンに係る各階層４１１毎の構成に

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関する情報として記憶されており、他ゲーム装置１－２のゲームに係るダンジョンに関する情報を受信することにより更新される。

【００６５】

通路情報５３１は、自ダンジョンと他ダンジョンとが、どの階層４１１において繋がれているかについての情報を記憶しており、他ゲーム装置１－２から受信し、ＷＲＡＭ２２に記憶した、他ダンジョン階層情報５２１～５２４を自ダンジョンへと反映させ、同じ階層４１１を新たに繋ぐときに更新される。

【００６６】

所持アイテム情報５４１は、自プレイヤキャラクタ４１２－１が所持しているアイテムに関する情報として記憶されている。アイテムは、敵キャラクタを倒すことによって手に入れることができ、それによって所持アイテム情報５４１は更新されることになる。

【００６７】

構成選択情報５５１は、プレイヤによって入力された、反映のさせ方に係る情報である。構成選択情報５５１は、他ゲーム装置１－２におけるゲームに係る共通仮想空間４０１（以下、「他共通仮想空間４０１－２」とする）の構成を、自ゲーム装置１－１におけるゲームに係る共通仮想空間４０１（以下、「自共通仮想空間４０１－１」とする）の構成に対し、選択的にどのように反映させるか、並びに、自ダンジョン及び他ダンジョンを繋ぐ通路をどこに設置するかに関する情報として記憶されている。構成選択情報５５１についての詳細は後述する。

【００６８】

また、メッセージ情報５５２及び譲渡アイテム情報５５３は、通信接続時に他ゲーム装置１－２へ送信する情報である。メッセージ情報５５２は、メッセージに関する情報、譲渡アイテム情報５５３は、自プレイヤキャラクタ４１２－１の所持するアイテムの中から、他プレイヤキャラクタ４１２－２へ譲渡するために選択されたアイテムに関する情報として記憶されている。

【００６９】

他ゲーム情報５６１は、他ゲーム装置１－２のゲームに係るゲームの進行状況に関する情報（以下、「他ゲーム進行状況情報」とする）であって、通信接続時に他ゲーム装置１－２から受信され、当該通信接続時毎に更新される。また、他ゲーム情報５６１は、他ダンジョン階層情報５２１～５２４の更新の際、並びに他ゲーム情報５６１及び構成選択情報５５１を基にして、敵キャラクタ情報５０１及び鍵付き扉情報５０２の更新の際に参照される。

【００７０】

次に、ゲーム装置１間の通信接続時における情報の授受に関して説明する。自ゲーム装置１－１及び他ゲーム装置１－２は、通信接続されると、それぞれのＷＲＡＭ２２に記憶される、共通仮想空間４０１の構成に係る敵キャラクタ情報５０１及び鍵付き扉情報５０２（以下、「共通仮想空間構成情報」とする）、並びにダンジョンの構成に係る自ダンジョン階層情報５１１～５１４（以下、「ダンジョン構成情報」とする）を、相互に交換することになる。これに加えて、それぞれのプレイヤは、プレイヤキャラクタ４１２の所持するアイテムとして譲渡アイテム情報５５３、及び相手に読ませるためのメッセージとして、メッセージ情報５５２も交換することができる。これら共通仮想空間構成情報及びダンジョン構成情報は、ＷＲＡＭ２２の他ゲーム情報５６１として記憶され、それを基にして、自共通仮想空間４０１－１及び自ダンジョンに反映させることになるが、当該反映がどのようにされるかはプレイヤの入力操作により選択され決定される。

【００７１】

ただし、自ゲーム装置１－１が装置起動状態であるとき、プレイヤによるそのような選択はできないため、プレイヤが、どのような選択を所望するか、ログイン状態から装置起動状態へと状態を遷移させる前において、予め当該構成の選択（以下、「予約選択」とする）をして、ＷＲＡＭ２２の構成選択情報５５１に記憶させておく。また、この予約選択と共に、譲渡アイテム情報５５３及びメッセージ情報５５２も記憶させておくことができ

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る。そして，他ゲーム装置１－２との通信接続が確立したとき、共通仮想空間構成情報及びダンジョン構成情報，並びに、譲渡アイテム情報５５３及びメッセージ情報５５２を、他ゲーム装置１－２と交換し、その共通仮想空間構成情報及びダンジョン構成情報と、構成選択情報５５１に記憶される予約選択とから、自共通仮想空間４０１－１へ構成を反映させる。

【００７２】

次に、自共通仮想空間４０１－１及び自ダンジョンへの反映についてそれぞれ説明する。自共通仮想空間４０１－１への反映に関しては，自共通仮想空間４０１－１及び他共通仮想空間４０１－２における構成として、それぞれ共通仮想空間４０１におけるゲーム進行前において同様に配置されていた、敵キャラクタ４０２及び鍵付き扉４０３の、ゲーム進行後において変更されるものとなった、その存在の有無が反映されることになる。つまり、自共通仮想空間４０１－１において，他共通仮想空間４０１－２と構成において異なるものがあれば，敵キャラクタ４０２及び鍵付き扉４０３毎に反映されることになる。この反映においては、自プレイヤが所望する構成として選択したものが、反映させることとなる。

【００７３】

また、ダンジョンの反映に関しては、自ダンジョン及び他ダンジョンにおける、それぞれ同じ階層４１１が通路によって繋がることで行われる。つまり、ダンジョンの反映が行われた階層では，自ゲーム装置１－１において元々生成されたダンジョンに加えて他ゲーム装置１－２において生成されたダンジョンにもプレイヤキャラクタを移動させることができるようになり、ダンジョンの大きさが拡張されることとなる。なお、どの階層４１１が繋がれるかは、自プレイヤが所望するところの、選択により決定される。これら、共通仮想空間４０１及びダンジョンの反映に関しての具体例に付いては後述する。

【００７４】

他ゲーム装置１－２から他ゲーム進行情報を受信した時点では、プレイヤが予約選択して構成選択情報５５１に記憶されていた内容についてのみ、上記した共通仮想空間４０１及びダンジョンに対して他ゲーム進行情報に応じた反映が行われる。そして，自ゲーム装置１－１がログイン状態にあれば、反映に係る通信接続後において、当該反映される共通仮想空間４０１及びダンジョンの構成の反映のされ方に関して，どの構成を反映させるかを選択をすることになる。つまり、他ゲーム進行情報の受信時に反映されていなかった内容でも、プレイヤが後から他ゲーム進行情報に応じた反映を行いたいと操作スイッチ部の操作により選択した内容については、該選択に応じて事後の反映が行われる。

【００７５】

次に，自ゲーム装置１－１で実行される当該ゲームにおいてのＣＰＵコア２１の処理について、図７を参照しながら説明する。ここでは特に，共通仮想空間４０１及びダンジョンの反映、及びそれに係る情報の授受に関する処理について説明し、ゲーム進行処理については詳細な説明を省略する。

【００７６】

まず，図７（ａ）において示す，自ゲーム装置１－１で実行される、ＣＰＵコア２１の起動処理について説明する。自ゲーム装置１－１において，ゲームが起動されると、ＣＰＵコア２１は、ログイン状態へと遷移するための適正なパスワード入力が検出されたかどうかの判定を行う（ステップＳ１０１）。適正なパスワード入力が検出されたと判定されれば、ＣＰＵコア２１は、処理をメイン処理へと移す（ステップＳ１０２）。メイン処理におけるＣＰＵコア２１の処理の詳細については後述する。

【００７７】

ステップＳ１０１において、適正なパスワード入力が検出されたと判定されず，または、処理がメイン処理から戻れば，ＣＰＵコア２１は、他ゲーム装置１－２からの通信接続を確立するための情報が、自ゲーム装置１－１に有する通信ポート２９において、受信されたかどうかの判定を行う（ステップＳ１０３）。通信接続を確立するための情報が、受信されたと判定されれば、ＣＰＵコア２１は、処理を通信接続処理へと移す（ステップＳ

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１０４）。通信接続処理におけるＣＰＵコア２１の処理の詳細については後述する。

【００７８】

ステップＳ１０３において、通信接続を確立するための情報が受信されたと判定されず、または、処理がステップＳ１０４における通信接続処理から戻れば、ＣＰＵコア２１は、自ゲーム装置１－１において、起動処理を終了する旨の入力が検出されたかどうかの判定を行う（ステップＳ１０５）。起動処理を終了する旨の入力が検出されれば、ＣＰＵコア２１は、当該起動処理を終了し、そうでなければ再び処理をステップＳ１０１へと戻す。

【００７９】

次に、図７（ｂ）において示す、自ゲーム装置１－１で実行される、ＣＰＵコア２１のメイン処理について説明する。処理をメイン処理に移すと、ＣＰＵコア２１は、ＷＲＡＭ２２に記憶される他ゲーム情報５６１を反映させるための入力が検出されたかどうかの判定を行う（ステップＳ１１１）。反映させるための入力が検出されたと判定されれば、ＣＰＵコア２１は、処理を反映処理へと移す（ステップＳ１１２）。反映処理におけるＣＰＵコア２１の処理の詳細については後述する。

【００８０】

ステップＳ１１１において、反映させるための入力があったと判定されず、または、ステップＳ１１２における処理が反映処理から戻れば、ＣＰＵコア２１は、自プレイヤによる、他ゲーム装置１－２と通信接続の準備をするための入力が検出されたかどうかの判定を行う（ステップＳ１１３）。通信接続の準備をするための入力が検出されたと判定されれば、ＣＰＵコア２１は、自プレイヤに、他プレイヤに譲渡するアイテムの選択、及びメッセージの作成をさせ（ステップＳ１１４）、それらに係る情報（以下、「アイテム・メッセージ情報」とする）により、ＷＲＡＭ２２に記憶される譲渡アイテム情報５５３及びメッセージ情報５５２を、それぞれ更新する（ステップＳ１１５）。このときプレイヤによって、必ずしも、アイテムの選択、及び／またはメッセージの作成がそれぞれされる必要はなく、それらに代えて、他プレイヤに譲渡するアイテム、及びメッセージは無いとの情報により、ＷＲＡＭ２２に記憶されるアイテム情報５５３及びメッセージ情報５５２は、それぞれＮＵＬＬ値で更新される。

【００８１】

ステップＳ１１５において、アイテム・メッセージ情報が更新されれば、ＣＰＵコア２１は、自ゲーム装置１－１の通信ポート２９により、他ゲーム装置１－２との通信接続を確立するための情報を送信し、それが他ゲーム装置１－２において受信されたという情報を、他ゲーム装置１－２から受信することで、ゲーム装置１間の通信接続が確立される（ステップＳ１１６）。

【００８２】

ステップＳ１１３において、通信接続の準備をするための入力が検出されたと判定されなければ、ＣＰＵコア２１は、他ゲーム装置１－２からの通信接続を確立するための情報が、受信されたかどうかの判定を行う（ステップＳ１１７）。ステップＳ１１６において、通信接続が確立され、または、ステップＳ１１７において他ゲーム装置１－２からの通信接続を確立するための情報が受信されたと判定されれば、ＣＰＵコア２１は、処理を通信接続処理へと移す（ステップＳ１１８）。

【００８３】

ステップＳ１１７において、通信接続を確立するための情報が受信されたと判定されず、または、処理が通信接続処理から戻れば、ＣＰＵコア２１は、処理をゲーム進行処理へと移す（ステップＳ１１９）。処理がゲーム進行処理から戻れば、ＣＰＵコア２１は、自プレイヤによる、ゲームからログアウトするための入力が検出されたかどうかの判定を行う（ステップＳ１２０）。ログアウトするための入力が検出されたと判定されれば、ＣＰＵコア２１は、自プレイヤに、自共通仮想空間４０１－１及び自ダンジョンに係る構成の選択、及びアイテム・メッセージ情報を入力させ（ステップＳ１２１）、それらの情報によって、ＷＲＡＭ２２に記憶される構成選択情報５５１、メッセージ情報５５２及び譲渡

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アイテム情報５５３をそれぞれ更新し（ステップＳ１２２），処理を再びステップＳ１０３へと戻す。ステップＳ１２２においても、ステップＳ１１５同様、プレイヤによって、構成の選択、及びアイテム・メッセージ情報に係る入力が全てされる必要はなく、それらのうち，選択及び作成されなかったものに係る、ＷＲＡＭ２２に記憶される構成選択情報５５１、メッセージ情報５５２及び譲渡アイテム情報５５３は、ＮＵＬＬ値によって更新される。またステップＳ１２０において、ゲームからログアウトするための入力が検出されたと判定されなければ、ＣＰＵコア２１は、処理を再び起動処理（図７（ａ））へと戻す。

【００８４】

次に、図７（ｃ）において示す、自ゲーム装置１－１で実行される、ＣＰＵコア２１の通信接続処理について説明する（他ゲーム装置１－２においても同様の処理が実行されるため、他ゲーム装置１－２における通信接続処理についての説明は省略する）。処理が通信接続処理へと移ると、ＣＰＵコア２１は、通信ポート２９により、他ゲーム進行状況情報を受信し、かつ、他ゲーム装置１－２において、自ゲーム装置１－１におけるゲームの情報が受信されていることを確認する（ステップＳ１３１）。

【００８５】

続いて、ＣＰＵコア２１は、他ゲーム装置１－２から受信した、他ゲーム進行状況情報により，ＷＲＡＭ２２に記憶されるゲーム情報５６１を更新し、次いで、当該ゲーム情報５６１を基に他ダンジョン階層情報５２１～５２４を更新する（ステップＳ１３２）。続いて、ＣＰＵコア２１は、ＷＲＡＭ２２にメッセージ情報５５２及び譲渡アイテム情報５５３を送信し（ステップＳ１３３）、受信された他ゲーム装置１－２に係る譲渡アイテム情報５５３を基に、自ゲーム装置１－１に係る所持アイテム情報５４１を更新する（ステップＳ１３４）。また，受信された他ゲーム装置１－２に係るメッセージ情報５５２があれば、それは、自プレイヤにメッセージとして認識できるものとして、ＬＣＤ１１、１２に表示されることとなるが、その表示に係るＣＰＵコア２１の処理は、本発明と直接の関係がないため、詳細な説明は省略する。

【００８６】

ステップＳ１３４において、所持アイテム情報５４１が更新処理がされれば、ＣＰＵコア２１は、すでに他ゲーム装置１－２へ送信された、ＷＲＡＭ２２にメッセージ情報５５２及び譲渡アイテム情報５５３をＮＵＬＬ値によって更新し（ステップＳ１３５）、処理を反映処理へと移す（ステップＳ１３６）。

【００８７】

次に，図７（ｄ）において示す、自ゲーム装置１－１で実行される，ＣＰＵコア２１の反映処理について説明する。処理を反映処理へと移すと，ＣＰＵコア２１は、ＷＡＲＭ２２に，構成選択情報５５１に，構成の選択に係る情報が記憶されいるかどうか判定を行う（ステップＳ１４１）。構成選択情報５５１が記憶されていると判定されなければ，ＣＰＵコア２１は，自ゲーム装置１－１がログイン状態であるかどうかの判定を行う（ステップＳ１４２）。ログイン状態であると判定されれば，ＣＰＵコア２１は，プレイヤに，ステップＳ１３１において受信した他ゲーム情報５６１に含まれる、他共通仮想空間４０１－２の構成のうち，どの構成を自共通仮想空間４０１－１の構成へと反映させるかの選択をさせ（ステップＳ１４３），その選択に基づいてＷＲＡＭ２２に構成選択情報５５１を更新する（ステップＳ１４４）。

【００８８】

ステップＳ１４１において、構成選択情報５５１に、構成の選択に係る情報が記憶されていると判定され、または、ステップＳ１４４において、構成選択情報５５１が更新されれば，ＣＰＵコア２１は，当該構成選択情報５５１及び他ゲーム情報５６１を基に，ＷＲＡＭ２２に記憶されている敵キャラクタ情報５０１及び鍵付き扉情報５０２，並びに通路情報５３１を更新する（ステップＳ１４５）。当該更新に係る処理を終えれば，ＣＰＵコア２１は、ＷＲＡＭ２２に記憶される構成選択情報５５１をＮＵＬＬ値によって更新し（ステップＳ１４６），処理を再び通信接続処理（図７（ｃ））へと戻す。処理を通信接続

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処理へと戻せば、続いてＣＰＵコア２１は、処理をメイン処理（図７（ｂ））へと戻す。

【００８９】

次に、図８及び図９において、他ゲーム装置１－２との通信接続することで反映される、自ゲーム装置１－１に係る共通仮想空間４０１及びダンジョンについて、その具体的な共通仮想空間４０１及びダンジョンの模式図を示して説明する。

【００９０】

図８に示すのは、自共通仮想空間４０１－１及び他共通仮想空間４０１－２、並びにそれらを反映させた結果としての自共通仮想空間４０１－１を具体的に表した模式図である。図８（ａ）及び図８（ｂ）に示す共通仮想空間４０１は、図５（ａ）に示した、当初の共通仮想空間４０１から、それぞれのプレイヤがゲームを進行させることで、一部の鍵付き扉４０３が解錠され、一部の敵キャラクタ４０２が倒されことにより、それらが共通仮想空間４０１から存在しなくなった状態にあることがわかる。

【００９１】

ここで、自共通仮想空間４０１－１において、他共通仮想空間４０１－２から反映可能な構成は、鍵付き扉４０３－Ｂ及び敵キャラクタ４０２－Ａである。そして、敵キャラクタ４０２－Ｂの有無についても、異なる構成ではあるが、当該ゲームにおいて、自共通仮想空間４０１－１においては、他共通仮想空間４０１－２に存在する当該的キャラクタ４０２－Ｂを再度存在させることはできない。

【００９２】

つまり、自プレイヤは、構成の選択において、鍵付き扉４０３－Ｂ及び敵キャラクタ４０２－Ａの構成を反映させる、どちらか一方のみの構成を反映、またはどの構成も反映させないといった選択を行うことになる。この選択において、自共通仮想空間４０１－１の鍵付き扉４０３－Ｂを解錠させるという反映を選択するとき、図７（ａ）に図示するように、ＷＲＡＭ２２の構成選択情報５５１が鍵付き扉４０３－Ｂ解錠を示す旨の情報によって更新されている。そして、図８（ｃ）に示すように、反映させた結果としての自共通仮想空間４０１－１は、他共通仮想空間４０１－２における構成から鍵付き扉４０３－Ｂの解錠のみを反映するという選択によって、変化されたものとなる。

【００９３】

この反映以前には、自共通仮想空間４０１－１における鍵付き扉４０３－Ａ及び鍵付き扉４０３－Ｂにより、自プレイヤキャラクタ４１２－１を敵キャラクタ４０２－Ａの近傍へと移動させることはできなかったが、図７（ｃ）に示すように、鍵付き扉４０３－Ｂの解錠を反映させることで、それが可能となる。自プレイヤキャラクタ４１２－１が敵キャラクタ４０２－Ａの近傍へと移動すると、バトルをすることが可能となる。そのバトルによって当該敵キャラクタ４０２－Ａを倒すことができれば、図７（ｄ）に示すように、自プレイヤキャラクタ４１２－１を自共通仮想空間４０１－１の出口へと移動させることが可能となる。

【００９４】

また、図７（ｂ）において示した、ステップＳ１２１の構成の選択においては、他ゲーム情報５６１がＷＲＡＭ２２に記憶されていない状態での選択であるため、この場合においては、反映させたい構成を、上記ステップＳ１４３における構成の選択と同様に、自共通仮想空間４０１－１から予め選択しておくことになる。

【００９５】

次に、図９に示すのは、図５（ｂ）において示した、自ゲーム装置１－１及び他ゲーム装置１－２それぞれのゲームに係るダンジョンを反映させたことによる、自ゲーム装置１－１に係るダンジョンを表したものである。図示するように、ダンジョンの反映については、同じ階層４１１同士（図９においては２Ｆの階層４１１）を通路８０１により繋ぐことによってなされる。反映されたこのダンジョンにおける、自ゲーム装置１－１のゲームに係るダンジョン（以下、「自ダンジョン」とする）の部分（以下、「自ダンジョン部分」とする）と、他ゲーム装置１－２のゲームに係るダンジョン（以下、「他ダンジョン」とする）の部分（以下、「他ダンジョン部分」とする）は、通信接続後もそれらは繋がれ

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た状態で、自ゲーム装置１－１において、維持されることになる（他ゲーム装置１－２においても同様）。

【００９６】

通路８０１によって自ダンジョン及び他ダンジョンが相互に繋がることで、自プレイヤキャラクタ４１２－１は、他ダンジョン部分に係る、２Ｆの階層４１１へと移動可能となる。そのように移動可能となった自プレイヤキャラクタ４１２－１は、ダンジョンの反映がされることによって、他ダンジョン部分にある施設４１３（ここでは、必殺技道場）へと移動することができる。これによって、反映以前の自ダンジョンにはなかった、施設４１３において、自プレイヤキャラクタ４１２－１に対し、当該施設４１３に応じた、所定の効果を与えることができるようになる。

【００９７】

もっとも、自ダンジョンにおいて、ゲームを進行させた結果、自ダンジョン部分の新たな階層４１１に自プレイヤキャラクタ４１２－１を移動させたことによって、階層４１１が生成されたとしても、当該新たな階層４１１については、次の通信接続時まで他ダンジョンへと反映されることはない。

【００９８】

以上説明したように、この実施の形態にかかるゲームは、複数のゲーム装置１（自ゲーム装置１－１と他ゲーム装置１－２）でプレイの同時性を要することなく、互いに無関係に進行することが可能なものとなっている。ゲーム装置１のＷＲＡＭ２２には、ゲームの進行状況に応じた各種情報が記憶されるが、この情報は、当該ゲーム装置１のプレイヤがタッチパネル１３や操作スイッチ部１４の操作により他のゲーム装置とは無関係にゲームを進行させた結果により更新されることとなる。もっとも、ゲーム装置１は、これとは無関係にゲームを進めてられいた他のゲーム装置から他ゲーム進行状況情報を受信することができ、この他ゲーム進行状況情報に基づいても、ＷＲＡＭ２２に記憶されているゲームの進行状況に応じた情報が更新される。

【００９９】

これにより、基本的には他のゲーム装置とは無関係にゲームを進行させるスタンドアロン型のゲームで、他のプレイヤによるゲームの進行結果を反映させるネットワークゲームに類似したゲーム性を実現することが可能となる。また、各プレイヤのゲーム装置１の他に、ゲームの進行にサーバ装置を介在させる必要がないので、比較的小規模なハードウェア構成で複数のプレイヤによるゲームの進行を擬似的に実現することができるものとなる。

【０１００】

また、例えば、自ゲーム装置１－１のＷＲＡＭ２２に記憶され、他ゲーム進行状況情報が反映されるゲームの進行状況に関する情報には、共通仮想空間４０１に関する情報５０１、５０２や、ダンジョンに関する情報５１１～５３１が含まれており、プレイヤキャラクタの移動空間であるマップの状況が変わってくることとなる。このようにゲームの進行状況を直接的に示すマップが他ゲーム装置１－１でのゲームの進行状況に応じて変わることで、複数のプレイヤによりゲームが進められることの印象が強くなる。

【０１０１】

また、共通仮想空間４０１に配置された敵キャラクタ４０２や鍵付き扉４０３は、他ゲーム装置１－２から受信した他ゲーム進行状況情報を反映させることができる情報であり、自ゲーム装置１－１のプレイヤがこれらの妨害要素の攻略（敵キャラクタ４０２を倒したり、鍵を入手して扉４０３を解錠すること）に手間取っても、他のゲーム装置のプレイヤの協力で妨害要素を排除してゲームを先に進行させることができるようになる。一方、ダンジョンの反映によって、プレイヤキャラクタの移動空間が広がるとともに、他ゲーム装置１－２において生成されたダンジョンの施設も利用できるようになるので、ゲームにおける攻略要素を増やしたり、攻略を容易にしたりすることができるようになり、ゲームの進行の幅を広げることができる。

【０１０２】

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自ゲーム装置１－１のプレイヤが予約選択を行っていない内容は、他ゲーム装置１－２から他ゲーム進行状況情報を受信した時点において、他ゲーム装置１－２におけるゲームの進行状況が反映されることはない。このため、他ゲーム装置１－２からのゲーム進行状況情報を受信してしまったがために、プレイヤが攻略を楽しんでいた要素が攻略されてしまっている等といった不測の事態が生じるのを防ぐことができる。もっとも、他ゲーム進行状況情報の受信よりも後のタイミングで、自ゲーム装置１－１のプレイヤが事後に反映を行う内容を選択することはできるので、例えば、プレイヤが自ら敵キャラクタを倒そうと思っていたが、他のゲーム装置のプレイヤが倒していたのであれば、それを反映させてゲームを先に進行させようという選択を行うことも可能になる。

【０１０３】

また、プレイヤが自ゲーム装置１－１でゲームを行うためには、パスワードを入力してログイン状態としなければならないので、他のプレイヤがゲーム装置１－１で勝手にゲームを進行してしまうことはない。もっとも、ゲームを進行することはできなくても、他ゲーム装置１－２のプレイヤが自ゲーム装置１－１を起動して装置起動状態とすることで、他ゲーム装置１－２からの他ゲーム進行状況情報を自ゲーム装置１－１に受信させることはできる。これにより、例えば、生活時間の異なる者同士（例えば、親子など）が基本的には個別にゲームを行うものの、ゲームの協力プレイを行うことができるようになる。

【０１０４】

本発明は、上記の実施の形態に限られず、種々の変形、応用が可能である。以下、本発明に適用可能な上記実施の形態の変形態様について説明する。

【０１０５】

上記の実施の形態では、共通仮想空間４０１には敵キャラクタ４０２や鍵付き扉４０３が配置され、これらによってプレイヤキャラクタの進行が妨害されるものとなっていた。そして、敵キャラクタ４０２を倒したり、鍵付き扉４０３を解錠することでプレイヤキャラクタの進行に対する妨害が排除されるものとなっていた。これに対して、共通仮想空間４０１においてプレイヤキャラクタの進行を妨害するのは、川や崖といったものであってもよく、ゲームを進行させて川に橋を架けたり、崖に梯子をかけるといったことをすることで、川や崖によるプレイヤキャラクタの進行に対する妨害を排除するものとしてもよい。

【０１０６】

上記の実施の形態では、ダンジョンの反映とは、自ダンジョン及び他ダンジョンにおける同じ階層が通路によって繋がれ、プレイヤキャラクタの移動空間となるダンジョンの大きさが拡張されるものとなっていた。これに対して、ゲーム装置毎に異なる形態の道が形成されたダンジョンが生成されるものとした場合には、自ゲーム装置１－１において生成されたダンジョンのマップを、他ゲーム装置１－２において生成されたダンジョンのマップと重ね、ダンジョンにおけるマップ上の道を増やすこととしてもよい。

【０１０７】

上記実施の形態におけるゲーム状況の反映は、共通仮想空間４０１及びダンジョンのゲーム状況につき行われるものとしていたが、これを自ゲーム装置１－１及び他ゲーム装置１－２における、それぞれのプレイヤーが、所定の仮想空間で独自の街作りを行う、街作りゲームにおけるゲーム状況についても行えるものとしてもよい。ここで、以下に、街作りゲーム、並びにそのゲームの進行状況、及びその反映について、以下に詳述する。

【０１０８】

まず、街作りゲームを、図１０に示した模式的な図により説明する。当該街作りゲームにおける、自ゲーム装置１－１及び他ゲーム装置１－２で同様に用いられる仮想空間は、図１０（ａ）に示すように、仮想空間における所定の位置及び大きさとなる道路１００１、並びに、道路１００１及び破線で区切られた区画１００２が共通して存在する。また、区画１００２には、当該区画１００２毎に建物１００３が置かれることになる。

【０１０９】

ここで、道路１００１は、プレイヤキャラクタ４１２を移動させることが可能な範囲で

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ある。また，建物１００３は複数種類から成り、その種類毎に、当該街作りゲームにおいてのプレイヤキャラクタ４１２に対してする役割、及び示す効果は異なることとなる。また、区画１００２毎に設置される建物１００３は、区画１００２をまたがって設置されることはない。

【０１１０】

続いて、図１０（ｂ）、図１０（ｃ）及び１０（ｄ）において、自ゲーム装置１－１及び他ゲーム装置１－２の街作りゲームに係る仮想空間の模式的な図を示して、そのゲームの状況、及びゲーム状況の反映について説明する。図１０（ｂ）に示すのは、自ゲーム装置１－１における街作りゲームに係る仮想空間（以下、「自街作り空間」とする）の模式的な図であり、建物１００３－Ａ及び建物１００３－Ｂが設置されている。一方、図１０（ｃ）に示すのは，他ゲーム装置１－２における街作りゲームに係る仮想空間（以下、「他街作り空間」とする）の模式的な図であり、建物１００３－Ｃ～Ｆが設置されている。これら建物１００３は、自ゲーム装置１－１及び他ゲーム装置１－２の街作りゲームに係る仮想空間に同様に配置されている道路１００１とは違い、自ゲーム装置１－１と他ゲーム装置１－２とでは異なる配置となっていることがわかる。

【０１１１】

他街作り空間における建物１００３－Ｃ、Ｆは自街作り空間上には配置されていない建物１００３であり、建物１００３－Ｅは、それと同様の区画１００２に配置されている自街作り空間上の建物１００３－Ｂとは種類の建物１００３が配置されている。また、他街作り空間の建物１００３－Ｄと自街作り空間の建物１００３－Ａと、区画１００２及び建物１００３の種類共に同様のものとなっている。このとき、反映の結果としての自街作り空間は例えば図１０（ｄ）に示すものとなる。

【０１１２】

ここで、図１０（ｄ）に示す反映の例えによると、建物１００３－Ｃに係る反映は、反映前において建物１００３が配置されていなかった区画１００２に、他街作り空間の１００３－Ｃを配置させたものである。また、建物１００３－Ｈに係る反映は、自街作り空間の１００３－Ａと他街作り空間の建物１００３－Ｄとを組み合わせて、新たな建物１００３－Ｈ（建物１００３－Ａの機能を１階，建物１００３－Ｄの機能を２階においた２階建ての建物）としたものである。また，建物１００３－１に係る反映は、反映前に配置されていた建物１００３－Ｂに代えて他街作り空間の１００３－Ｅを配置したものである。もっとも、既に自らが配置させた建物１００３が配置されている区画には，他のプレイヤが配置させた建物を配置させずに、自らが配置させた建物をそのままとすることもできる。

【０１１３】

これらのように，建物１００３の配置されていない区画１００２には、同区画１００２に配置される他街作り空間の建物１００３を配置でき、既に建物１００３が配置されている区画１００２には、同区画に配置される他街作り空間の建物１００３を、それに代えて配置するか，あるいは、それにさらに組み合わせて配置することができる。この、建物１００３を組み合わせて配置するとは、同じ区画１００２に複数の種類の建物１００３を重ねて配置することである。一方，他街作り空間の建物１００３－Ｆも、自街作り空間の同区画１００２へと反映できるものであるが，図１０（ｄ）に示す例のように、自プレイヤの選択により反映させないとすることもできる。

【０１１４】

この場合には、ゲーム装置１毎に仮想空間の各区画１００２に建物１００３を配置していくが、他のゲーム装置から受信した他ゲーム進行状況情報が示す他のプレイヤが配置した建物１００３を、自街作り空間にもそのまま配置させることができる。これにより、街作りゲームにおける仮想空間への建物の配置を、基本的には無関係にゲームを進めている他のプレイヤからの協力を得て進めることができるようになる。

【０１１５】

また、複数のプレイヤが参加し、複数の領域に分かれたマップ上の各領域に対して、各プレイヤがゲームを進行させることで獲得される領域毎のポイントに応じて、各領域の支

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配権が何れかのプレイヤに付与されるものとするゲームにも、本発明を適用することができる。例えば、領域毎のポイントの獲得は、ゲーム装置毎に個別にゲームを進めることで獲得されるものとすることができる。ポイントを獲得するためのゲームは、領域毎に設定されたミニゲームなど、従来から知られている種々のゲームを適用できる。

【０１１６】

このゲームに参加しているプレイヤのゲーム装置同士を通信接続したときに、各プレイヤの領域毎の獲得ポイントのデータを交換するものとする。そして、領域毎の獲得ポイントのデータを交換した後に、各々のゲーム装置では、現在支配権を有するプレイヤと各プレイヤの獲得ポイントに応じて、領域毎に新たに支配権を獲得するプレイヤを決定するものとすることができる。なお、ある領域について支配権を有するプレイヤを変更するには、新たに支配権を得るプレイヤの獲得ポイントが今まで支配権を得ていたプレイヤの獲得ポイントのＮ倍（Ｎは、１よりも大きな定数）とすることを条件としてもよい。

【０１１７】

この場合には、複数のゲーム装置が互いに無関係にゲームを進行してマップの領域毎の獲得ポイントを得ていくが、通信接続により各プレイヤの獲得ポイントのデータを交換する度に領域毎に支配権を得ているプレイヤを更新することができるようになる。これにより、基本的には無関係にゲームを進めている複数のゲーム装置のプレイヤが各領域の支配権を獲得するというゲームにおける競争を実現することができる。

【０１１８】

上記の実施の形態に係るゲームは、２からなるゲーム装置１に係るゲーム状況の反映について説明してきたが、当該疑似ネットワークゲームにおいては、２より多い複数のゲーム装置１に係るゲーム状況を相互に反映させるものであってもよい。このとき、ゲーム装置１のＷＲＡＭ２２に記憶可能な容量に応じて、ゲーム状況を反映できるゲーム装置１の数が制限されるものであってもよい。

【０１１９】

上記実施の形態において、それぞれのゲーム装置１に係るゲーム状況を反映するにあたって、ピアツーピアによる通信接続をゲーム装置１間で確立することにより、直接ゲーム状況に係る情報を送受信していたが、無線または有線を問わず、インフラストラクチャーによって、通信接続を確立し、そこでゲーム状況に係る情報の送受信を行うものとしてもよい。また、このゲーム状況に係る情報をメールに添付することで、そのゲーム状況の交換を行えるものとしてもよい。

【０１２０】

上記の実施の形態では、第１ＬＣＤ１１と第２ＬＣＤ１２という２つの表示装置、及びタッチパネル１３というポインティングデバイスを備えるゲーム装置１において、本発明に係る疑似ネットワークゲームシステムを実行するものとした場合を例として説明した。しかしながら、少なくともゲームの画像を表示する表示装置と、プレイヤが指示を入力することのできる入力装置とを備えるものであれば、ゲーム装置１以外のコンピュータ装置において、本発明を適用したゲームを実行するものとしてもよい。本発明を適用した疑似ネットワークゲームシステムを実行するコンピュータ装置は、ゲーム専用機でもパーソナルコンピュータのような汎用機であってもよく、携帯型であるか据え置き型であるかを問わない。また、発明を適用したゲームを実行するコンピュータ装置として、携帯電話機を適用することもできる。

【０１２１】

また、上記の実施の形態では、疑似ネットワークゲームシステムに係るプログラム及びデータは、ゲームカートリッジ１７に格納されて配布されるものとしていた。ゲーム装置１が外部のネットワーク上に存在するサーバ装置と接続され、通信を行うとき、ゲームシステムに係るプログラム及びデータをサーバ装置が有する固定ディスク装置に格納しておき、ゲーム装置１にネットワークを介して配信するものとしてもよい。該ゲーム装置１において、無線インターフェース部２９がサーバ装置から受信したプログラム及びデータは、例えば、ゲーム装置１に、記憶される情報の書き換えが可能なＲＯＭ（例えば、フラッ

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シュメモリ等）を備えることでそれに、またはそのようなＲＯＭを含むカートリッジ１７に保存し、実行時にＷＲＡＭ２２にロードすることができる。

【０１２２】

また、もっとも、これらのプログラム及びデータを格納する記録媒体は、このようなものに限るものではなく、プラットフォームとなるコンピュータ装置の形態に応じて、光and/or磁気ディスク装置（フレキシブルディスク、ＣＤ－ＲＯＭ、ＤＶＤ－ＲＯＭなど）を適用することもできる。固定ディスク装置を備えるコンピュータ装置をプラットフォームとする場合には、これらのプログラム及びデータは、固定ディスク装置に予め格納して配布してもよい。

【図面の簡単な説明】

【０１２３】

【図１】本発明の実施の形態にかかる疑似ネットワークゲームシステムに用いるゲーム装置の外観を示す図である。

【図２】本発明の実施の形態にかかる疑似ネットワークゲームシステムに用いるゲーム装置の構成を示すブロック図である。

【図３】ゲーム装置の状態遷移を示す図である。

【図４】ゲーム進行に係る空間の選択を模式的に示した図である。

【図５】ゲーム進行に係る空間を模式的に示した図である。

【図６】ＷＲＡＭ２２に記憶される各種情報の構成を示す図である。

【図７】疑似ネットワークゲームシステムに係るゲーム装置１の処理を示すフローチャートである。

【図８】共通仮想空間に係るゲーム進行の具体例を示した図である。

【図９】ダンジョンに係るゲーム進行の具体例を示した図である。

【図１０】街作りゲームに係るゲーム進行の具体例を示した図である。

【符号の説明】

【０１２４】

１　ゲーム装置
１３　タッチパネル
１４　操作スイッチ部
１１　第１ＬＣＤ
１２　第２ＬＣＤ
２１　ＣＰＵコア
２２　ＷＲＡＭ
２４　第１ＧＰＵ
２６　第２ＧＰＵ

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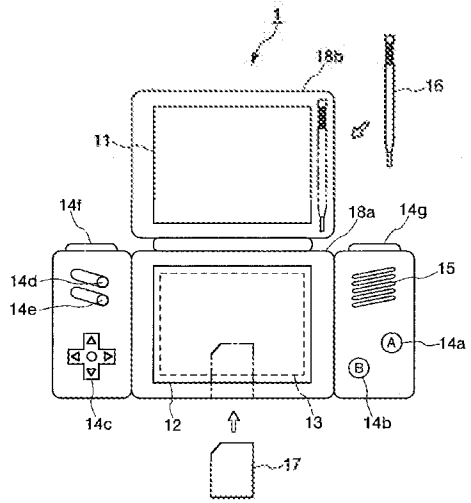
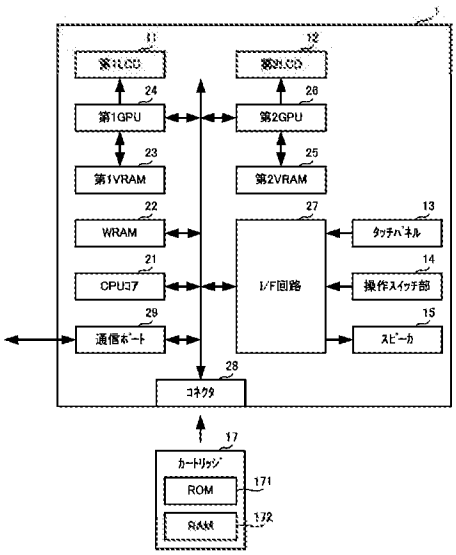
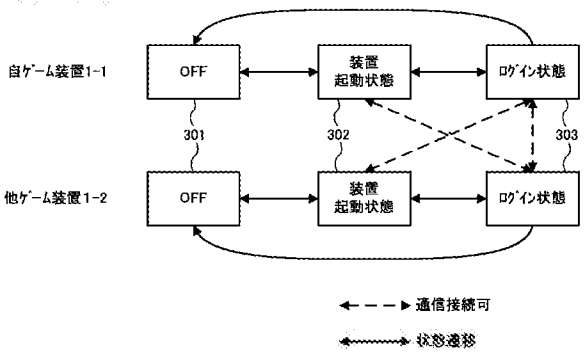
【図１】



【図２】



【図３】



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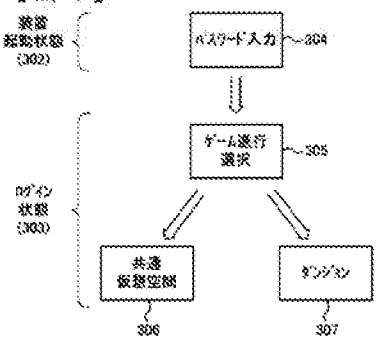

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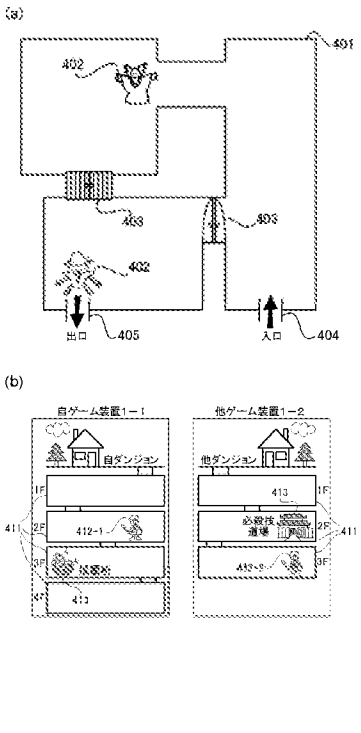

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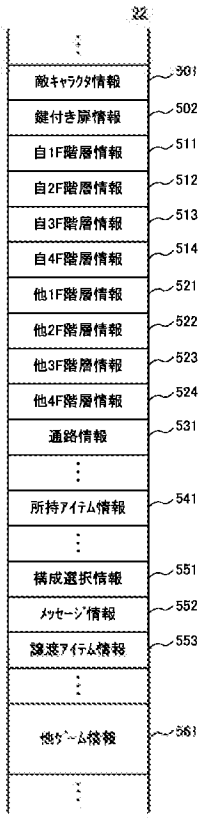
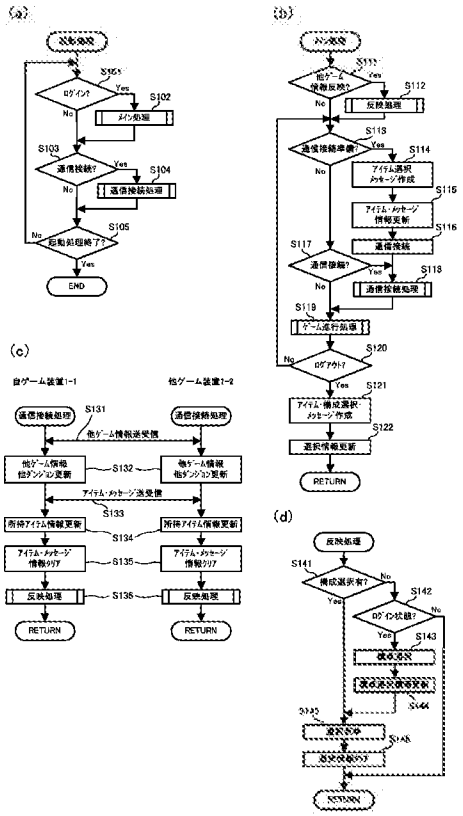
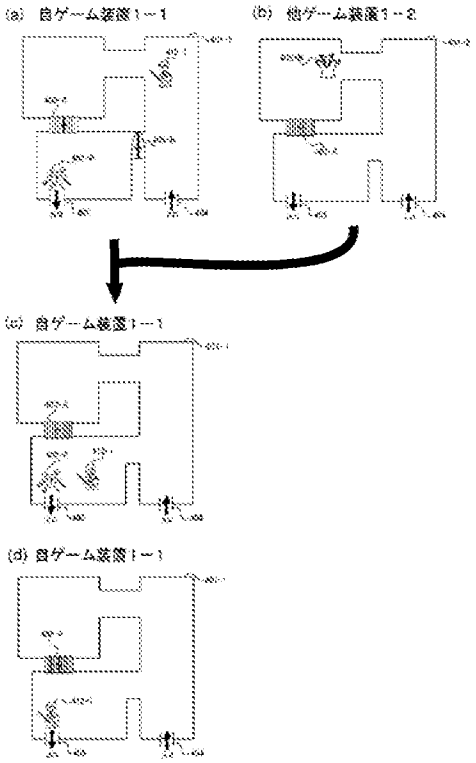
【図６】


22
敵キャラクタ情報
301
鍵付き扉情報
502
自1F階層情報
511
自2F階層情報
512
自3F階層情報
513
自4F階層情報
514
他1F階層情報
521
他2F階層情報
522
他3F階層情報
523
他4F階層情報
524
通路情報
531
所持アイテム情報
541
構成選択情報
551
メッセージ情報
552
譲渡アイテム情報
553
他ゲーム情報
561

【図７】


(a)
(b)
(c)
(d)
END
RETURN

【図８】


(a) 自ゲーム装置1－1
(b) 他ゲーム装置1－2
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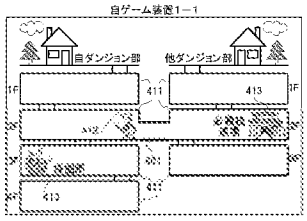
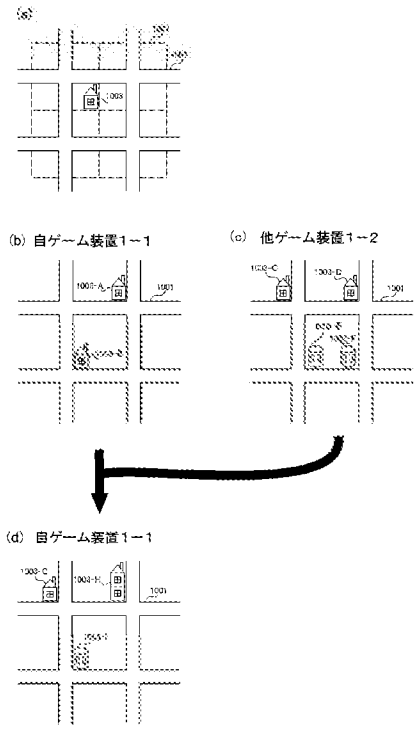
(d) 自ゲーム装置1－1

【図９】


自ゲーム装置1－1
自ダンジョン部
他ダンジョン部
411
413
1F

【図１０】



Selected Gazette

JP,2009-247474,A

* NOTICES *

JPO and INPIT are not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1]

It is a program for a game which holds waging war with a unit of a self-unit group, and a unit of an enemy unit group for a mass which constitutes a map as an action unit of a unit,

An action deciding part which determines action of a unit out of an action group which includes movement, an attack, and first specific ability at least,

A movement controlling part which performs control to which the unit concerned is moved in movable regions based on action of a unit having been determined by the aforementioned movement,

An attack control part which performs control which makes the unit concerned attack within within the scope which can be attacked based on action of a unit having been determined by the aforementioned attack,

A program operating a computer based on action of a unit having been determined by said first specific ability as an event generation part which generates a mass joint event which combines a plurality of masses which influence of said first specific ability attains to.

[Claim 2]

In Claim 1,

An attribute which affects the aforementioned movable regions is set to each mass,

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A program operating a computer further as a mass attribute changing part which changes the attribute of a mass combined by the aforementioned mass joint event.

[Claim 3]

In Claim 1 or 2,

A program operating a computer further as a display control part which performs display control which changes an image of a mass combined by the aforementioned mass joint event.

[Claim 4]

In either of the Claims 1-3,

The aforementioned event generation part,

While making a plurality of units unite as the aforementioned mass joint event, a union event which combines a plurality of masses by which a unit after union is arranged is generated,

The aforementioned movement controlling part,

A unit after the union concerned is moved as a transfer unit of a unit after uniting a mass combined by the aforementioned union event,

The aforementioned attack control part,

A program characterized by making a unit after the union concerned attack as an attack unit of a unit after uniting a mass combined by the aforementioned union event.

[Claim 5]

In either of the Claims 1-4,

Second specific ability is further included in the aforementioned action group,

The aforementioned event generation part,

A program generating a mass decomposition event which decomposes a mass combined by the aforementioned mass joint event based on action of a unit having been determined by said second specific ability.

[Claim 6]

In either of the Claims 1-5,

Each unit is set to enabled execution in a plurality of actions in 1 time of an action phase,

The aforementioned action deciding part,

In an action phase of the aforementioned enemy unit group, by combining a mass, on

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condition that an attack of a unit of the aforementioned enemy unit group to a unit of the aforementioned self-unit group is attained, action of a unit of the aforementioned enemy unit group is determined to the aforementioned movement, the aforementioned attack, and said first specific ability at least,

The aforementioned event generation part,

the aforementioned mass joint event is generated -- the aforementioned movement controlling part,

In a map after mass combination, a unit of the aforementioned enemy unit group is moved in said movable regions,

The aforementioned attack control part,

A program performing attack control of a unit of the aforementioned enemy unit group to a unit of the aforementioned self-unit group arranged at the aforementioned range which can be attacked in a map after mass combination.

[Claim 7]

In Claim 6,

The aforementioned action deciding part,

While performing first decision processing that judges whether a unit of the aforementioned self-unit group is arranged in an action phase of the aforementioned enemy unit group within within the scope which can be acted adding the aforementioned movable regions of a unit of the aforementioned enemy unit group, and the aforementioned range which can be attacked, When a mass is combined by the aforementioned mass joint event, second decision processing which judges whether a unit of the aforementioned self-unit group is arranged within the aforementioned within the scope which can be acted is performed,

While judging with a unit of the aforementioned self-unit group not being arranged in said first decision processing within the aforementioned within the scope which can be acted, A program characterized by determining action of a unit of the aforementioned enemy unit group to the aforementioned movement, the aforementioned attack, and said first specific ability at least when it judges with a unit of the aforementioned self-unit group being arranged in said second decision processing within the aforementioned within the scope which can be acted.

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[Claim 8]

An information storage medium being an information storage medium which can be read and memorizing the program according to any one of claims 1 to 7 by computer.

[Claim 9]

It is a game device for a game which holds waging war with a unit of a self-unit group, and a unit of an enemy unit group for a mass which constitutes a map as an action unit of a unit,

An action deciding part which determines action of a unit out of an action group which includes movement, an attack, and first specific ability at least,

A movement controlling part which performs control to which the unit concerned is moved in movable regions based on action of a unit having been determined by the aforementioned movement,

An attack control part which performs control which makes the unit concerned attack within within the scope which can be attacked based on action of a unit having been determined by the aforementioned attack,

A game device by which an event generation part which generates a mass joint event which combines a plurality of masses which influence of said first specific ability attains to being included based on action of a unit having been determined by said first specific ability.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[Field of the Invention]

[0001]

The present invention relates to a program, an information storage medium, and a game device.

[Background of the Invention]

[0002]

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Conventionally, the simulation game reproducing the battle of war etc. is known (for example, Patent document 1). A unit, a character, a battleship, etc. which participate in a battle are likened with the piece called a unit, and movement, an attack, etc. are made to act in such a simulation game in the mass unit which constitutes a map.

[Patent document 1] JP 2002 - 65937A

[Description of the Invention]

[Problem to be solved by the invention]

[0003]

By the way, in the conventional simulation game, since the mass used as the action unit of a unit was set up fixed, there was a problem that the variation of the behavior pattern of a unit was scarce and lacked in strategy nature.

[0004]

Since time will be taken before units encounter to the number of the units which appear in a simulation game when a map is large (when there are many masses which constitute a map), there is also a problem that a game cannot be gone on efficiently.

[0005]

The present invention is made in light of the above-mentioned circumstances, and the object is rich in strategy nature, and there is in providing the program, information storage medium, and game device which can run a game efficiently.

[Means for solving problem]

[0006]

(1) The present invention the mass which constitutes a map as an action unit of a unit, The action deciding part which is a game device for the game which holds waging war with the unit of a self-unit group, and the unit of an enemy unit group, and determines action of a unit at least out of an action group including movement, an attack, and first specific ability, The movement controlling part which performs control to which the unit concerned is moved in movable regions based on action of the unit having been

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determined by the aforementioned movement, The attack control part which performs control which makes the unit concerned attack within the within the scope which can be attacked based on action of the unit having been determined by the aforementioned attack, Based on action of the unit having been determined by the above-mentioned first specific ability, it is related with the game device containing the event generation part which generates the mass joint event which combines a plurality of masses which the influence of the above-mentioned first specific ability attains to.

[0007]

The present invention relates to the information storage medium which memorizes the program as which a computer is operated as each part of the above, and the program as which a computer is operated as each part of the above and in which computer reading is possible.

[0008]

According to the present invention, since a plurality of masses are combined by the mass joint event, compared with mass combination before, the behavior ranges (a moving range, an attack range, etc.) of a unit will spread. Therefore, the variation of the behavior pattern of a unit increases, and while being able to consider it as the game which was rich in strategy nature, an encounter opportunity with the unit of an enemy unit group can also increase, and it can also go on a game efficiently.

[0009]

(2) The affecting attribute is set to the aforementioned movable regions at each mass, and it may be made to further include the mass attribute changing part which changes the attribute of the mass combined by the aforementioned mass joint event in the game device of the present invention, a program, and an information storage medium.

[0010]

Since the attribute of the mass combined by the mass joint event will be changed if it does in this way, the movable regions of a unit can be changed and it can be considered as the

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game which was more rich in strategy nature.

[0011]

(3) It may be made to further include the display control part which performs display control which changes the image of the mass combined by the aforementioned mass joint event in the game device of the present invention, a program, and an information storage medium.

[0012]

(4) In the game device of the present invention, a program, and an information storage medium, The union event which combines a plurality of masses by which the unit after union is arranged while the aforementioned event generation part makes a plurality of units unite as the aforementioned mass joint event is generated, The aforementioned movement controlling part the mass combined by the aforementioned union event as a transfer unit of the unit after uniting, The unit after the union concerned is moved and it may be made to make the unit after the union concerned attack as an attack unit of the unit after the aforementioned attack control part uniting the mass combined by the aforementioned union event.

[0013]

Since the mass combined by the union event in action of the unit which united by the union event can be performed as an action unit if it does in this way, while being able to consider it as the game which was more rich in strategy nature, An encounter opportunity with the unit of an enemy unit group can also increase, and it can also go on a game more efficiently.

[0014]

(5) In the game device of the present invention, a program, and an information storage medium, It may be made to generate the mass decomposition event which decomposes the mass by which the aforementioned event generation part was combined with the aforementioned action group by the aforementioned mass joint event based on action of

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the unit having been determined by the above-mentioned second specific ability further including second specific ability.

[0015]

Since a mass decomposition event can decompose the mass combined by the mass joint event if it does in this way, it can be considered as the game which was more rich in strategy nature.

[0016]

(6) In the game device of the present invention, a program, and an information storage medium, In [each unit sets a plurality of actions to enabled execution in 1 time of an action phase and] the action phase of the aforementioned enemy unit group the aforementioned action deciding part, On condition that the attack of the unit of the aforementioned enemy unit group to the unit of the aforementioned self-unit group is attained by combining a mass, In [determine action of the unit of the aforementioned enemy unit group at least to the aforementioned movement, the aforementioned attack, and the above-mentioned first specific ability, and the aforementioned event generation part generates the aforementioned mass joint event, and] the map after mass combination the aforementioned movement controlling part, The unit of the aforementioned enemy unit group is moved in the above-mentioned movable regions, and the aforementioned attack control part may be made to perform attack control of the unit of the aforementioned enemy unit group to the unit of the aforementioned self-unit group arranged at the aforementioned range which can be attacked in the map after mass combination.

[0017]

If it does in this way, when the attack of the unit of an enemy unit group to the unit of a self-unit group will be attained by combining a mass, while the unit of an enemy unit group generates a mass joint event, Since an attack to the unit of a self-unit group will be delivered, the unit of an enemy unit group makes a mass joint event generated

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strategically, and can improve the idea nature of waging war with the unit of an enemy unit group.

(7) In the game device of the present invention, a program, and an information storage medium, While performing first decision processing judged for whether the unit of the aforementioned self-unit group is arranged within the within the scope which can be acted [to which the aforementioned action deciding part added the aforementioned movable regions of the unit of the aforementioned enemy unit group, and the aforementioned range which can be attacked in the action phase of the aforementioned enemy unit group], Second decision processing which judges whether the unit of the aforementioned self-unit group is arranged within the aforementioned within the scope which can be acted when a mass is combined by the aforementioned mass joint event is performed, While judging with the unit of the aforementioned self-unit group not being arranged in the above-mentioned first decision processing within the aforementioned within the scope which can be acted, When it judges with the unit of the aforementioned self-unit group being arranged in the above-mentioned second decision processing within the aforementioned within the scope which can be acted, it may be made to determine action of the unit of the aforementioned enemy unit group at least to the aforementioned movement, the aforementioned attack, and the above-mentioned first specific ability.

[Best Mode of Carrying Out the Invention]

[0018]

Hereinafter, it describes about an embodiment of the invention (this embodiment). This embodiment described below does not limit unfairly the contents of the present invention described in the scope of the claim. Not all the composition of describing by this embodiment is necessarily indispensable constituent features of the present invention.

[0019]

1. Functional block of game device

Fig.1 is an example of the functional block diagram of the game device of this embodiment.

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The game device of this embodiment is good also as composition which did not need to include all the components (each part) of Fig.1 and omitted the part.

[0020]

The operating part 160 is for inputting the operation which the player performed as operation information, and can realize the function with a controller, a lever, a button, a mouse, a keyboard, a microphone, a trackball, a touch panel, etc.

[0021]

The information storage medium 180 (medium in which reading [computer] is possible), Store a program, data (the program and data for operating a computer as each part of this embodiment specifically), etc., and the function, It is realizable by hardwares, such as optical discs (CD, DVD, etc.), a magneto-optical disc (MO), a magnetic disk, a hard disk, magnetic tape, or a memory (ROM).

[0022]

The storage part 170 serves as a storing region of work regions, such as the processing part 100 and the communications department 194, the program developed from the information storage medium 180, or data, and can realize the function by hardwares, such as RAM (VRAM). The storage part 170 is constituted including the primary storage 171, the mass attribute storage part 172, the status parameter storing part 173, and the drawing buffer 174. It is good also as composition which omits these parts.

[0023]

The display part 190 outputs the image generated by the processing part 100, and the function, It is realizable by a CRT display, LCD (liquid crystal display), OELD (organic electroluminescence display), PDP (plasma display panel), a touch-panel type display, or HMD (head mount display).

[0024]

The sound output part 192 outputs the sound generated by the processing part 100, and can realize the function by loudspeaker, headphone, etc.

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[0025]

The communications department 194 communicates between outside (for example, a server and other game devices), and can realize the function by various processors or ASIC for communication.

[0026]

It may be made to distribute the program (data) for operating a computer as each part of this embodiment to the information storage medium 180 (storage part 170) via a network and the communications department 194 from the information storage medium which a server has. Use of the information storage medium of such a server is also included in the range of the present invention.

[0027]

The processing part 100 (processor) performs various processings, such as game processing, image generation processing, or sound generation processing, by making the primary storage 171 into a work region based on a program, data, etc. which were developed by the storage part 170 from the operation information and the information storage medium 180 from the operating part 160. It is the processing which starts a game as game processing when game start conditions are fulfilled. When the processing which arranges objects which advance a game, such as processing, a unit, and a map, the processing which displays an object, the processing which calculates a game result, or game end conditions are fulfilled, processing etc. which end a game are performed. The function of the processing part 100 is realizable by hardwares, such as various processors (CPU, DSP, etc.) and ASIC (gate array etc.), and a program.

[0028]

The processing part 100 is constituted including the game progress control part 110, the action deciding part 112, the event generation part 114, the movement controlling part 116, the attack control part 118, the mass attribute changing part 120, the display control part 122, the parameter updating section 124, the communication control part 126, the

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drawing part 140, and the sound generation part 150. It is good also as composition which omits these parts.

[0029]

The game progress control part 110 performs advance control of the game which holds waging war with the unit of a self-unit group, and the unit of an enemy unit group for the mass which constitutes a map as an action unit of a unit.

[0030]

While arranging specifically the map which comprises a plurality of masses in game space with the start of a game, units, such as a character and a mobile body, are arranged on a mass. And a game is advanced by the turn system which makes 1 turn the action phase of the self-unit group which makes each unit of a self-unit group act, and the action phase of the enemy unit group which makes each unit of an enemy unit group act, and a turn is repeated until game end conditions are satisfied. With "game end conditions", it corresponds to annihilate the unit of an enemy unit group, to topple the specific unit of an enemy unit group, that the time limit passes, etc., for example. According to this embodiment, each unit is set to enabled execution in a plurality of actions in 1 time of an action phase. For example, while setting up a point required in order to set each action to enabled execution at least 1 time respectively in 1 time of an action phase and to perform action for every action, The point which can use a unit in 1 time of an action phase is set up, and it may be made to perform action within the scope of the point which can use a unit.

[0031]

The action deciding part 112 determines action of a unit out of the action group which includes movement, an attack, and first specific ability at least. It may be made to include second specific ability in an action group.

[0032]

When a player performs an one-person play, the action deciding part 112 determines

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action of the unit of a self-unit group based on the operation information on a player, and determines action of the unit of an enemy unit group based on a predetermined algorithm. For example, in the action phase of an enemy unit group, when the attack of the unit of an enemy unit group to the unit of a self-unit group is attained by combining a mass, action of the unit of an enemy unit group is determined to movement, an attack, and first specific ability at least. Specifically, in the action phase of an enemy unit group, while performing first decision processing that judges whether the unit of the self-unit group is arranged within the within the scope which can be acted adding the movable regions and the range which can be attacked of the unit of an enemy unit group, Second decision processing which judges whether the unit of the self-unit group is arranged within the within the scope which can be acted when a mass is combined by a mass joint event is performed, While judging with the unit of a self-unit group not being arranged in first decision processing within the within the scope which can be acted, When it judges with the unit of a self-unit group being arranged in second decision processing within the within the scope which can be acted, action of the unit of an enemy unit group is determined to movement, an attack, and first specific ability at least.

[0033]

When a player performs a competition play with other players, the action deciding part 112 determines action of the unit of a self-unit group based on the operation information on a player, and determines action of the unit of an enemy unit group based on the operation information on other players.

[0034]

The event generation part 114 generates the mass joint event which combines a plurality of masses which the influence of first specific ability attains to based on action of the unit having been determined by first specific ability. With first specific ability, union of a unit, deformation of a unit, use of an item, use of magic, etc. correspond. For example, when action of a unit is determined by union of a unit, while making a plurality of units unite as

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a mass joint event, the union event which combines a plurality of masses by which the unit after union is arranged is generated. The mass combined by the mass joint event is treated as one mass like other masses.

[0035]

The event generation part 114 generates the mass decomposition event which decomposes the mass combined by the mass joint event based on action of the unit having been determined by second specific ability. With second specific ability, disassembly of a unit, deformation of a unit, use of an item, use of magic, etc. correspond.

[0036]

The movement controlling part 116 performs control to which a unit is moved in movable regions based on action of the unit having been determined by movement. The movable regions of a unit are determined according to the attribution information of the mass which constitutes the map memorized by the map information storage part 172, and the status parameter of the unit memorized by the status parameter storing part 173.

[0037]

The movement controlling part 116 performs control to which the unit after union is moved as a transfer unit of the unit after uniting the mass of the size combined by the union event, when a union event occurs.

[0038]

The attack control part 118 performs control which makes a unit attack within the within the scope which can be attacked based on action of the unit having been determined by the attack. The range of a unit which can be attacked is determined according to the status parameter memorized by the status parameter storing part 173.

[0039]

The attack control part 118 makes the unit after union attack as an attack unit of the unit after uniting the mass of the size combined by the union event, when a union event occurs.

[0040]

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The mass attribute changing part 120 performs processing which changes the attribution information of the mass combined by the mass joint event. Processing which changes the attribution information of the mass combined by the mass joint event out of the mass which constitutes specifically the map memorized by the map information storage part 172 is performed. Attribution information is memorized for every mass which constitutes a map by the map information storage part 172.

[0041]

The display control part 122 performs display control of the image (object image) displayed on the display part 190. Display control of generating specifically the object which should display a unit (mobile bodies, such as a character, a car, and an airplane), a map (geographical feature), etc., instructing a display and display position of an object, or extinguishing an object is performed. That is, display control of registering the object which occurred into an object list, transmitting an object list to the drawing part 140 etc., or deleting the object which disappeared from an object list is performed. When movement of a unit (display thing defined by two dimensional data or three-dimensional data), an attack, or an event occurs, control for displaying the image which shows the situation of movement and the attack which occurred, or an event on the display part 190 is performed. For example, when a mass joint event occurs, display control which changes into other images the image of the mass combined by the mass joint event is performed.

[0042]

The parameter updating section 124 performs processing which updates the status parameters (for example, physical strength, a locomotive faculty, aggressivity, defense power, etc.) of the unit memorized by the status parameter storing part 173. For example, when the various parameters of a unit are increased when the level of a unit goes up, or the attack of a waging-war partner's unit is received, processing which decreases physical strength is performed.

[0043]

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The communication control part 126 as control of the communications department 194 about transmission and reception of data (packet), Processing which generates the data transmitted to a server or other game devices, processing which analyzes the data which saves the data which specifies the network address of the data transmission point, and which was processed and received at the primary storage 171, and which was processed and received, etc. are performed.

[0044]

The drawing part 140 performs drawing processing based on results, such as game processing performed by the processing part 100, generates an image by this, and outputs it to the display part 190. The image which the drawing part 140 generates may be what is called a two-dimensional image, and may be a three-dimensional image.

[0045]

In generating a two-dimensional image, an object with a high priority synthesizes an object and creates drawing data so that an object with a low priority may be displayed in front. And it is based on this drawing data and is the drawing buffer 174 (buffer which can memorize picture information in pixel units, such as a frame buffer or intermediate buffers.) about the object after a synthesis. It draws to VRAM and generates a two-dimensional image.

[0046]

When generating a three-dimensional image, it is coordinate conversion (it and) first. [world-coordinate-] Geometry processing, such as camera coordinate conversion, clipping processing, or transparent transformation, is performed, and drawing data (a position coordinate, a texture coordinate, color data, a normal vector, or alpha value of the primitive peak, etc.) is created based on the processing result. And based on this drawing data (primitive data), the object (1 or two or more primitives) after transparent transformation (after geometry processing) is drawn to the drawing buffer 174. This generates the image which is in sight from a virtual camera (given viewpoint) in game

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space.

[0047]

The game device of this embodiment may be used as the game device only for single handicap player mode which can play only one person's player, and may be used as a game device provided also with the multiplayer mode which can play a plurality of players. When a plurality of players play, the game image and game sound with which these players of a plurality of are provided may be generated using a server or one game device, and distributed processing may generate them using the server and a plurality of game devices which were connected via the network.

[0048]

3. Technique of this embodiment

Hereinafter, it describes about the control techniques of the simulation game performed with the game device of this embodiment, referring to Fig.2 - Fig.14.

[0049]

3-1. The summary of a game

It describes about the summary of the simulation game of this embodiment, referring to Fig.2 - Fig.6. Fig.2 is an example of the game image of a simulation game the shown figure, and Fig.3, Are an example of the flow of advance of the game of a simulation game a shown flow chart figure, and Fig.4, It is the figure for describing an example of the status parameter of the character 210, Fig.5 (A) - Fig.5 (C) are the figures for describing an example of the movable regions of the character 210, and Fig.6 (A) and Fig.6 (B) are the figures for describing an example of the range of the character 210 which can be attacked.

[0050]

First, it describes about flowing into advance of the simulation game of this embodiment.

[0051]

The simulation game of this embodiment is a unit of the self-unit group arranged on the

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map which comprises a plurality of masses, as shown in Fig.2. On (concrete target, the character 210, the character 220, the tank 230, the character 240, and character 250), It is a game which opposes the unit (specifically the character 310, the character 320) of an enemy unit group, The game is advanced by the turn system which makes 1 turn the action phase of the self-unit group which makes each unit of a self-unit group act, and the action phase of the enemy unit group which makes each unit of an enemy unit group act.

[0052]

For example, each unit of a self-unit group is made to act until a game is started from the action phase of a self-unit group and action of all the units of a self-unit group is fundamentally completed, as shown in Fig.3 when a self-unit group is precedent (being Step S10 and Step S14 N). However, it is not necessary to make all the units of a self-unit group not necessarily act, and may pass action of a specific unit. When annihilating the unit of an enemy unit group by action of the unit of a self-unit group, it becomes Y) and a stage clearance at the (step S12, and shifts to a next stage. Without on the other hand, annihilating the unit of an enemy unit group (it is N at Step S12), when action of all the units of a self-unit group is completed, the action phase of Y) and a self-unit group is completed at the (step S14, and the action phase of an enemy unit group is started.

[0053]

Each unit of an enemy unit group is made to act until action of all the units of an enemy unit group will be completed fundamentally, if the action phase of an enemy unit group is started (being Step S16 and Step S20 N). However, it is not necessary to make all the units of an enemy unit group not necessarily act, and may pass action of a specific unit. When the unit of a self-unit group is totally destroyed by action of the unit of an enemy unit group, it becomes Y) and game over at the (step S18. Without on the other hand, destroying the unit of a self-unit group totally (it is N at Step S18), When action of all the units of an enemy unit group is completed, 1 turn is completed with the end of the action phase of Y) and an enemy unit group at the (step S20, and it rushes in at the action phase

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of the self-unit group of the next turn (Step S10). Henceforth, a turn is repeated until victory or defeat stick.

[0054]

Next, it describes about the map of the simulation game of this embodiment.

[0055]

In the simulation game of this embodiment, as shown in Fig.2, the square type map which comprises a plurality of square masses is adopted, and this mass has become an action unit of each unit. It may be made to adopt the HEKUSU type map which comprises a plurality of right hexagon masses, for example in addition to a square type map, and the Provence type map which comprises a plurality of free-shaped masses.

[0056]

The geographical feature attribute (specifically the flat ground 410, the prairie 420, the woods 430, the river 440) is set to each mass. This geographical feature attribute affects action of each unit. The geographical feature attribution information of each mass is memorized by the map information storage part 172 for every map.

[0057]

Next, it describes about action of the unit in the simulation game of this embodiment.

[0058]

In the simulation game of this embodiment, the status parameter which shows the capability value of a unit is set as each unit, and each unit acts by making a mass into an action unit based on this status parameter. The status parameter is memorized by the status parameter storing part 173 for every unit.

[0059]

If it describes taking the case of the character 210, as shown in Fig.4, various parameters, such as a level, an experience value, physical strength, a locomotive faculty, geographical feature justice, aggressivity, defense power, specific ability, and arms, are set up as a status parameter.

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[0060]

A "level" is a parameter which shows the rank of the character 210, and if it improves, the value of other parameters (for example, aggressivity and a locomotive faculty) will rise.

[0061]

An "experience value" is a parameter which shows a value required for improvement, and it can acquire an experience value by toppling the unit of an enemy unit group. In the example shown in Fig.4, the present experience value is 100, and when an experience value is set to 500, it will improve.

[0062]

"Physical strength" is a parameter which shows the vitality of the character 210, and when the attack of a waging-war partner's unit is received and it is set to 0, it becomes impossible for the character 210 to act.

[0063]

A "locomotive faculty" is a parameter which shows the movable regions of the character 210. In the example shown in Fig.4, the value is 3, and it is movable a maximum of 3 masses.

[0064]

"-- geographical feature proper" is a parameter which shows affinity with the geographical feature attribute set as each mass -- the value of a locomotive faculty -- geographical feature -- it becomes movable regions where the value adding a proper value is actual.

[0065]

Since it is geographical feature proper ** 0 to the flat ground 410 of the character 210 as shown in Fig.4, as shown in Fig.5 (A), a maximum of 3 mass (with within the scope surrounded by enclosure line 510) movement of the character 210 can be carried out in the area of the flat ground 410 as a locomotive faculty. The same can be said for the prairie 420. Since it is geographical feature proper **-1 to the woods 430 of the character 210 as shown in Fig.4, as shown in Fig.5 (B), only two masses can move the character

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210 at the maximum in the area in the woods 430 within within the scope surrounded by the enclosure line 520. Since it is geographical feature proper **-2 to the river 440 of the character 210 as shown in Fig.4, as shown in Fig.5 (C), only one mass can move the character 210 at the maximum in the area of the river 440 within within the scope surrounded by the enclosure line 530.

[0066]

With "aggressivity", when the character 210 attacks to the unit of an enemy unit group, It is a parameter which influences the size of the damage given to the unit of an enemy unit group, and the damage (decrement of the physical strength of the unit of an enemy unit group) given to the unit of an enemy unit group can be enlarged, so that this value is large.

[0067]

With "defense power", when the character 210 is attacked by the unit of an enemy unit group, It is a parameter which influences the size of the damage which the character 210 receives, and the damage (decrement of the physical strength of the character 210) which the character 210 receives can be made small, so that this value is large.

[0068]

"Specific ability" is the special ability to exert the character 210, and there are union of characters (unit), decomposition after union, etc. The details of specific ability are mentioned below.

[0069]

"Arms" is used when the character 210 attacks the unit of an enemy unit group, and the range (range range) which can be attacked is set up for every arms. except for the range which can be attacked -- the direction which can be attacked, aggressivity, hit probability, and geographical feature -- it may be made to set any proper parameter for every arms

[0070]

Since the range of a sword which can be attacked is 1 as shown in Fig.4, as shown in Fig.6

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(A), the character 210, It can attack to the unit (unit of the enemy unit group which is within the within the scope surrounded by the enclosure line 540) of the enemy unit group which is in less than one mass from the mass by which the character 210 is arranged. That is, in the example shown in Fig.6 (A), when attacking using a sword, it can attack to the character 310, but the character 210 can be attacked to the character 320. Since the range of a rifle which can be attacked is 3 as shown in Fig.4, as shown in Fig.6 (B), the character 210, It can attack to the unit (unit of the enemy unit group which is within the within the scope surrounded by the enclosure line 550) of the enemy unit group which is in less than three masses from the mass by which the character 210 is arranged. That is, in the example shown in Fig.6 (B), the character 210 can be attacked also to any of the character 310 and the character 320, when attacking using a rifle.

[0071]

3-2. Mass combination and the decomposition technique

It describes about mass combination and the decomposition technique of the simulation game of this embodiment, referring to Fig.7 - Fig.10. Fig.7 is the figure for describing an example of the status parameter of the tank 230, Fig.8 and Fig.9 are the figures for describing an example of the mass joint technique by the special effect of the tank 230, and Fig.10 is the figure for describing an example of the mass joint technique by special effect, such as the character 210.

[0072]

First, it describes about the mass joint technique by the specific ability of the tank 230.

[0073]

The status parameter of the tank 230 is as being shown in Fig.7. Since the tank 230 does not have geographical feature **** to the river 440, it cannot move on the river 440. The tank 230 performs action per 1 mass, although arranged not to the region for one mass but to the region for four masses.

[0074]

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As shown in Fig.7, the arms of the tank 230 are guns and the range which can be attacked is set as less than five masses from the mass by which the tank 230 is arranged. Since the locomotive faculty of the tank 230 is 2, it is geographical feature proper ** 0 to the flat ground 410 and it is geographical feature proper **-1 to the woods 430 as shown in Fig.7, the tank 230, A maximum of two masses can move in the area of the flat ground 410, and a maximum of one mass can move in the area in the woods 430.

[0075]

By the way, only by moving the tank 230 in the action phase of a self-unit group in the example shown in Fig.8 (A), since it is separated from the tank 230 and nine masses of characters 320, The character 320 is not contained in the range of the tank 230 which can be attacked, and the tank 230 cannot be attacked to the character 320.

[0076]

So, according to this embodiment, using the flame radiation which is the specific ability of the tank 230, the attack to the character 320 by the tank 230 in 1 time of an action phase is realized by combining the mass MSA - the mass MSF.

[0077]

In the state which shows in Fig.8 (A), a player determines action of the tank 230 to the flame radiation which is specific ability first. Then, as are shown in Fig.8 (B), and the flame radiation event which burns the woods of the mass MSA - the mass MSF occurs and it is shown in Fig.9 (A), the mass MSA - the mass MSF are combined and it becomes the mass MSG. Under the present circumstances, while the geographical feature attribute of the mass MSG is changed into the flat ground 410 from the woods 430 which are the geographical feature attribute of the mass MSA - the mass MSF, the image of the mass MSG is also changed into the flat ground from woods. Whether the tank 230 combines the direction which performs flame radiation, i.e., which mass, may enable it to choose a player. It may be made to set up the range of the mass which the influence of a flame radiation event attains to with a status parameter.

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[0078]

Then, a player determines action of the tank 230 to movement, and makes 2 mass ****** mass MSG move the tank 230 after a flame radiation event, as shown in Fig.9 (B). As a result, since the distance of the tank 230 and the character 320 serves as five masses, the character 320 will be contained in the range of the tank 230 which can be attacked, and the tank 230 can be attacked to the character 320.

[0079]

Thus, since the behavior ranges (a moving range, an attack range, etc.) of a unit can be extended in this embodiment by the mass joint event which combines a plurality of masses, The variation of the behavior pattern of a unit increases, and while being able to consider it as the game which was rich in strategy nature, an encounter opportunity with the unit of an enemy unit group can also increase, and it can also go on a game efficiently. Since the attribute of the mass combined by the mass joint event is also changed, the movable regions of a unit can be changed and it can also be considered as the game which was more rich in strategy nature. Since the image of the mass combined by the mass joint event is also changed according to the attribute of the combined mass, the player can understand the attribute of the combined mass easily.

[0080]

The character 320 may enable it to decompose the mass MSG into the mass MSA - the mass MSF by using an item (for example, wooden seedling) and magic as specific ability. Under the present circumstances, while changing the geographical feature attribute of the mass MSA before mass combination - the mass MSF into the woods 430 from the flat ground 410 which is the geographical feature attribute of the mass MSG, it may be made to also change the image of the mass MSA - the mass MSF into woods from the flat ground. If it does in this way, it can be considered as the game which was more rich in strategy nature.

[0081]

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Next, it describes about the mass joint technique by specific ability, such as the character 210.

[0082]

According to this embodiment, it is set up so that the character 210, the character 220, the character 240, and the character 250 can be made to unite, and a plurality of masses by which the character after union is arranged by making each character unite are combined.

[0083]

A player determines action of either of the characters which gathered each character and was gathered to the union which is specific ability, as shown in Fig.10 (A). Then, as the union event which makes each character unite occurs and it is shown in Fig.10 (B), while each character unites and changing to the character 260, mass MSH by which each character is arranged - the mass MSK are combined, and it becomes the mass MSL.

[0084]

The character 260 which is a character after union acts by making four combined masses into an action unit. That is, when a player determines action of the character 260 to movement, the character 260 is moved by making four combined masses into a transfer unit. When a player determines action of the character 260 to an attack, the character 260 is made to attack by making four combined masses into an attack unit similarly. For example, when the range of the character 260 which can be attacked is 3. It can attack to the unit (unit of the enemy unit group which is within the within the scope surrounded by the enclosure line 560) of the enemy unit group which is in less than three masses by making the mass MSL (four combined masses) by which the character 260 is arranged into one mass. Therefore, the character 260 can be attacked to the character 320.

[0085]

Thus, since a plurality of masses by which the character after union is arranged are combined and the mass after combination is made into the action unit of the character

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after uniting in this embodiment, while making a plurality of characters unite, While being able to consider it as the game which was more rich in strategy nature, an encounter opportunity with the unit of an enemy unit group can also increase, and it can also go on a game more efficiently.

[0086]

3-3. Control techniques of the unit of an enemy unit group

It describes about the behavior control technique of the unit of the enemy unit group of the simulation game of this embodiment, referring to Fig.11 - Fig.13. Fig.11 is an example of the status parameter of the character 320 the figure for describing, and Fig.12, It is a flow chart figure showing an example of the action decision algorithm of the character 320, and Fig.13 (A) - Fig.13 (C) are the figures for describing an example of the behavior control technique of the character 320.

[0087]

According to this embodiment, when a player performs an one-person play, action of the unit of a self-unit group is determined based on the operation information on a player, and action of the unit of an enemy unit group is determined based on a predetermined algorithm.

[0088]

Hereinafter, the character 320 is taken for an example and an example of the behavior control technique of the unit of an enemy unit group is described. The status parameter of the character 320 is as being shown in Fig.11. As shown in Fig.11, the arms of the character 320 are a sword and a rifle, the range of a sword which can be attacked is set as less than one mass from the mass by which the character 320 is arranged, and the range of a rifle which can be attacked is set as less than three masses from the mass by which the character 320 is arranged. Since the locomotive faculty of the character 320 is 2 and it is geographical feature proper ** 0 to the flat ground 410 as shown in Fig.11, a maximum of two masses of characters 320 are movable in the area of the flat ground 410. That is,

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the range (range adding movable regions and the range which can be attacked) in the area of the flat ground 410 of the character 320 which can be acted serves as five masses. As shown in Fig.11, the specific ability of the enemy character 320 is a bomb, and if a bomb is used, the explosion event which combines the mass for four masses (a plurality of masses) will generate it.

[0089]

In the action phase of an enemy unit group, if it becomes the turn of making the character 320 acting, as shown in Fig.12, it will be judged whether the unit of the self-unit group is first arranged within the within the scope which can be acted adding the movable regions and the range which can be attacked of the character 320 (S100). In the example shown in Fig.13 (A), since it is separated from the character 320 and six masses of characters 210, it judges that the character 210 is not arranged by them within the within the scope which can be acted [of the character 320].

[0090]

If an explosion event is generated and a mass is combined when the unit of the self-unit group is not arranged within the within the scope which can be acted [of the character 320] (it is N at Step S100), It is judged whether the unit of a self-unit group is arranged within the within the scope which can be acted [of the character 320] (Step S102). Since it will become the mass MSQ which the mass MSM shown in Fig.13 (A) - the mass MSP are combined, and is shown in Fig.13 (B) in the example shown in Fig.13 (A) if an explosion event occurs, The distance of the character 320 and the character 210 serves as five masses, and the character 210 will be arranged within the within the scope which can be acted [of the character 320].

[0091]

If a mass is combined, when the unit of a self-unit group is arranged within the within the scope which can be acted [of the character 320], action of the character 320 will be first determined at the (step S102 with Y) and the bomb which is specific ability. Then, as an

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explosion event occurs and it is shown in Fig.13 (B), the mass MSM - the mass MSP are combined and it becomes the mass MSL (Step S104).

[0092]

Then, action of the character 320 is determined to movement and 2 mass ****** mass MSR is made to move the character 320 after an explosion event, as shown in Fig.13 (C) (Step S106). As a result, since the distance of the character 320 and the character 210 serves as three masses, the character 210 will be contained in the range of the character 320 which can be attacked.

[0093]

Finally, action of the character 320 is determined to an attack and it attacks to the character 210 (Step S108).

[0094]

When judged with the unit of a self-unit group being arranged within the within the scope which can be acted [of the character 320] in Step S100, at the (step S100 Y), It shifts to Step S106, and it is made to attack while moving the character 320 (Step S106, Step S108).

[0095]

Even if it combines a mass, when the unit of a self-unit group is not arranged within the within the scope which can be acted [of the character 320] (it is N at Step S102), it may be made to pass action of the character 320, and may be made to make it move at random in Step S102.

[0096]

Thus, when the attack of the unit of an enemy unit group to the unit of a self-unit group is attained by combining a mass in this embodiment, while the unit of an enemy unit group generates a mass joint event, Since an attack to the unit of a self-unit group will be delivered, the unit of an enemy unit group makes a mass joint event generated strategically, and can improve the idea nature of waging war with the unit of an enemy

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unit group.

[0097]

Control techniques of 3-4. network waging war

It describes about the network waging-war technique of the simulation game of this embodiment, referring to Fig.14. Fig.14 is the figure showing an example of the schematic configuration diagram of the game system in the case of holding network waging war.

[0098]

In performing the simulation game of this embodiment by network waging war, The server 20 receives the game device 10-1 and the operation information from 10-2, various processing is performed by the server 20, the processing result is transmitted to the game device 10-1 and 10-2, and each game device generates a game image based on the processing result of the server 20.

[0099]

Especially in the action phase of the unit group of the player of the game device 10-1 at this embodiment, The server 20 receives the operation information from the game device 10-1, various processing is performed by the server 20, the processing result is transmitted to the game device 10-1, and the game device 10-1 generates a game image based on the processing result of the server 20.

[0100]

And when changing from the action phase of the unit group of the player of the game device 10-1 to the action phase of the unit group of the player of the game device 10-2, the game device 10-2, The data (data of the stage which the action phase of the unit group of the player of the game device 10-1 ended) in which the present game situation is shown from the server 20 is received, and the action phase of the unit group of the player of the game device 10-2 is started.

[0101]

In the action phase of the unit group of the player of the game device 10-2, The server 20

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receives the operation information from the game device 10-2, various processing is performed by the server 20, the processing result is transmitted to the game device 10-2, and the game device 10-2 generates a game image based on the processing result of the server 20.

[0102]

And when changing from the action phase of the unit group of the player of the game device 10-2 to the action phase of the unit group of the player of the game device 10-1, the game device 10-1, The data (data of the stage which the action phase of the unit group of the player of the game device 10-2 ended) in which the present game situation is shown from the server 20 is received, and the action phase of the unit group of the player of the game device 10-1 is started.

[0103]

Thus, according to this embodiment, when changing from the action phase of a waging-war partner's unit group to the action phase of one's unit group, a waging-war partner's game situation will be reflected in its own game device.

[0104]

What [not only] was described by the above-mentioned embodiment but various deformation implementation is possible for the present invention. The composition described by the above-mentioned embodiment only showed an example, and when the equal technique of producing the same effect as the composition of the above-mentioned embodiment is adopted, it can include it in the range of the present invention.

[0105]

Processing of each part (each means) of this embodiment may realize the all only by hardware, and the program stored in an information storage medium and the program distributed via a communication interface may realize it. Or both hardware and a program may realize. And when both hardware and a program realize processing of each part of this embodiment, the program for operating hardware (computer) as each part of this

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embodiment is stored in an information storage medium.

[0106]

The present invention is applicable to various game devices, such as a business-use game device, home video game equipment, a portable game device, a large-sized attraction system with which a many player participates, a simulator, a computer terminal for multimedia services, and a mobile phone.

[Brief Description of the Drawings]

[0107]

A [FIG. 1] The figure showing an example of the functional block diagram of the game device of this embodiment.

A [FIG. 2] The figure showing an example of the game image of a simulation game.

A [FIG. 3] The flow chart figure showing an example of the flow of advance of the game of a simulation game.

A [FIG. 4] The figure for describing an example of the status parameter of the character 210.

A [FIG. 5] Fig.5 (A) - Fig.5 (C) are the figures for describing an example of the movable regions of the character 210.

A [FIG. 6] Fig.6 (A) and Fig.6 (B) are the figures for describing an example of the range of the character 210 which can be attacked.

A [FIG. 7] The figure for describing an example of the status parameter of the tank 230.

A [FIG. 8] The figure for describing an example of the mass joint technique by the special effect of the tank 230.

A [FIG. 9] The figure for describing an example of the mass joint technique by the special effect of the tank 230.

A [FIG. 10] The figure for describing an example of the mass joint technique by special effect, such as the character 210.

A [FIG. 11] Fig.11 is the figure for describing an example of the status parameter of the

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character 320.

A [FIG. 12] The flow chart figure showing an example of the action decision algorithm of the character 320.

A [FIG. 13] Fig.13 (A) - Fig.13 (C) are the figures for describing an example of the behavior control technique of the character 320.

A [FIG. 14] The figure showing an example of the schematic configuration diagram of the game system in the case of holding network waging war.

[Explanations of letters or numerals]

[0108]

100 A processing part, a 110 game-progress control part, and 112 Action deciding part, 114 An event generation part and 116 A movement controlling part and 118 Attack control part,

120 A mass attribute changing part and 122 A display control part and 124 Parameter updating section,

126 A communication control part and 140 A drawing part and 150 A sound generation part and 160 Operating part,

170 A storage part and 171 A primary storage and 172 Mass attribute storage part,

173 A status parameter storing part, 174 drawing buffers,

180 An information storage medium and 190 A display part and 192 A sound output part and 194 Communications department

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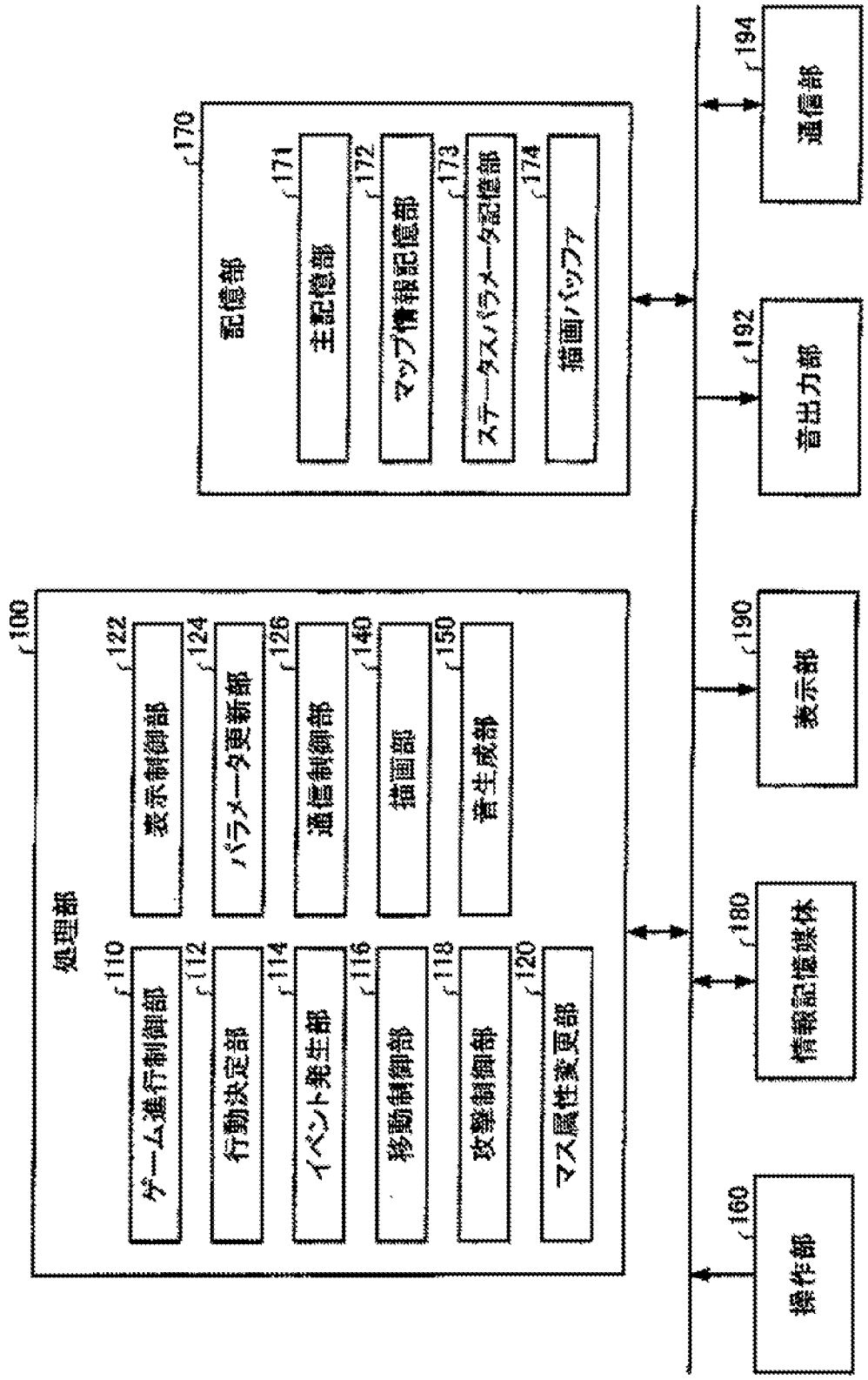
DRAWINGS A [FIG. 1]



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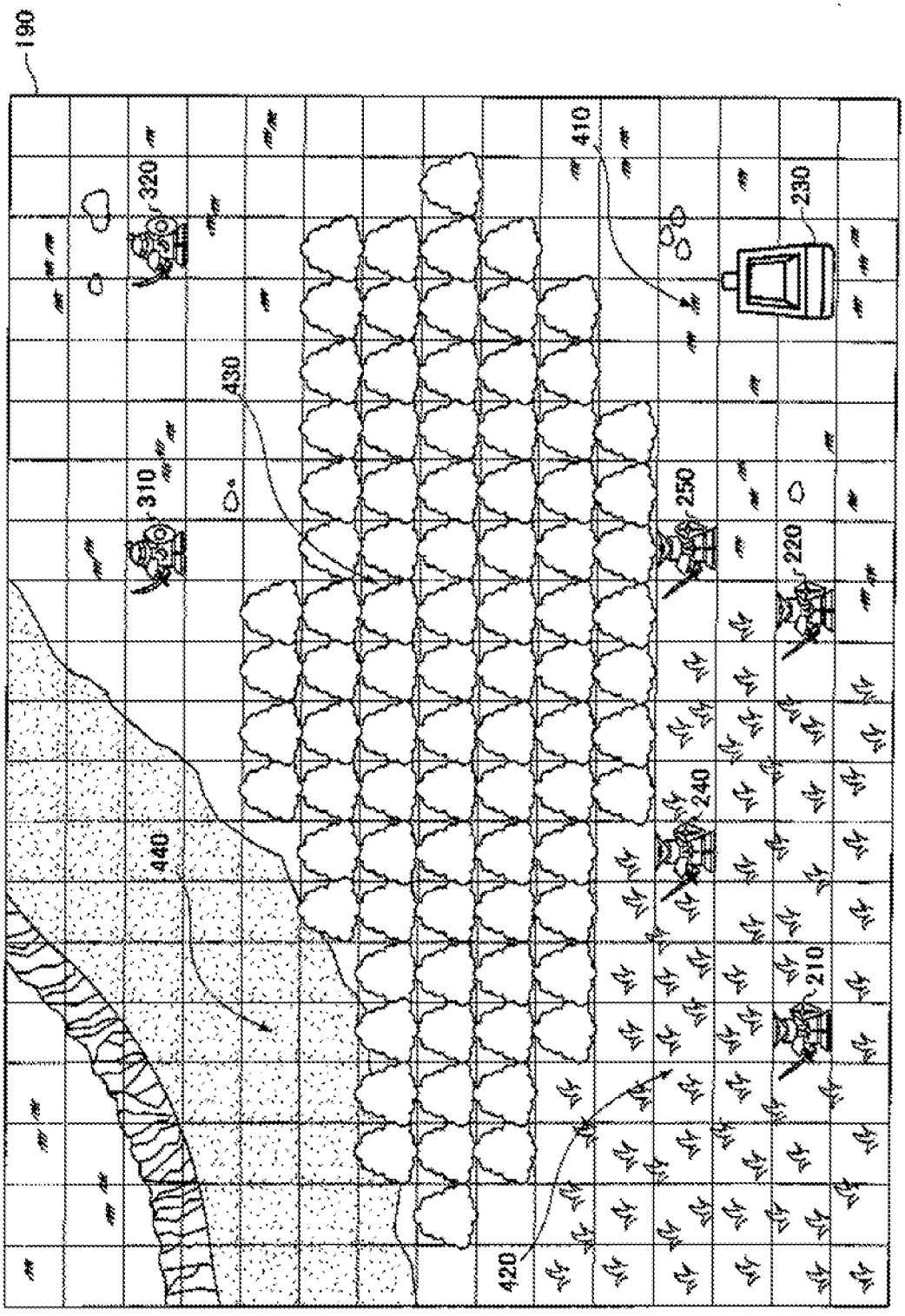

A [FIG. 2]

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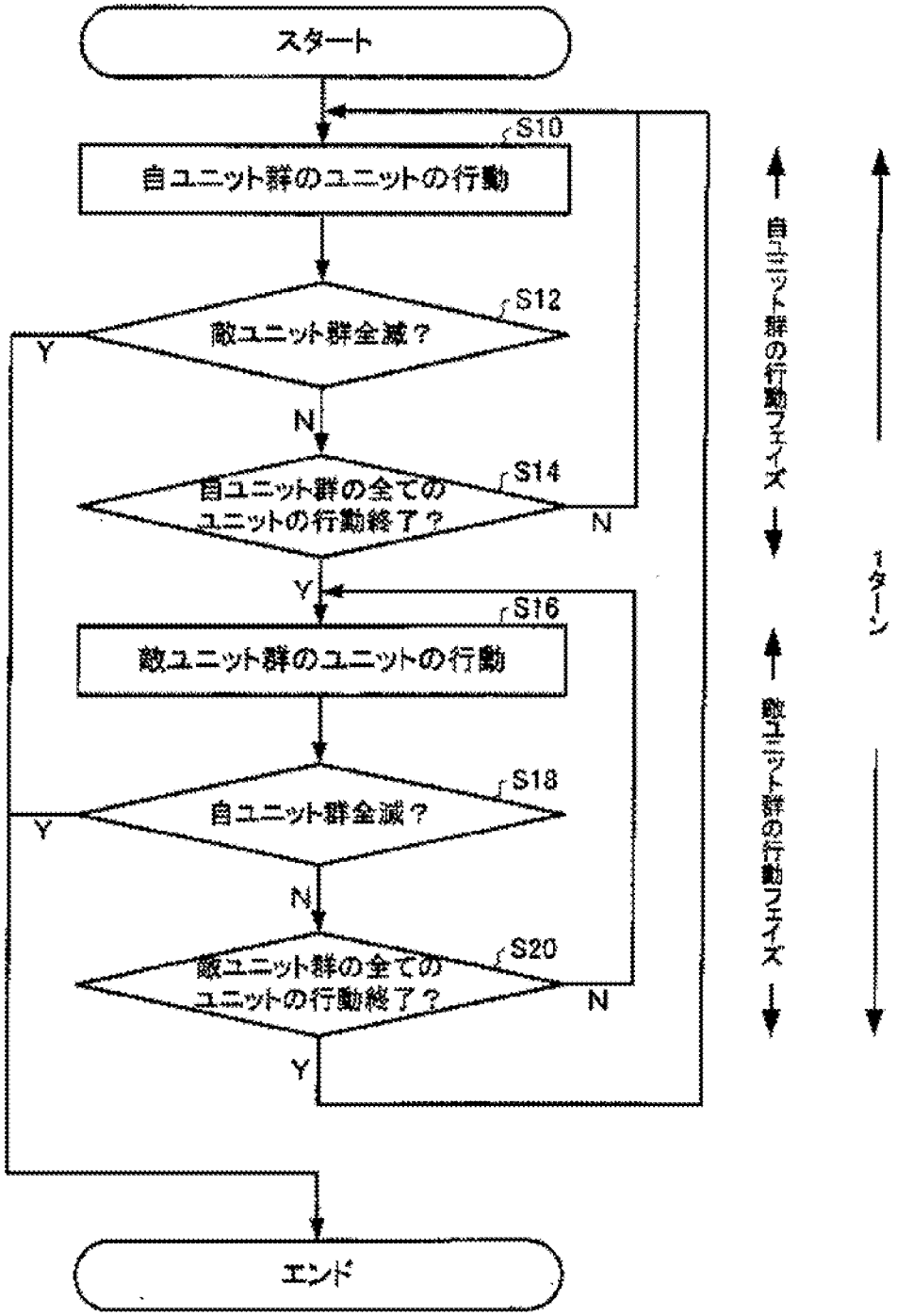
A [FIG. 3]



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パラメータ		値
レベル		3
経験値		100/500
体力		750
移動力		3
地形適正	平地410	0
	草原420	0
	森430	-1
	川440	-2
攻撃力		4
防御力		3
特殊能力	合体	—
	分解	—
武器	刀	1
	ライフル	3

A [FIG. 4]

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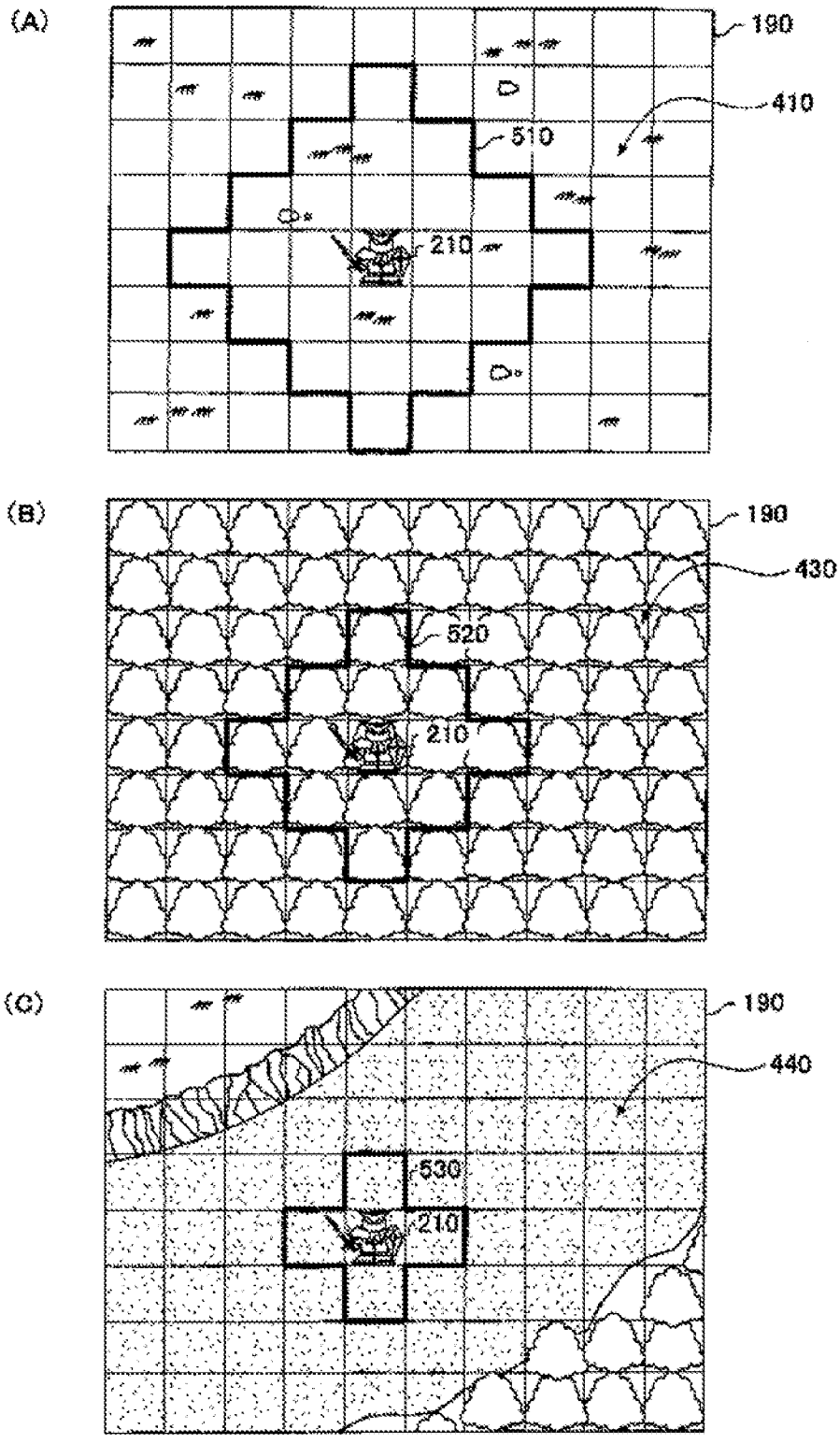

A [FIG. 5]

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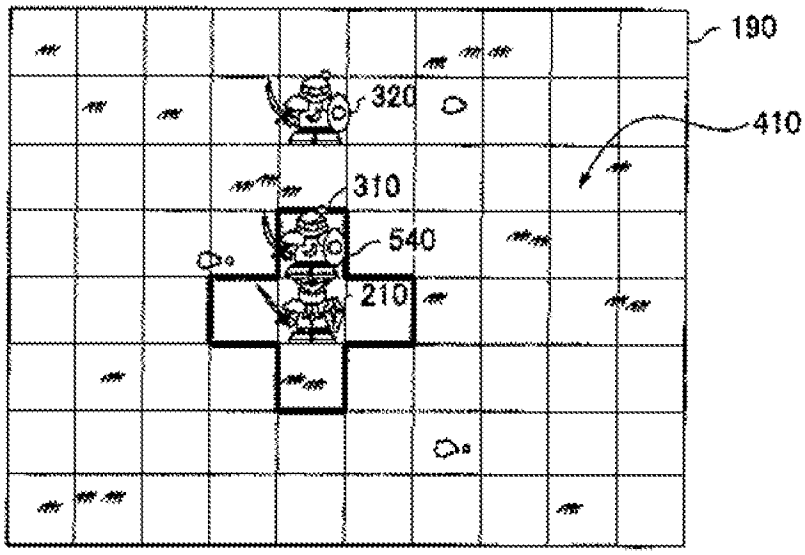
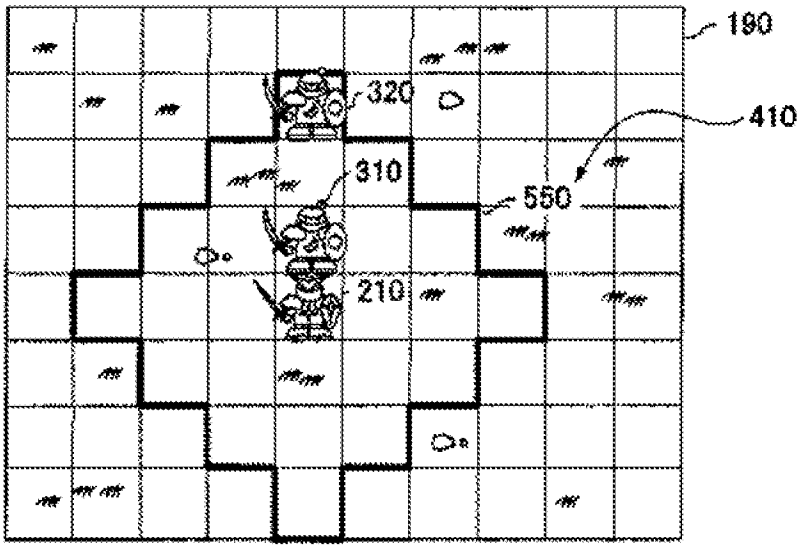
A [FIG. 6]

(A)



(B)



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A [FIG. 7]

パラメータ		値
レベル		1
経験値		200/300
体力		1000
移動力		2
地形適正	平地410	0
	草原420	0
	森430	-1
	川440	-
攻撃力		5
防御力		2
特殊能力	火炎放射	—
武器	大砲	5

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A [FIG. 9]

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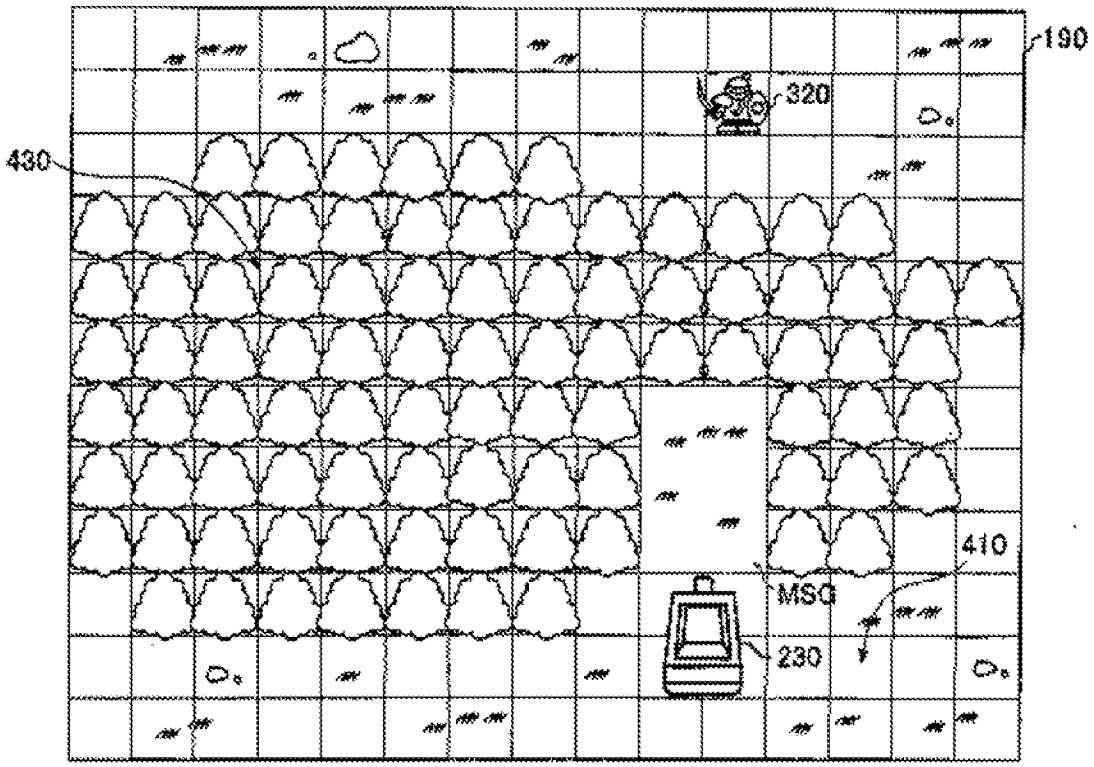
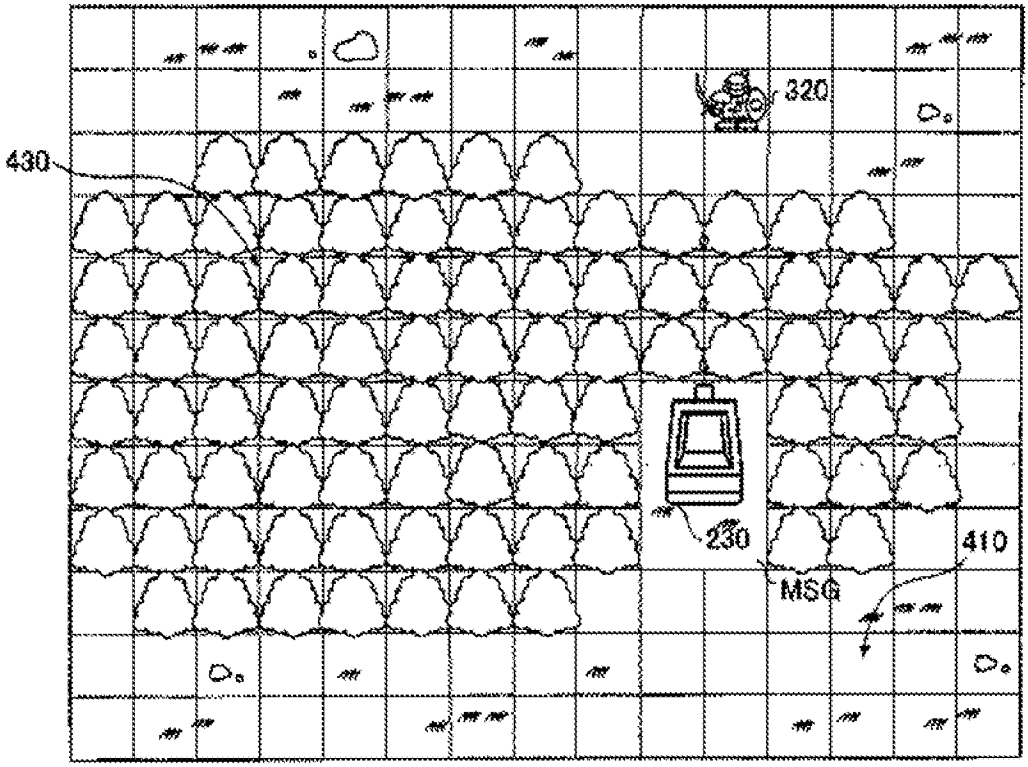
(A)



(B)



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A [FIG. 10]

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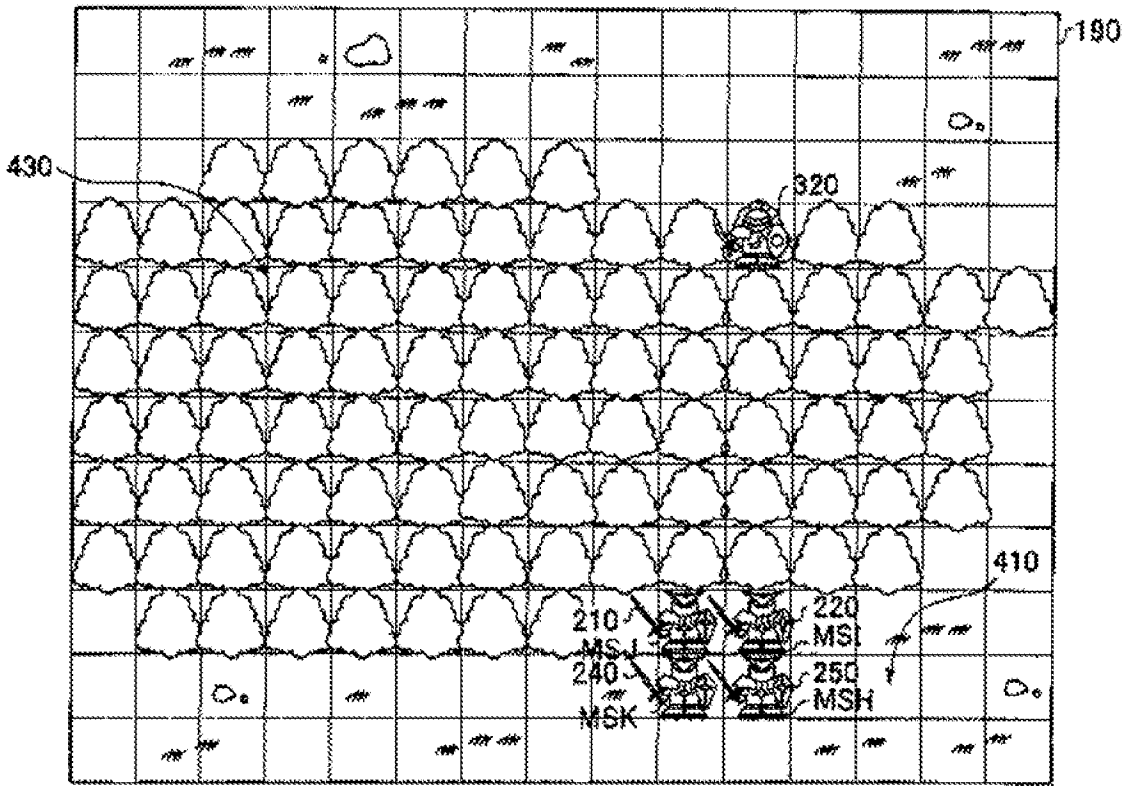
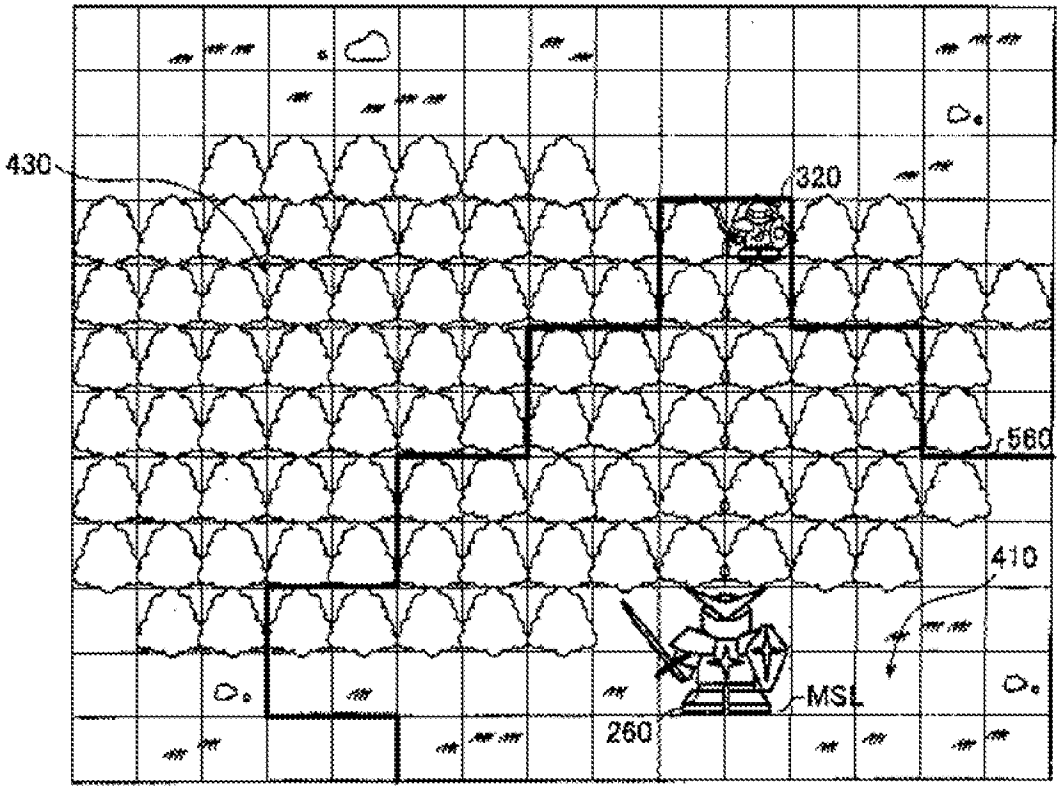
(A)



(B)



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A [FIG. 11]

パラメータ		値
レベル		2
体力		500
移動力		2
地形適正	平地410	0
	草原420	0
	森430	-1
	川440	-1
攻撃力		3
防御力		2
特殊能力	爆弾	—
武器	刀	1
	ライフル	3

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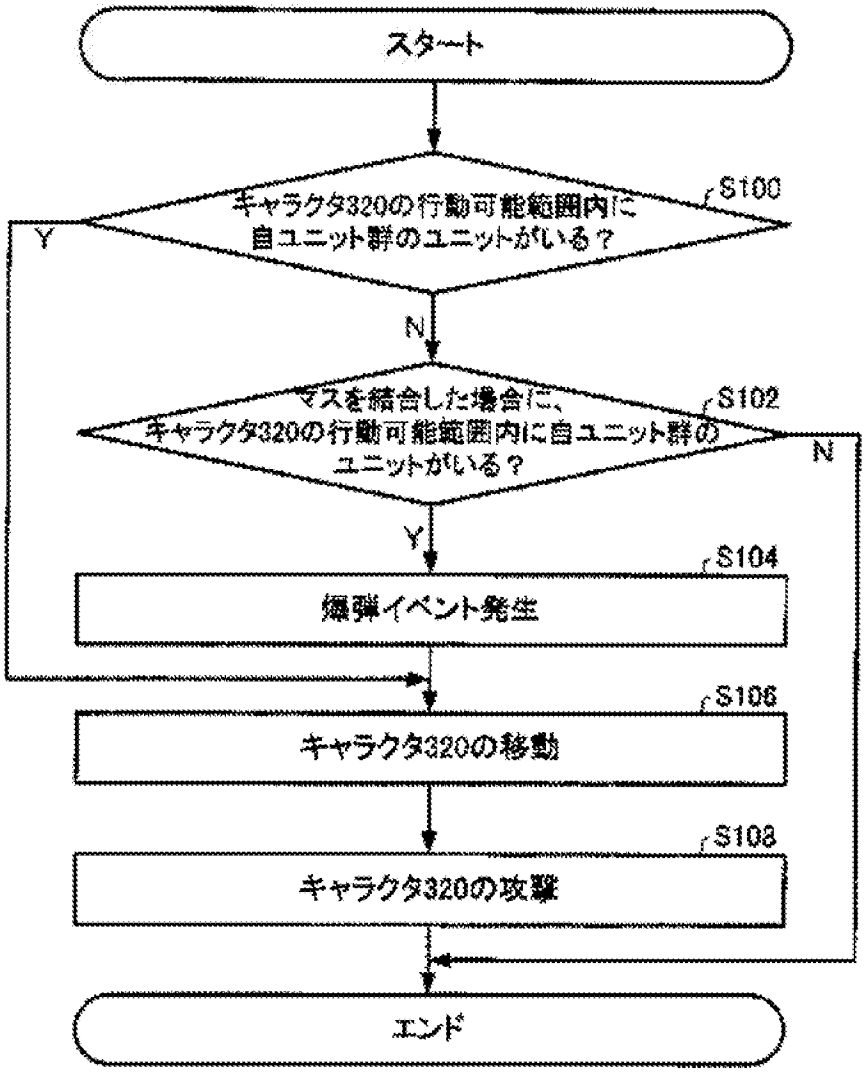
A [FIG. 12]



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A [FIG. 13]

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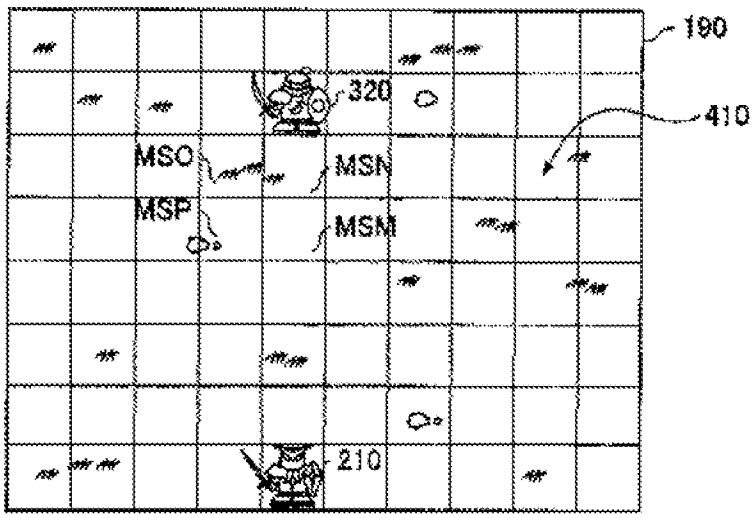
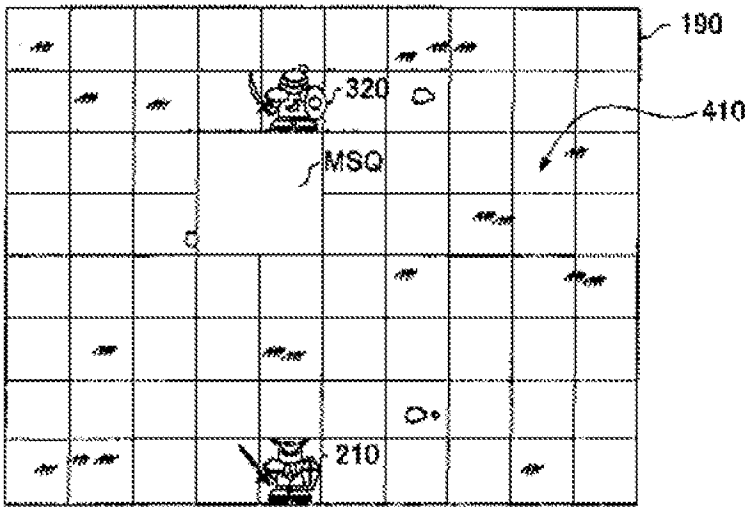
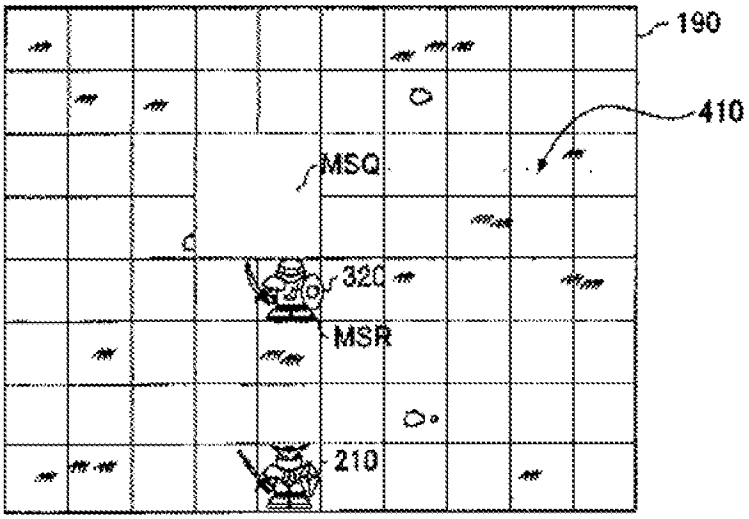
(A)



(B)



(C)



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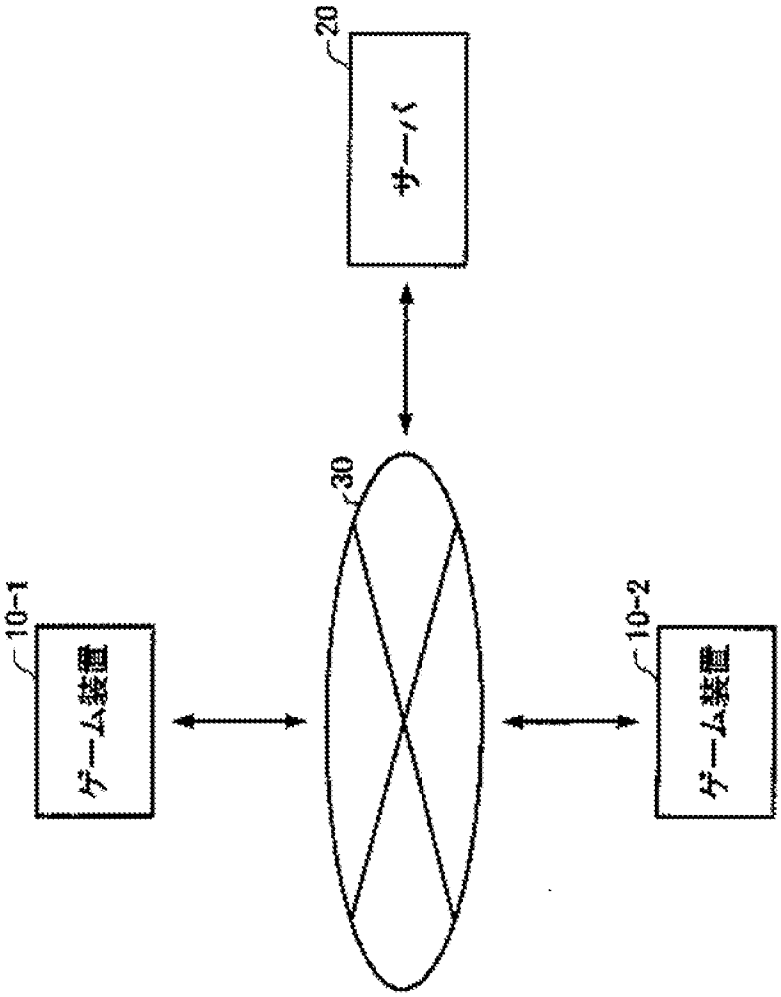
A [FIG. 14]



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A [FIG. 8]

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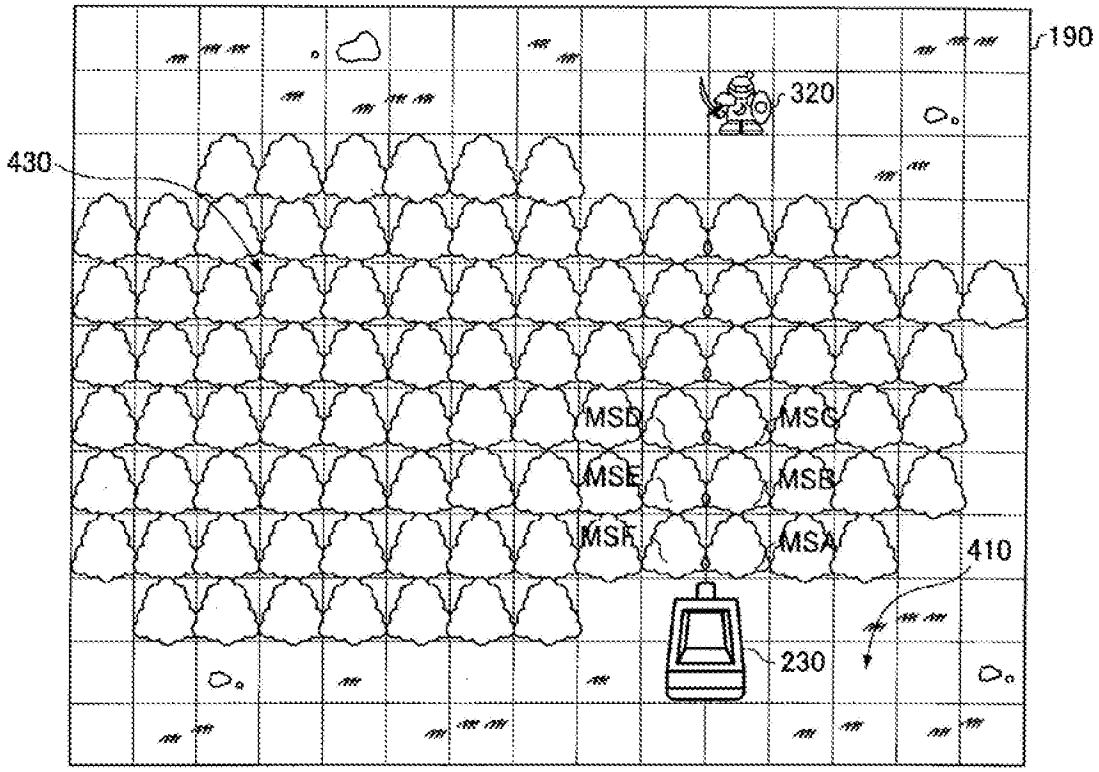
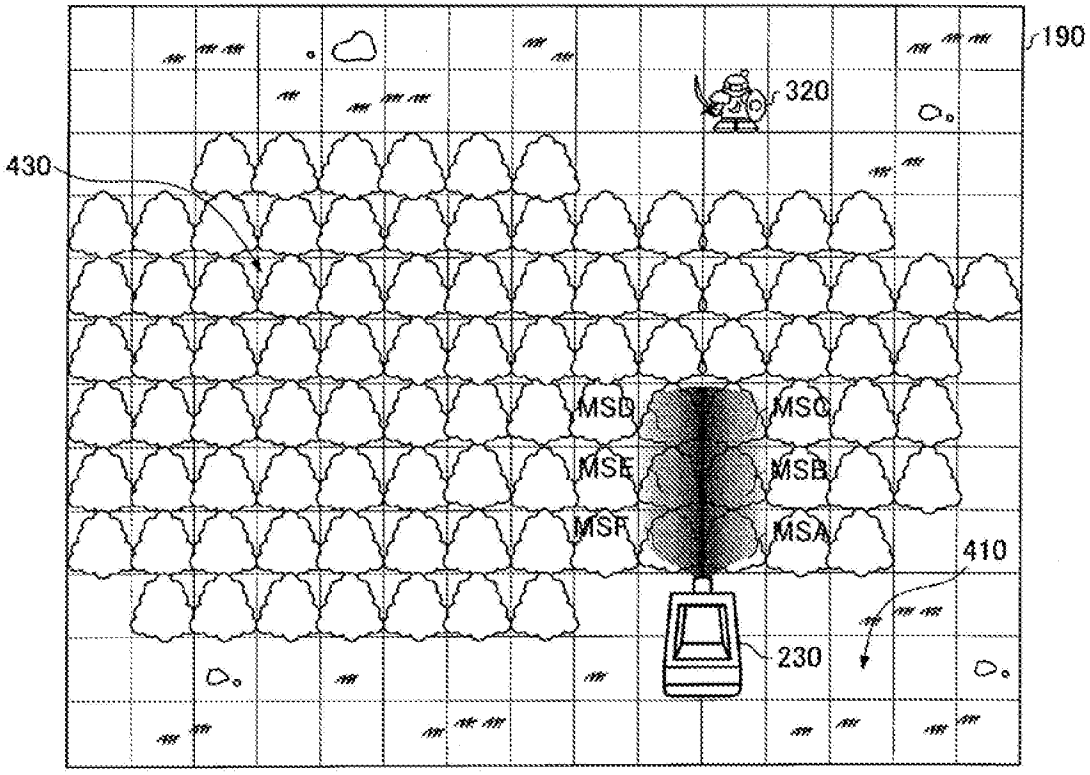
(A)



(B)



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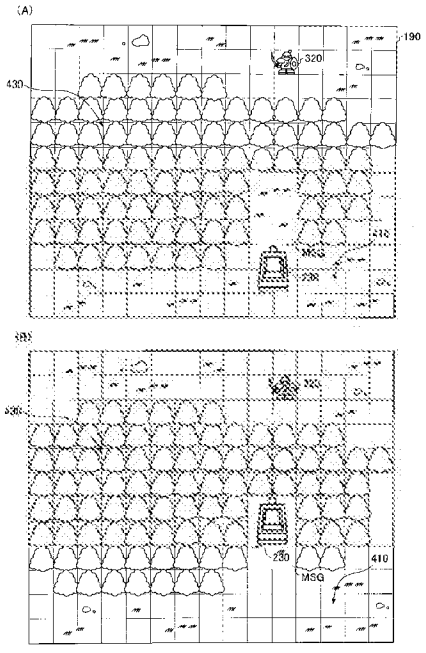
(71)出願人　000134855
株式会社バンダイナムコゲームス
東京都品川区東品川４丁目５番１５号
(74)代理人　100090387
弁理士　布施　行夫
(74)代理人　100090398
弁理士　大渕　美千栄
(74)代理人　100113066
弁理士　永田　美佐
(72)発明者　広野　啓
東京都品川区東品川四丁目５番１５号　株式会社バンダイナムコゲームス内

Fターム(参考)　2C001 AA03 BA06 BC05 CA00 CB01 CB03 CB06 CB08 CC01 CC08 DA04

(54)【発明の名称】プログラム、情報記憶媒体、およびゲーム装置

(57)【要約】
【課題】戦略性に富み、効率的にゲームを進行することができるプログラム、情報記憶媒体、およびゲーム装置を提供する。
【解決手段】マップを構成するマスをユニットの行動単位として、自ユニット群のユニットと敵ユニット群のユニットとの対戦を行うゲームであって、少なくとも移動、攻撃および第１の特殊能力を含む行動群の中からユニットの行動を決定し、ユニットの行動が移動に決定されたことに基づいて、当該ユニットを移動可能範囲内で移動させる制御を行い、ユニットの行動が攻撃に決定されたことに基づいて、当該ユニットを攻撃可能範囲内で攻撃させる制御を行い、ユニットの行動が第１の特殊能力に決定されたことに基づいて、第１の特殊能力の影響がおよぶ複数のマスを結合するマス結合イベントを発生させる。
【選択図】図９



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【特許請求の範囲】
【請求項１】
マップを構成するマスをユニットの行動単位として、自ユニット群のユニットと敵ユニット群のユニットとの対戦を行うゲームのためのプログラムであって、
少なくとも移動、攻撃および第１の特殊能力を含む行動群の中からユニットの行動を決定する行動決定部と、
ユニットの行動が前記移動に決定されたことに基づいて、当該ユニットを移動可能範囲内で移動させる制御を行う移動制御部と、
ユニットの行動が前記攻撃に決定されたことに基づいて、当該ユニットを攻撃可能範囲内で攻撃させる制御を行う攻撃制御部と、
ユニットの行動が前記第１の特殊能力に決定されたことに基づいて、前記第１の特殊能力の影響がおよぶ複数のマスを結合するマス結合イベントを発生させるイベント発生部としてコンピュータを機能させることを特徴とするプログラム。
【請求項２】
請求項１において、
各マスには、前記移動可能範囲に影響を与える属性が設定されており、
前記マス結合イベントによって結合されたマスの属性を変更するマス属性変更部として更にコンピュータを機能させることを特徴とするプログラム。
【請求項３】
請求項１または２において、
前記マス結合イベントによって結合されたマスの画像を変更する表示制御を行う表示制御部として更にコンピュータを機能させることを特徴とするプログラム。
【請求項４】
請求項１～３のいずれかにおいて、
前記イベント発生部が、
前記マス結合イベントとして、複数のユニットを合体させるとともに合体後のユニットが配置される複数のマスを結合する合体イベントを発生させ、
前記移動制御部が、
前記合体イベントによって結合されたマスを合体後のユニットの移動単位として、当該合体後のユニットを移動させ、
前記攻撃制御部が、
前記合体イベントによって結合されたマスを合体後のユニットの攻撃単位として、当該合体後のユニットを攻撃させることを特徴とするプログラム。
【請求項５】
請求項１～４のいずれかにおいて、
前記行動群には、第２の特殊能力が更に含まれ、
前記イベント発生部が、
ユニットの行動が前記第２の特殊能力に決定されたことに基づいて、前記マス結合イベントによって結合されたマスを分解するマス分解イベントを発生させることを特徴とするプログラム。
【請求項６】
請求項１～５のいずれかにおいて、
各ユニットは、１回の行動フェイズにおいて複数の行動を実行可能に設定されており、
前記行動決定部が、
前記敵ユニット群の行動フェイズにおいて、マスを結合することによって前記敵ユニット群のユニットが前記自ユニット群のユニットに攻撃可能となることを条件に、前記敵ユニット群のユニットの行動を少なくとも前記移動、前記攻撃、および前記第１の特殊能力に決定し、
前記イベント発生部が、
前記マス結合イベントを発生させ、

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前記移動制御部が、
マス結合後のマップにおいて、前記敵ユニット群のユニットを前記移動可能範囲内で移動させ、
前記攻撃制御部が、
マス結合後のマップにおいて、前記攻撃可能範囲に配置されている前記自ユニット群のユニットに対する前記敵ユニット群のユニットの攻撃制御を行うことを特徴とするプログラム。
【請求項７】
請求項６において、
前記行動決定部が、
前記敵ユニット群の行動フェイズにおいて、前記敵ユニット群のユニットの前記移動可能範囲と前記攻撃可能範囲を加算した行動可能範囲内に前記自ユニット群のユニットが配置されているか否かを判定する第１の判定処理を行うとともに、前記マス結合イベントによってマスを結合した場合に前記行動可能範囲内に前記自ユニット群のユニットが配置されているか否かを判定する第２の判定処理を行い、
前記第１の判定処理において前記行動可能範囲内に前記自ユニット群のユニットが配置されていないと判定するとともに、前記第２の判定処理において前記行動可能範囲内に前記自ユニット群のユニットが配置されていると判定した場合に、前記敵ユニット群のユニットの行動を少なくとも前記移動、前記攻撃および前記第１の特殊能力に決定することを特徴とするプログラム。
【請求項８】
コンピュータにより読取可能な情報記憶媒体であって、請求項１～７のいずれかに記載のプログラムを記憶することを特徴とする情報記憶媒体。
【請求項９】
マップを構成するマスをユニットの行動単位として、自ユニット群のユニットと敵ユニット群のユニットとの対戦を行うゲームのためのゲーム装置であって、
少なくとも移動、攻撃および第１の特殊能力を含む行動群の中からユニットの行動を決定する行動決定部と、
ユニットの行動が前記移動に決定されたことに基づいて、当該ユニットを移動可能範囲内で移動させる制御を行う移動制御部と、
ユニットの行動が前記攻撃に決定されたことに基づいて、当該ユニットを攻撃可能範囲内で攻撃させる制御を行う攻撃制御部と、
ユニットの行動が前記第１の特殊能力に決定されたことに基づいて、前記第１の特殊能力の影響がおよぶ複数のマスを結合するマス結合イベントを発生させるイベント発生部とを含むことを特徴とするゲーム装置。
【発明の詳細な説明】
【技術分野】
【０００１】
本発明は、プログラム、情報記憶媒体、およびゲーム装置に関する。
【背景技術】
【０００２】
従来から、戦争などの戦闘を再現したシミュレーションゲームが知られている（例えば、特許文献１）。このようなシミュレーションゲームでは、戦闘に参加する部隊、キャラクタ、戦艦などをユニットと呼ばれる駒に見立てて、マップを構成するマス単位で移動や攻撃などの行動を行わせる。
【特許文献１】特開２００２－６５９３７号公報
【発明の開示】
【発明が解決しようとする課題】
【０００３】
ところで、従来のシミュレーションゲームでは、ユニットの行動単位となるマスが固定

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的に設定されていたため、ユニットの行動パターンのバリエーションが乏しく、戦略性に欠けるという問題があった。

【０００４】

また、シミュレーションゲームに登場するユニットの数に対してマップが大きい場合（マップを構成するマスの数が多い場合）、ユニット同士が遭遇するまでに時間がかかるため、効率的にゲームを進行することができないという問題もある。

【０００５】

本発明は上記事情に鑑みてなされたものであり、その目的は、戦略性に富み、効率的にゲームを進行することができるプログラム、情報記憶媒体、およびゲーム装置を提供することにある。

【課題を解決するための手段】

【０００６】

（１）本発明は、マップを構成するマスをユニットの行動単位として、自ユニット群のユニットと敵ユニット群のユニットとの対戦を行うゲームのためのゲーム装置であって、少なくとも移動、攻撃および第１の特殊能力を含む行動群の中からユニットの行動を決定する行動決定部と、ユニットの行動が前記移動に決定されたことに基づいて、当該ユニットを移動可能範囲内で移動させる制御を行う移動制御部と、ユニットの行動が前記攻撃に決定されたことに基づいて、当該ユニットを攻撃可能範囲内で攻撃させる制御を行う攻撃制御部と、ユニットの行動が前記第１の特殊能力に決定されたことに基づいて、前記第１の特殊能力の影響がおよぶ複数のマスを結合するマス結合イベントを発生させるイベント発生部とを含むゲーム装置に関する。

【０００７】

また本発明は、上記各部としてコンピュータを機能させるプログラム、および上記各部としてコンピュータを機能させるプログラムを記憶するコンピュータ読み取り可能な情報記憶媒体に関する。

【０００８】

本発明によれば、マス結合イベントによって複数のマスが結合されるため、マス結合前に比べてユニットの行動範囲（移動範囲や攻撃範囲など）が広がることになる。従って、ユニットの行動パターンのバリエーションが増え、戦略性に富んだゲームとすることができるとともに、敵ユニット群のユニットとの遭遇機会も増え、効率的にゲームを進行することもできる。

【０００９】

（２）また本発明のゲーム装置、プログラム、および情報記憶媒体では、各マスに、前記移動可能範囲に影響を与える属性を設定し、前記マス結合イベントによって結合されたマスの属性を変更するマス属性変更部を更に含めるようにしてもよい。

【００１０】

このようにすると、マス結合イベントによって結合されたマスの属性が変更されるため、ユニットの移動可能範囲を変化させることができ、より戦略性に富んだゲームとすることができる。

【００１１】

（３）また本発明のゲーム装置、プログラム、および情報記憶媒体では、前記マス結合イベントによって結合されたマスの画像を変更する表示制御を行う表示制御部を更に含めるようにしてもよい。

【００１２】

（４）また本発明のゲーム装置、プログラム、および情報記憶媒体では、前記イベント発生部が、前記マス結合イベントとして、複数のユニットを合体させるとともに合体後のユニットが配置される複数のマスを結合する合体イベントを発生させ、前記移動制御部が、前記合体イベントによって結合されたマスを合体後のユニットの移動単位として、当該合体後のユニットを移動させ、前記攻撃制御部が、前記合体イベントによって結合されたマスを合体後のユニットの攻撃単位として、当該合体後のユニットを攻撃させるようにし

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てもよい。

【００１３】

このようにすると、合体イベントによって合体されたユニットの行動を、合体イベントによって結合されたマスを行動単位として実行することができるため、より戦略性に富んだゲームとすることができるとともに、敵ユニット群のユニットとの遭遇機会も増え、より効率的にゲームを進行することもできる。

【００１４】

（５）また本発明のゲーム装置、プログラム、および情報記憶媒体では、前記行動群に、第２の特殊能力を更に含み、前記イベント発生部が、ユニットの行動が前記第２の特殊能力に決定されたことに基づいて、前記マス結合イベントによって結合されたマスを分解するマス分解イベントを発生させるようにしてもよい。

【００１５】

このようにすると、マス結合イベントによって結合されたマスをマス分解イベントによって分解することができるため、より戦略性に富んだゲームとすることができる。

【００１６】

（６）また本発明のゲーム装置、プログラム、および情報記憶媒体では、各ユニットは、１回の行動フェイズにおいて複数の行動を実行可能に設定し、前記行動決定部が、前記敵ユニット群の行動フェイズにおいて、マスを結合することによって前記敵ユニット群のユニットが前記自ユニット群のユニットに攻撃可能となることを条件に、前記敵ユニット群のユニットの行動を少なくとも前記移動、前記攻撃、および前記第１の特殊能力に決定し、前記イベント発生部が、前記マス結合イベントを発生させ、前記移動制御部が、マス結合後のマップにおいて、前記敵ユニット群のユニットを前記移動可能範囲内で移動させ、前記攻撃制御部が、マス結合後のマップにおいて、前記攻撃可能範囲に配置されている前記自ユニット群のユニットに対する前記敵ユニット群のユニットの攻撃制御を行うようにしてもよい。

【００１７】

このようにすると、マスを結合することによって敵ユニット群のユニットが自ユニット群のユニットに攻撃可能となる場合に、敵ユニット群のユニットがマス結合イベントを発生させるとともに、自ユニット群のユニットに対する攻撃を行うことになるため、敵ユニット群のユニットが戦略的にマス結合イベントを発生させることになり、敵ユニット群のユニットとの対戦の趣向性を高めることができる

（７）また本発明のゲーム装置、プログラム、および情報記憶媒体では、前記行動決定部が、前記敵ユニット群の行動フェイズにおいて、前記敵ユニット群のユニットの前記移動可能範囲と前記攻撃可能範囲を加算した行動可能範囲内に前記自ユニット群のユニットが配置されているか否かを判定する第１の判定処理を行うとともに、前記マス結合イベントによってマスを結合した場合に前記行動可能範囲内に前記自ユニット群のユニットが配置されているか否かを判定する第２の判定処理を行い、前記第１の判定処理において前記行動可能範囲内に前記自ユニット群のユニットが配置されていないと判定するとともに、前記第２の判定処理において前記行動可能範囲内に前記自ユニット群のユニットが配置されていると判定した場合に、前記敵ユニット群のユニットの行動を少なくとも前記移動、前記攻撃および前記第１の特殊能力に決定するようにしてもよい。

【発明を実施するための最良の形態】

【００１８】

以下、本発明の実施の形態（本実施形態）について説明する。なお、以下に説明する本実施形態は特許請求の範囲に記載された本発明の内容を不当に限定するものではない。また、本実施形態で説明される構成の全てが本発明の必須構成要件であるとは限らない。

【００１９】

１．ゲーム装置の機能ブロック

図１は、本実施形態のゲーム装置の機能ブロック図の一例である。なお本実施形態のゲーム装置は、図１の構成要素（各部）を全て含む必要はなく、その一部を省略した構成と

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してもよい。

【００２０】

操作部１６０は、プレーヤが行った操作を操作情報として入力するためのものであり、その機能は、コントローラ、レバー、ボタン，マウス、キーボード、マイク、トラックボール、タッチパネルなどにより実現できる。

【００２１】

情報記憶媒体１８０（コンピュータにより読み取り可能な媒体）は、プログラムやデータ（具体的には、本実施形態の各部としてコンピュータを機能させるためのプログラムやデータ）などを格納するものであり、その機能は、光ディスク（ＣＤ、ＤＶＤ等）、光磁気ディスク（ＭＯ）、磁気ディスク、ハードディスク、磁気テープ、或いはメモリ（ＲＯＭ）などのハードウェアにより実現できる。

【００２２】

記憶部１７０は、処理部１００や通信部１９４などのワーク領域や、情報記憶媒体１８０から展開されたプログラムやデータの格納領域となるもので、その機能はＲＡＭ（ＶＲＡＭ）などのハードウェアにより実現できる。記憶部１７０は，主記憶部１７１、マス属性記憶部１７２、ステータスパラメータ記憶部１７３、描画バッファ１７４を含んで構成される。なお、これらの一部を省略する構成としてもよい。

【００２３】

表示部１９０は，処理部１００により生成された画像を出力するものであり，その機能は、ＣＲＴディスプレイ、ＬＣＤ（液晶ディスプレイ）、ＯＥＬＤ(有機ＥＬディスプレイ)、ＰＤＰ（プラズマディスプレイパネル）、タッチパネル型ディスプレイ、或いはＨＭＤ（ヘッドマウントディスプレイ）などにより実現できる。

【００２４】

音出力部１９２は、処理部１００により生成された音を出力するものであり、その機能は、スピーカ、あるいはヘッドフォンなどにより実現できる。

【００２５】

通信部１９４は、外部（例えばサーバや他のゲーム装置）との間で通信を行うものであり，その機能は、各種プロセッサ又は通信用ＡＳＩＣなどにより実現できる。

【００２６】

なお、本実施形態の各部としてコンピュータを機能させるためのプログラム（データ）を、サーバが有する情報記憶媒体からネットワーク及び通信部１９４を介して情報記憶媒体１８０（記憶部１７０）に配信するようにしてもよい。このようなサーバの情報記憶媒体の使用も本発明の範囲に含まれる。

【００２７】

処理部１００（プロセッサ）は、操作部１６０からの操作情報や情報記憶媒体１８０から記憶部１７０に展開されたプログラムやデータなどに基づいて、主記憶部１７１をワーク領域として、ゲーム処理、画像生成処理、あるいは音生成処理などの各種処理を行う。ゲーム処理としては、ゲーム開始条件が満たされた場合にゲームを開始する処理、ゲームを進行させる処理、ユニット、マップなどのオブジェクトを配置する処理、オブジェクトを表示する処理、ゲーム結果を演算する処理，あるいはゲーム終了条件が満たされた場合にゲームを終了する処理などを行う。処理部１００の機能は、各種プロセッサ（ＣＰＵ、ＤＳＰ等）、ＡＳＩＣ（ゲートアレイ等）などのハードウェアや，プログラムにより実現できる。

【００２８】

処理部１００は、ゲーム進行制御部１１０、行動決定部１１２、イベント発生部１１４、移動制御部１１６、攻撃制御部１１８、マス属性変更部１２０、表示制御部１２２、パラメータ更新部１２４、通信制御部１２６、描画部１４０、音生成部１５０を含んで構成される。なお、これらの一部を省略する構成としてもよい。

【００２９】

ゲーム進行制御部１１０は、マップを構成するマスをユニットの行動単位として、自ユ

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ニット群のユニットと敵ユニット群のユニットとの対戦を行うゲームの進行制御を行う。

【００３０】

具体的には、ゲームの開始に伴い、ゲーム空間内に複数のマスから構成されるマップを配置するとともに、キャラクタや移動体などのユニットをマス上に配置する。そして、自ユニット群の各ユニットを行動させる自ユニット群の行動フェイズと敵ユニット群の各ユニットを行動させる敵ユニット群の行動フェイズとを１ターンとするターン制でゲームを進行させ、ゲーム終了条件が成立するまでの間ターンを繰り返す。なお「ゲーム終了条件」とは、例えば、敵ユニット群のユニットを全滅させること、敵ユニット群の特定のユニットを倒すこと、制限時間が経過することなどが該当する。また本実施形態では、各ユニットは、１回の行動フェイズにおいて複数の行動を実行可能に設定されている。例えば、１回の行動フェイズにおいて各行動を少なくとも１回ずつ実行可能に設定してもよいし、行動を実行するために必要なポイントを行動毎に設定するとともに、１回の行動フェイズにおいてユニットが使用できるポイントを設定し、ユニットが使用できるポイントの範囲内で行動を実行するようにしてもよい。

【００３１】

行動決定部１１２は、少なくとも移動、攻撃および第１の特殊能力を含む行動群の中からユニットの行動を決定する。なお、行動群の中に第２の特殊能力を含むようにしてもよい。

【００３２】

行動決定部１１２は、プレーヤが１人プレイを行う場合には、自ユニット群のユニットの行動をプレーヤの操作情報に基づいて決定し、敵ユニット群のユニットの行動を所定のアルゴリズムに基づいて決定する。例えば、敵ユニット群の行動フェイズにおいて、マスを結合することによって敵ユニット群のユニットが自ユニット群のユニットに攻撃可能となる場合には、敵ユニット群のユニットの行動を少なくとも移動、攻撃、および第１の特殊能力に決定する。具体的には、敵ユニット群の行動フェイズにおいて、敵ユニット群のユニットの移動可能範囲と攻撃可能範囲を加算した行動可能範囲内に自ユニット群のユニットが配置されているか否かを判定する第１の判定処理を行うとともに、マス結合イベントによってマスを結合した場合に行動可能範囲内に自ユニット群のユニットが配置されているか否かを判定する第２の判定処理を行い、第１の判定処理において行動可能範囲内に自ユニット群のユニットが配置されていないと判定するとともに、第２の判定処理において行動可能範囲内に自ユニット群のユニットが配置されていると判定した場合に、敵ユニット群のユニットの行動を少なくとも移動、攻撃および第１の特殊能力に決定する。

【００３３】

また行動決定部１１２は、プレーヤが他のプレーヤとの対戦プレイを行う場合には、プレーヤの操作情報に基づいて自ユニット群のユニットの行動を決定し、他のプレーヤの操作情報に基づいて敵ユニット群のユニットの行動を決定する。

【００３４】

イベント発生部１１４は、ユニットの行動が第１の特殊能力に決定されたことに基づいて、第１の特殊能力の影響がおよぶ複数のマスを結合するマス結合イベントを発生させる。第１の特殊能力とは、ユニットの合体、ユニットの変形、アイテムの使用、魔法の使用などが該当する。例えば、ユニットの行動がユニットの合体に決定された場合には、マス結合イベントとして、複数のユニットを合体させるとともに合体後のユニットが配置される複数のマスを結合する合体イベントを発生させる。なお、マス結合イベントによって結合されたマスは他のマスと同様に１マスとして扱われる。

【００３５】

またイベント発生部１１４は、ユニットの行動が第２の特殊能力に決定されたことに基づいて、マス結合イベントによって結合されたマスを分解するマス分解イベントを発生させる。第２の特殊能力とは、ユニットの分解、ユニットの変形、アイテムの使用、魔法の使用などが該当する。

【００３６】

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移動制御部１１６は、ユニットの行動が移動に決定されたことに基づいて、ユニットを移動可能範囲内で移動させる制御を行う。なおユニットの移動可能範囲は、マップ情報記憶部１７２に記憶されているマップを構成するマスの属性情報、ステータスパラメータ記憶部１７３に記憶されているユニットのステータスパラメータに応じて決定される。

【００３７】

また移動制御部１１６は、合体イベントが発生した場合には、合体イベントによって結合された大きさのマスを合体後のユニットの移動単位として、合体後のユニットを移動させる制御を行う。

【００３８】

攻撃制御部１１８は、ユニットの行動が攻撃に決定されたことに基づいて、ユニットを攻撃可能範囲内で攻撃させる制御を行う。なおユニットの攻撃可能範囲は、ステータスパラメータ記憶部１７３に記憶されているステータスパラメータに応じて決定される。

【００３９】

また攻撃制御部１１８は、合体イベントが発生した場合には、合体イベントによって結合された大きさのマスを合体後のユニットの攻撃単位として、合体後のユニットを攻撃させる。

【００４０】

マス属性変更部１２０は、マス結合イベントによって結合されたマスの属性情報を変更する処理を行う。具体的には、マップ情報記憶部１７２に記憶されているマップを構成するマスの中から、マス結合イベントによって結合されたマスの属性情報を変更する処理を行う。なおマップ情報記憶部１７２には、マップを構成するマス毎に属性情報が記憶されている。

【００４１】

表示制御部１２２は、表示部１９０に表示される画像（オブジェクト画像）の表示制御を行う。具体的には、ユニット（キャラクタ、車、飛行機などの移動体）、マップ（地形）などの表示すべきオブジェクトを発生させたり、オブジェクトの表示や表示位置を指示したり、オブジェクトを消滅させたりするなどの表示制御を行う。即ち、発生したオブジェクトをオブジェクトリストに登録したり、オブジェクトリストを描画部１４０等に転送したり、消滅したオブジェクトをオブジェクトリストから削除したりするなどの表示制御を行う。また、ユニット（２次元データ又は３次元データで定義される表示物）の移動、攻撃あるいはイベントが発生した場合に、発生した移動、攻撃あるいはイベントの様子を示す画像を表示部１９０に表示するための制御を行う。例えば、マス結合イベントが発生した場合には、マス結合イベントによって結合されたマスの画像を他の画像に変更する表示制御を行う。

【００４２】

パラメータ更新部１２４は、ステータスパラメータ記憶部１７３に記憶されたユニットのステータスパラメータ（例えば、体力、移動力、攻撃力、防御力など）を更新する処理を行う。例えば、ユニットのレベルが上がった場合にユニットの各種パラメータを増大させたり、対戦相手のユニットの攻撃を受けた場合に体力を減少させたりする処理を行う。

【００４３】

通信制御部１２６は、データ（パケット）の送受信に関する通信部１９４の制御として、サーバあるいは他のゲーム装置に送信するデータを生成する処理、データ送信先のネットワークアドレスを指定する処理、受信したデータを主記憶部１７１に保存する処理、受信したデータを解析する処理などを行う。

【００４４】

描画部１４０は、処理部１００で行われるゲーム処理などの結果に基づいて描画処理を行い、これにより画像を生成し、表示部１９０に出力する。なお、描画部１４０が生成する画像は、いわゆる２次元画像であってもよいし、３次元画像であってもよい。

【００４５】

２次元画像を生成する場合には、優先度の高いオブジェクトが優先度の低いオブジェク

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トの前面に表示されるようにオブジェクトを合成して描画データを作成する。そして、この描画データに基づいて、合成後のオブジェクトを描画バッファ１７４（フレームバッファあるいは中間バッファなどのピクセル単位で画像情報を記憶できるバッファ。ＶＲＡＭ）に描画して、２次元画像を生成する。

【００４６】

３次元画像を生成する場合には、まず、座標変換（ワールド座標変換、カメラ座標変換）、クリッピング処理、或いは透視変換等のジオメトリ処理を行い、その処理結果に基づいて、描画データ（プリミティブの頂点の位置座標、テクスチャ座標、色データ、法線ベクトル或いはα値等）を作成する。そして、この描画データ（プリミティブデータ）に基づいて、透視変換後（ジオメトリ処理後）のオブジェクト（１又は複数プリミティブ）を描画バッファ１７４に描画する。これにより、ゲーム空間内において仮想カメラ（所与の視点）から見える画像を生成する。

【００４７】

なお、本実施形態のゲーム装置は、１人のプレーヤのみがプレイできるシングルプレーヤモード専用のゲーム装置にしてもよいし、複数のプレーヤがプレイできるマルチプレーヤモードも備えるゲーム装置にしてもよい。また複数のプレーヤがプレイする場合に、これらの複数のプレーヤに提供するゲーム画像やゲーム音を、サーバあるいは１つのゲーム装置を用いて生成してもよいし、ネットワークを介して接続されたサーバや複数のゲーム装置を用いて分散処理により生成してもよい。

【００４８】

３、本実施形態の手法

以下、図２～図１４を参照しながら本実施形態のゲーム装置で行われるシミュレーションゲームの制御手法について説明する。

【００４９】

３－１．ゲームの概要

図２～図６を参照しながら本実施形態のシミュレーションゲームの概要について説明する。図２は、シミュレーションゲームのゲーム画像の一例を示す図であり、図３は、シミュレーションゲームのゲームの進行の流れの一例を示すフローチャート図であり、図４は、キャラクタ２１０のステータスパラメータの一例を説明するための図であり、図５（Ａ）～図５（Ｃ）は、キャラクタ２１０の移動可能範囲の一例を説明するための図であり、図６（Ａ）、図６（Ｂ）は、キャラクタ２１０の攻撃可能範囲の一例を説明するための図である。

【００５０】

まず、本実施形態のシミュレーションゲームの進行の流れについて説明する。

【００５１】

本実施形態のシミュレーションゲームは、図２に示すように、複数のマスから構成されるマップ上に配置された自ユニット群のユニット（具体的には、キャラクタ２１０、キャラクタ２２０、戦車２３０、キャラクタ２４０、キャラクタ２５０）と、敵ユニット群のユニット（具体的には、キャラクタ３１０、キャラクタ３２０）とを対戦させるゲームであり、自ユニット群の各ユニットを行動させる自ユニット群の行動フェイズと敵ユニット群の各ユニットを行動させる敵ユニット群の行動フェイズとを１ターンとするターン制でゲームを進行させている。

【００５２】

例えば自ユニット群が先行である場合には、図３に示すように、自ユニット群の行動フェイズからゲームが開始され、基本的に自ユニット群の全てのユニットの行動が終了するまでの間、自ユニット群の各ユニットを行動させる（ステップＳ１０、ステップＳ１４でＮ）。但し、必ずしも自ユニット群の全てのユニットを行動させる必要はなく、特定のユニットの行動をパスしてもよい。また、自ユニット群のユニットの行動により敵ユニット群のユニットを全滅させた場合には（ステップＳ１２でＹ）、ステージクリアとなり次ステージに移行する。一方、敵ユニット群のユニットを全滅させることなく（ステップＳ１

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２でＮ）、自ユニット群の全てのユニットの行動が終了した場合には（ステップＳ１４でＹ）、自ユニット群の行動フェイズが終了し、敵ユニット群の行動フェイズが開始される。

【００５３】

敵ユニット群の行動フェイズが開始されると、基本的に敵ユニット群の全てのユニットの行動が終了するまでの間、敵ユニット群の各ユニットを行動させる（ステップＳ１６、ステップＳ２０でＮ）。但し、必ずしも敵ユニット群の全てのユニットを行動させる必要はなく、特定のユニットの行動をパスしてもよい。また、敵ユニット群のユニットの行動により自ユニット群のユニットが全滅した場合には（ステップＳ１８でＹ）、ゲームオーバーとなる。一方、自ユニット群のユニットが全滅することなく（ステップＳ１８でＮ）、敵ユニット群の全てのユニットの行動が終了した場合には（ステップＳ２０でＹ）、敵ユニット群の行動フェイズの終了とともに１ターンが終了し、次のターンの自ユニット群の行動フェイズに突入する（ステップＳ１０）。以後、勝敗がつくまでの間、ターンを繰り返す。

【００５４】

次に、本実施形態のシミュレーションゲームのマップについて説明する。

【００５５】

本実施形態のシミュレーションゲームでは、図２に示すように、正方形の複数のマスから構成されるスクエア型マップを採用しており、このマスが各ユニットの行動単位となっている。なお、スクエア型マップ以外に、例えば、正六角形の複数のマスから構成されるヘクス型マップや、自由な形状の複数のマスから構成されるプロヴァンス型マップを採用するようにしてもよい。

【００５６】

また各マスには、地形属性（具体的には、平地４１０、草原４２０、森４３０、川４４０）が設定されており。この地形属性が各ユニットの行動に影響を与える。なお各マスの地形属性情報は、マップ情報記憶部１７２にマップ毎に記憶されている。

【００５７】

次に、本実施形態のシミュレーションゲームでのユニットの行動について説明する。

【００５８】

本実施形態のシミュレーションゲームでは、ユニットの能力値を示すステータスパラメータが各ユニットに設定されており、各ユニットはこのステータスパラメータに基づいて、マスを行動単位として行動を行う。なおステータスパラメータは、ステータスパラメータ記憶部１７３にユニット毎に記憶されている。

【００５９】

キャラクタ２１０を例に取り説明すると、図４に示すように、ステータスパラメータとして、レベル、経験値、体力、移動力、地形適正、攻撃力、防御力、特殊能力、武器などの各種パラメータが設定されている。

【００６０】

「レベル」とは、キャラクタ２１０のランクを示すパラメータであり、レベルアップすると、他のパラメータ（例えば、攻撃力や移動力）の値が上昇する。

【００６１】

「経験値」とは、レベルアップに必要な値を示すパラメータであり、敵ユニット群のユニットを倒すことで経験値を獲得できる。図４に示す例では、現在の経験値が１００となっており、経験値が５００になるとレベルアップすることになる。

【００６２】

「体力」とは、キャラクタ２１０の生命力を示すパラメータであり、対戦相手のユニットの攻撃を受け０になると、キャラクタ２１０は行動できなくなる。

【００６３】

「移動力」とは、キャラクタ２１０の移動可能範囲を示すパラメータである。図４に示す例では、値が３となっており、最大３マス移動可能となっている。

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【００６４】
「地形適正」とは、各マスに設定された地形属性との相性を示すパラメータであり、移動力の値に地形適正の値を加算した値が実際の移動可能範囲となる。
【００６５】
図４に示すように、キャラクタ２１０の平地４１０に対する地形適正は０となっているため、図５（Ａ）に示すように、キャラクタ２１０は平地４１０のエリアでは、移動力通り最大３マス（囲み線５１０で囲まれた範囲内で）移動することができる。なお、草原４２０についても同様である。また図４に示すように、キャラクタ２１０の森４３０に対する地形適正は－１となっているため、図５（Ｂ）に示すように、キャラクタ２１０は森４３０のエリアでは、最大でも２マス（囲み線５２０で囲まれた範囲内で）しか移動することができない。また図４に示すように、キャラクタ２１０の川４４０に対する地形適正は－２となっているため、図５（Ｃ）に示すように、キャラクタ２１０は川４４０のエリアでは、最大でも１マス（囲み線５３０で囲まれた範囲内で）しか移動することができない。
【００６６】
「攻撃力」とは、キャラクタ２１０が敵ユニット群のユニットに攻撃した際に、敵ユニット群のユニットに与えるダメージの大きさに影響するパラメータであり、この値が大きいほど敵ユニット群のユニットに与えるダメージ（敵ユニット群のユニットの体力の減少量）を大きくすることができる。
【００６７】
「防御力」とは、キャラクタ２１０が敵ユニット群のユニットに攻撃された際に、キャラクタ２１０が受けるダメージの大きさに影響するパラメータであり、この値が大きいほどキャラクタ２１０が受けるダメージ（キャラクタ２１０の体力の減少量）を小さくすることができる。
【００６８】
「特殊能力」とは、キャラクタ２１０が発揮できる特別な能力であり、キャラクタ（ユニット）同士の合体や合体後の分解などがある。なお、特殊能力の詳細については後述する。
【００６９】
「武器」とは、キャラクタ２１０が敵ユニット群のユニットを攻撃する際に使用するものであり、武器毎に攻撃可能範囲（射程範囲）が設定されている。なお、攻撃可能範囲以外に、攻撃可能方向、攻撃力、命中率、地形適正などのパラメータを武器毎に設定するようにしてもよい。
【００７０】
図４に示すように、刀の攻撃可能範囲は１となっているため、図６（Ａ）に示すように、キャラクタ２１０は、キャラクタ２１０が配置されているマスから１マス以内にいる敵ユニット群のユニット（囲み線５４０で囲まれた範囲内にいる敵ユニット群のユニット）に対して攻撃することができる。つまり図６（Ａ）に示す例では、キャラクタ２１０は刀を用いて攻撃する場合、キャラクタ３１０に対しては攻撃できるが、キャラクタ３２０に対しては攻撃できないことになる。また図４に示すように、ライフルの攻撃可能範囲は３となっているため、図６（Ｂ）に示すように、キャラクタ２１０は、キャラクタ２１０が配置されているマスから３マス以内にいる敵ユニット群のユニット（囲み線５５０で囲まれた範囲内にいる敵ユニット群のユニット）に対して攻撃することができる。つまり図６（Ｂ）に示す例では、キャラクタ２１０はライフルを用いて攻撃する場合、キャラクタ３１０、キャラクタ３２０のいずれに対しても攻撃できることになる。
【００７１】
３－２．マス結合および分解手法
図７～図１０を参照しながら本実施形態のシミュレーションゲームのマス結合および分解手法について説明する。図７は、戦車２３０のステータスパラメータの一例を説明するための図であり、図８、図９は、戦車２３０の特殊効力によるマス結合手法の一例を説明

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するための図であり、図１０は、キャラクタ２１０等の特殊効力によるマス結合手法の一例を説明するための図である。

【００７２】

まず，戦車２３０の特殊能力によるマス結合手法について説明する。

【００７３】

戦車２３０のステータスパラメータは，図７に示す通りである。なお戦車２３０は、川４４０に対する地形適正を有していないため、川４４０を移動することはできない。また戦車２３０は，１マス分の領域ではなく４マス分の領域に配置されているが、行動は１マス単位で行う。

【００７４】

図７に示すように、戦車２３０の武器は大砲であり、その攻撃可能範囲は、戦車２３０が配置されているマスから５マス以内に設定されている。また図７に示すように、戦車２３０の移動力は２であり、平地４１０に対する地形適正は０であり、森４３０に対する地形適正は－１であるため、戦車２３０は、平地４１０のエリアでは最大２マス移動することができ、森４３０のエリアでは最大１マス移動することができる。

【００７５】

ところで図８（Ａ）に示す例では、戦車２３０とキャラクタ３２０とは９マス離れているため，自ユニット群の行動フェイズにおいて戦車２３０を移動させただけでは、キャラクタ３２０が戦車２３０の攻撃可能範囲に含まれず、戦車２３０はキャラクタ３２０に対して攻撃することはできない。

【００７６】

そこで本実施形態では，戦車２３０の特殊能力である火炎放射を使用して、マスＭＳＡ～マスＭＳＦを結合することによって、１回の行動フェイズでの戦車２３０によるキャラクタ３２０への攻撃を実現する。

【００７７】

まずプレーヤは，図８（Ａ）に示す状態において、戦車２３０の行動を特殊能力である火炎放射に決定する。すると図８（Ｂ）に示すように，マスＭＳＡ～マスＭＳＦの森を燃やす火炎放射イベントが発生し、図９（Ａ）に示すように、マスＭＳＡ～マスＭＳＦが結合されて、マスＭＳＧとなる。この際，マスＭＳＧの地形属性は、マスＭＳＡ～マスＭＳＦの地形属性である森４３０から平地４１０に変更されるとともに、マスＭＳＧの画像も森から平地に変更される。なお、戦車２３０が火炎放射を行う方向、即ちどのマスを結合するかはプレーヤが選択できるようにしてもよい。また、火炎放射イベントの影響がおよぶマスの範囲をステータスパラメータで設定するようにしてもよい。

【００７８】

続いてプレーヤは、火炎放射イベントの後に、戦車２３０の行動を移動に決定し、図９（Ｂ）に示すように、戦車２３０を２マス進めてマスＭＳＧに移動させる。この結果，戦車２３０とキャラクタ３２０との距離は５マスとなるため、キャラクタ３２０が戦車２３０の攻撃可能範囲に含まれることになり、戦車２３０はキャラクタ３２０に対して攻撃することができる。

【００７９】

このように本実施形態では，複数のマスを結合するマス結合イベントによってユニットの行動範囲（移動範囲や攻撃範囲など）を広げることができるため，ユニットの行動パターンのバリエーションが増え、戦略性に富んだゲームとすることができるとともに、敵ユニット群のユニットとの遭遇機会も増え、効率的にゲームを進行することもできる。また，マス結合イベントによって結合されたマスの属性も変更しているため，ユニットの移動可能範囲を変化させることができ，より戦略性に富んだゲームとすることもできる。また，マス結合イベントによって結合されたマスの画像も結合されたマスの属性に応じて変更しているため，プレーヤは結合されたマスの属性を容易に理解することができる。

【００８０】

なお、キャラクタ３２０は、特殊能力としてアイテム（例えば、木の苗）や魔法を使用す

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ることにより，マスＭＳＧをマスＭＳＡ～マスＭＳＦに分解できるようにしてもよい。この際、マス結合前のマスＭＳＡ～マスＭＳＦの地形属性をマスＭＳＧの地形属性である平地４１０から森４３０に変更するとともに、マスＭＳＡ～マスＭＳＦの画像も平地から森に変更するようにしてもよい。このようにすると、より戦略性に富んだゲームとすることができる。

【００８１】

次に、キャラクタ２１０等の特殊能力によるマス結合手法について説明する。

【００８２】

本実施形態では、キャラクタ２１０、キャラクタ２２０、キャラクタ２４０、キャラクタ２５０を合体させることができるように設定されており、各キャラクタを合体させることで合体後のキャラクタが配置される複数のマスを結合する。

【００８３】

プレーヤは、図１０（Ａ）に示すように、各キャラクタを集合させ、集合させたキャラクタのいずれかの行動を特殊能力である合体に決定する。すると、各キャラクタを合体させる合体イベントが発生し、図１０（Ｂ）に示すように、各キャラクタが合体してキャラクタ２６０に変化するとともに、各キャラクタが配置されていたマスＭＳＨ～マスＭＳＫが結合されて、マスＭＳＬとなる。

【００８４】

なお、合体後のキャラクタであるキャラクタ２６０は、結合された４マスを行動単位として行動を行う。つまり、プレーヤが、キャラクタ２６０の行動を移動に決定した場合には，結合された４マスを移動単位としてキャラクタ２６０を移動させる。同様にプレーヤが、キャラクタ２６０の行動を攻撃に決定した場合には、結合された４マスを攻撃単位としてキャラクタ２６０を攻撃させる。例えば、キャラクタ２６０の攻撃可能範囲が３である場合には、キャラクタ２６０が配置されているマスＭＳＬ（結合された４マス）を１マスとして３マス以内にいる敵ユニット群のユニット（囲み線５６０で囲まれた範囲内にいる敵ユニット群のユニット）に対して攻撃することができる。従ってキャラクタ２６０は、キャラクタ３２０に対して攻撃することができる。

【００８５】

このように本実施形態では、複数のキャラクタを合体させるとともに合体後のキャラクタが配置される複数のマスを結合し，結合後のマスを合体後のキャラクタの行動単位としているため、より戦略性に富んだゲームとすることができるとともに、敵ユニット群のユニットとの遭遇機会も増え、より効率的にゲームを進行することもできる。

【００８６】

３－３．敵ユニット群のユニットの制御手法

図１１～図１３を参照しながら本実施形態のシミュレーションゲームの敵ユニット群のユニットの行動制御手法について説明する。図１１は、キャラクタ３２０のステータスパラメータの一例を説明するための図であり、図１２は、キャラクタ３２０の行動決定アルゴリズムの一例を示すフローチャート図であり，図１３（Ａ）～図１３（Ｃ）は、キャラクタ３２０の行動制御手法の一例を説明するための図である。

【００８７】

本実施形態では、プレーヤが１人プレイを行う場合には、自ユニット群のユニットの行動をプレーヤの操作情報に基づいて決定し、敵ユニット群のユニットの行動を所定のアルゴリズムに基づいて決定する。

【００８８】

以下、キャラクタ３２０を例にとり、敵ユニット群のユニットの行動制御手法の一例を説明する。キャラクタ３２０のステータスパラメータは図１１に示す通りである。図１１に示すように、キャラクタ３２０の武器は刀とライフルであり、刀の攻撃可能範囲は、キャラクタ３２０が配置されているマスから１マス以内に設定されており、ライフルの攻撃可能範囲は、キャラクタ３２０が配置されているマスから３マス以内に設定されている。また図１１に示すように、キャラクタ３２０の移動力は２であり、平地４１０に対する地

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形適正は０であるため、キャラクタ３２０は、平地４１０のエリアでは最大２マス移動することができる。つまり、キャラクタ３２０の平地４１０のエリアにおける行動可能範囲（移動可能範囲と攻撃可能範囲を加算した範囲）は、５マスとなる。また図１１に示すように、敵キャラクタ３２０の特殊能力は爆弾であり、爆弾を使用すると４マス分のマス（複数のマス）を結合する爆発イベントが発生する。

【００８９】

敵ユニット群の行動フェイズにおいて、キャラクタ３２０を行動させる順番になると、図１２に示すように、まず、キャラクタ３２０の移動可能範囲と攻撃可能範囲を加算した行動可能範囲内に自ユニット群のユニットが配置されているか否かを判定する（Ｓ１００）。なお図１３（Ａ）に示す例では、キャラクタ３２０とキャラクタ２１０とは６マス離れているため、キャラクタ３２０の行動可能範囲内にキャラクタ２１０は配置されていないと判定される。

【００９０】

キャラクタ３２０の行動可能範囲内に自ユニット群のユニットが配置されていない場合（ステップＳ１００でＮ）、爆発イベントを発生させてマスを結合すると、キャラクタ３２０の行動可能範囲内に自ユニット群のユニットが配置されるか否かを判定する（ステップＳ１０２）。なお図１３（Ａ）に示す例では、爆発イベントが発生すると、図１３（Ａ）に示すマスＭＳＭ～マスＭＳＰが結合されて、図１３（Ｂ）に示すマスＭＳＱとなるため、キャラクタ３２０とキャラクタ２１０との距離が５マスとなり、キャラクタ３２０の行動可能範囲内にキャラクタ２１０が配置されることになる。

【００９１】

マスを結合すると、キャラクタ３２０の行動可能範囲内に自ユニット群のユニットが配置される場合には（ステップＳ１０２でＹ）、まず、キャラクタ３２０の行動を特殊能力である爆弾に決定する。すると、爆発イベントが発生し、図１３（Ｂ）に示すように、マスＭＳＭ～マスＭＳＰが結合されて、マスＭＳＬとなる（ステップＳ１０４）。

【００９２】

続いて爆発イベントの後に、キャラクタ３２０の行動を移動に決定し、図１３（Ｃ）に示すように、キャラクタ３２０を２マス進めてマスＭＳＲに移動させる（ステップＳ１０６）。この結果、キャラクタ３２０とキャラクタ２１０との距離は３マスとなるため、キャラクタ２１０がキャラクタ３２０の攻撃可能範囲に含まれることになる。

【００９３】

最後に、キャラクタ３２０の行動を攻撃に決定し、キャラクタ２１０に対して攻撃を行う（ステップＳ１０８）。

【００９４】

なおステップＳ１００において、キャラクタ３２０の行動可能範囲内に自ユニット群のユニットが配置されていると判定された場合には（ステップＳ１００でＹ）、ステップＳ１０６に移行し、キャラクタ３２０を移動させるとともに攻撃を行わせる（ステップＳ１０６、ステップＳ１０８）。

【００９５】

またステップＳ１０２において、マスを結合しても、キャラクタ３２０の行動可能範囲内に自ユニット群のユニットが配置されない場合には（ステップＳ１０２でＮ）キャラクタ３２０の行動をパスするようにしてもよいし、ランダムに移動させるようにしてもよい。

【００９６】

このように本実施形態では、マスを結合することによって敵ユニット群のユニットが自ユニット群のユニットに攻撃可能となる場合に、敵ユニット群のユニットがマス結合イベントを発生させるとともに、自ユニット群のユニットに対する攻撃を行うことになるため、敵ユニット群のユニットが戦略的にマス結合イベントを発生させることになり、敵ユニット群のユニットとの対戦の趣向性を高めることができる。

【００９７】

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３－４．ネットワーク対戦の制御手法

図１４を参照しながら本実施形態のシミュレーションゲームのネットワーク対戦手法について説明する。図１４は、ネットワーク対戦を行う場合のゲームシステムの概略構成図の一例を示す図である。

【００９８】

本実施形態のシミュレーションゲームをネットワーク対戦で行う場合には、ゲーム装置１０－１、１０－２からの操作情報をサーバ２０が受信し、サーバ２０で各種処理を行い、その処理結果をゲーム装置１０－１，１０－２に送信し、各ゲーム装置がサーバ２０の処理結果に基づいてゲーム画像を生成する。

【００９９】

特に本実施形態では、ゲーム装置１０－１のプレーヤのユニット群の行動フェイズにおいては、ゲーム装置１０－１からの操作情報をサーバ２０が受信し、サーバ２０で各種処理を行い、その処理結果をゲーム装置１０－１に送信し、ゲーム装置１０－１がサーバ２０の処理結果に基づいてゲーム画像を生成する。

【０１００】

そして、ゲーム装置１０－１のプレーヤのユニット群の行動フェイズからゲーム装置１０－２のプレーヤのユニット群の行動フェイズに切り替わる際に、ゲーム装置１０－２は、サーバ２０から現在のゲーム状況を示すデータ（ゲーム装置１０－１のプレーヤのユニット群の行動フェイズが終了した段階のデータ）を受信し、ゲーム装置１０－２のプレーヤのユニット群の行動フェイズを開始する。

【０１０１】

ゲーム装置１０－２のプレーヤのユニット群の行動フェイズにおいては、ゲーム装置１０－２からの操作情報をサーバ２０が受信し、サーバ２０で各種処理を行い、その処理結果をゲーム装置１０－２に送信し、ゲーム装置１０－２がサーバ２０の処理結果に基づいてゲーム画像を生成する。

【０１０２】

そして、ゲーム装置１０－２のプレーヤのユニット群の行動フェイズからゲーム装置１０－１のプレーヤのユニット群の行動フェイズに切り替わる際に、ゲーム装置１０－１は、サーバ２０から現在のゲーム状況を示すデータ（ゲーム装置１０－２のプレーヤのユニット群の行動フェイズが終了した段階のデータ）を受信し、ゲーム装置１０－１のプレーヤのユニット群の行動フェイズを開始する。

【０１０３】

このように本実施形態では、対戦相手のユニット群の行動フェイズから自分のユニット群の行動フェイズに切り替わる際に、対戦相手のゲーム状況が自分のゲーム装置に反映されることになる。

【０１０４】

なお本発明は、上記実施形態で説明したものに限らず、種々の変形実施が可能である。また上記実施形態で説明した構成は、一例を示したに過ぎず、上記実施形態の構成と同様の効果を奏する均等な手法を採用した場合においても本発明の範囲に含めることができる。

【０１０５】

また、本実施形態の各部（各手段）の処理は、その全てをハードウェアのみにより実現してもよいし、情報記憶媒体に格納されるプログラムや通信インターフェースを介して配信されるプログラムにより実現してもよい。或いは、ハードウェアとプログラムの両方により実現してもよい。そして、本実施形態の各部の処理をハードウェアとプログラムの両方により実現する場合には、情報記憶媒体には、ハードウェア（コンピュータ）を本実施形態の各部として機能させるためのプログラムが格納される。

【０１０６】

また本発明は、業務用ゲーム装置、家庭用ゲーム装置、携帯型ゲーム装置、多数のプレーヤが参加する大型アトラクションシステム、シミュレータ、マルチメディア端末、携帯

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電話等の種々のゲーム装置に適用できる。

【図面の簡単な説明】

【０１０７】

【図１】本実施形態のゲーム装置の機能ブロック図の一例を示す図。

【図２】シミュレーションゲームのゲーム画像の一例を示す図。

【図３】シミュレーションゲームのゲームの進行の流れの一例を示すフローチャート図。

【図４】キャラクタ２１０のステータスパラメータの一例を説明するための図。

【図５】図５（Ａ）～図５（Ｃ）は、キャラクタ２１０の移動可能範囲の一例を説明するための図。

【図６】図６（Ａ）、図６（Ｂ）は、キャラクタ２１０の攻撃可能範囲の一例を説明するための図。

【図７】戦車２３０のステータスパラメータの一例を説明するための図。

【図８】戦車２３０の特殊効力によるマス結合手法の一例を説明するための図。

【図９】戦車２３０の特殊効力によるマス結合手法の一例を説明するための図。

【図１０】キャラクタ２１０等の特殊効力によるマス結合手法の一例を説明するための図。

【図１１】図１１は、キャラクタ３２０のステータスパラメータの一例を説明するための図。

【図１２】キャラクタ３２０の行動決定アルゴリズムの一例を示すフローチャート図。

【図１３】図１３（Ａ）～図１３（Ｃ）は、キャラクタ３２０の行動制御手法の一例を説明するための図。

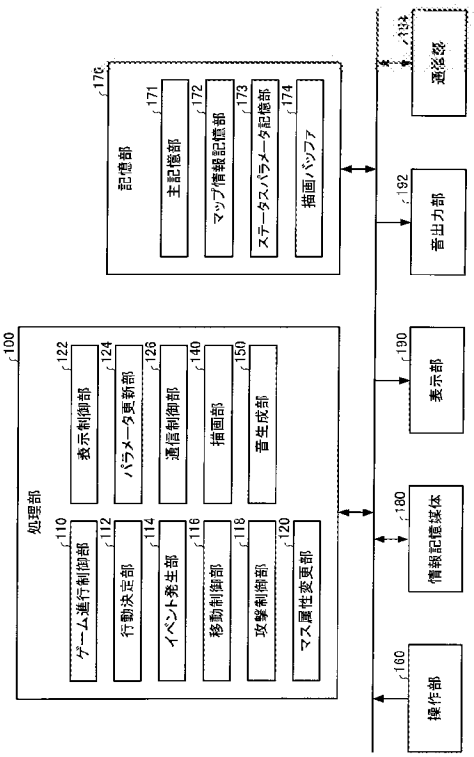
【図１４】ネットワーク対戦を行う場合のゲームシステムの概略構成図の一例を示す図。

【符号の説明】

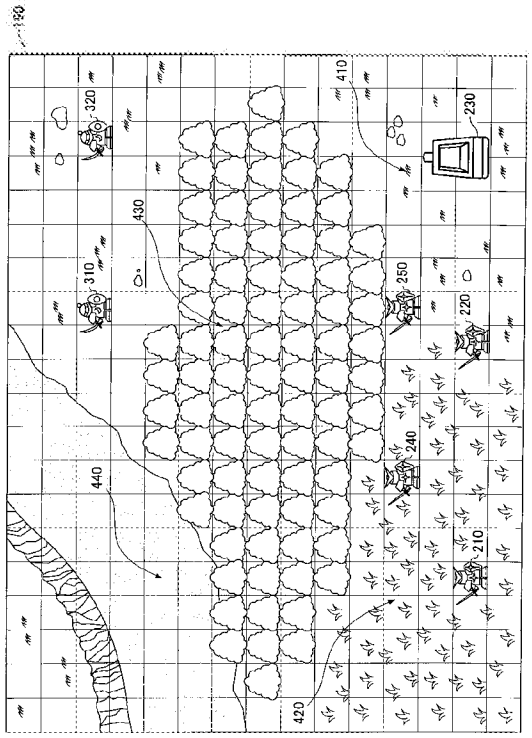
【０１０８】

１００　処理部、１１０　ゲーム進行制御部、１１２　行動決定部、
１１４　イベント発生部、１１６　移動制御部、１１８　攻撃制御部、
１２０　マス属性変更部、１２２　表示制御部、１２４　パラメータ更新部、
１２６　通信制御部、１４０　描画部、１５０　音生成部、１６０　操作部、
１７０　記憶部、１７１　主記憶部、１７２　マス属性記憶部、
１７３　ステータスパラメータ記憶部、１７４　描画バッファ、
１８０　情報記憶媒体、１９０　表示部、１９２　音出力部、１９４　通信部

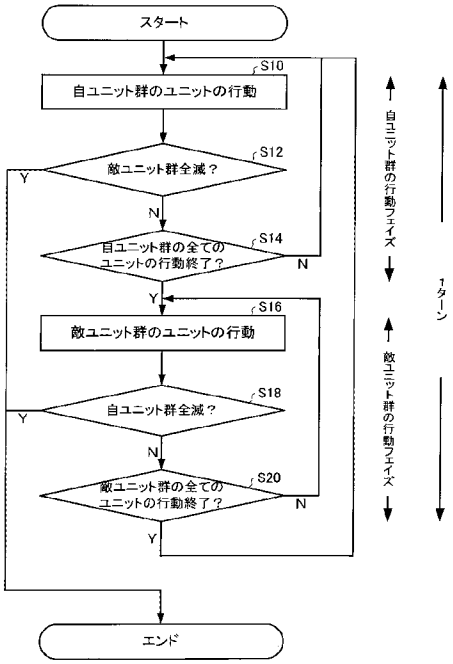
【図１】



【図２】



【図３】



【図４】

パラメータ		値
レベル		3
経験値		100/500
体力		750
移動力		3
地形適正	平地410	0
	草原420	0
	森430	−1
	川440	−2
攻撃力		4
防御力		3
特殊能力	合体	—
	分解	—
武器	刀	1
	ライフル	3

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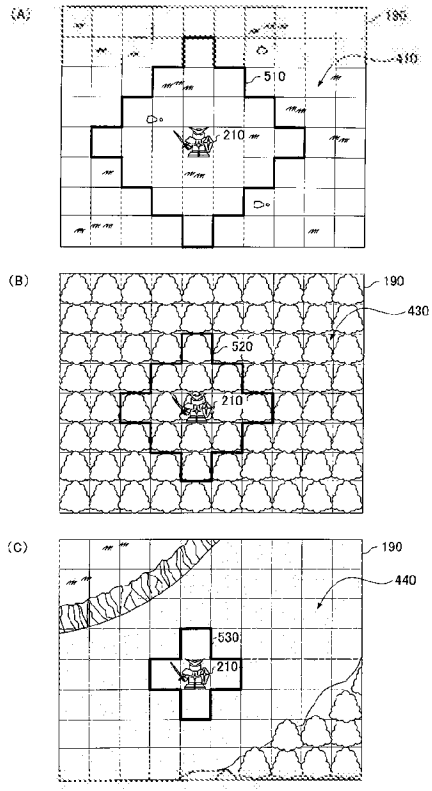
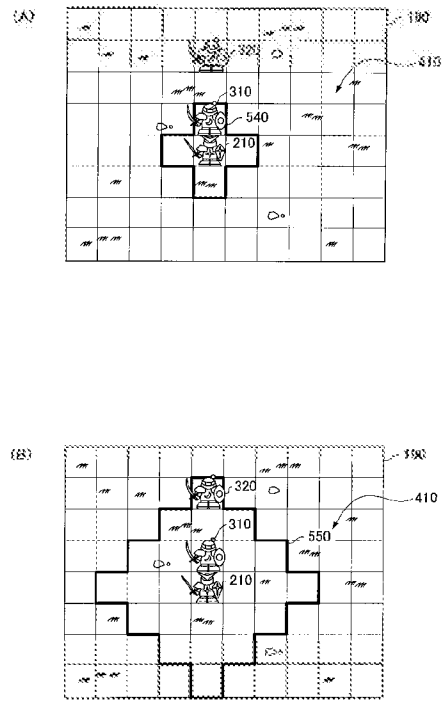
【図５】



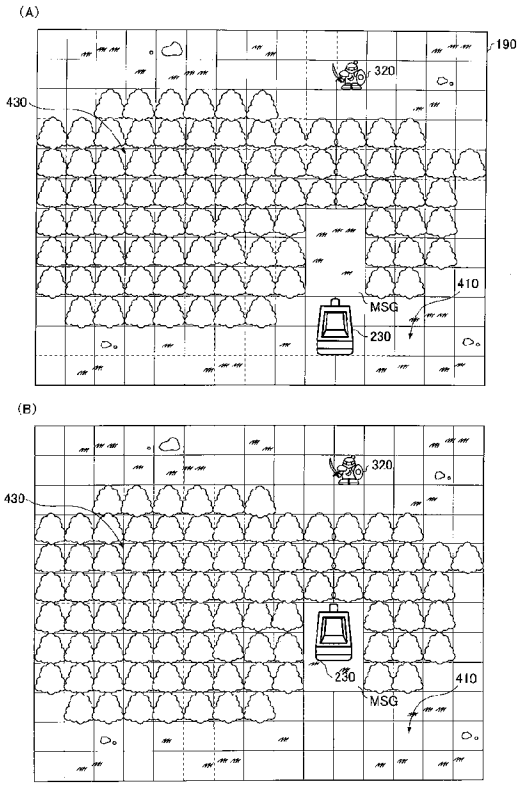
【図６】



【図７】

パラメータ		値
レベル		1
経験値		200/300
体力		1000
移動力		2
地形適正	平地410	0
	草原420	0
	森430	-1
	川440	−
攻撃力		5
防御力		2
特殊能力	火炎放射	−
武器	大砲	5

【図９】



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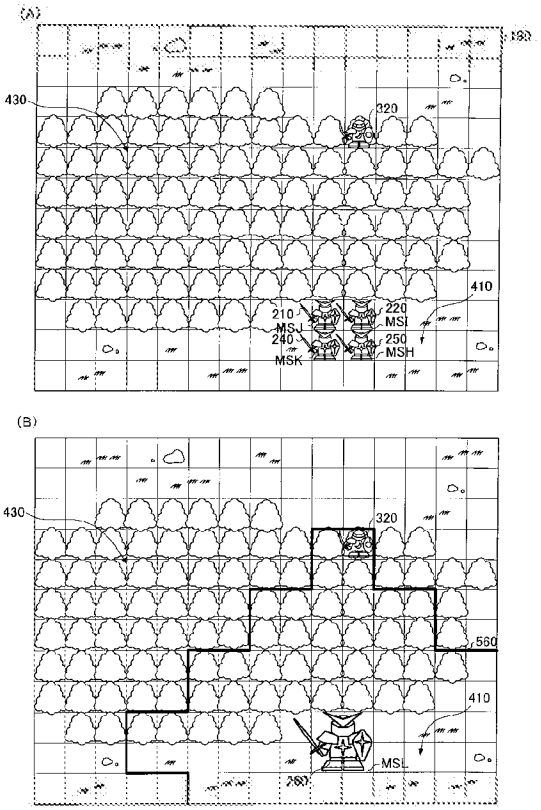
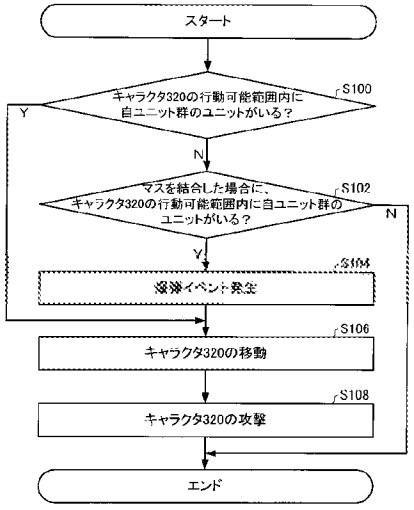
【図１０】



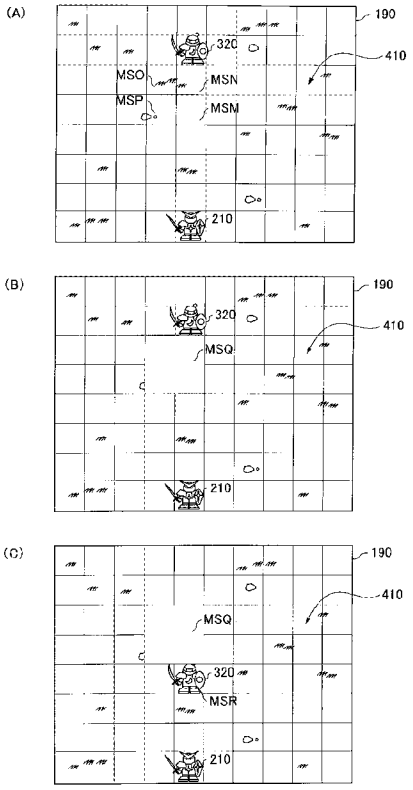
【図１１】

パラメータ		値
レベル		2
体力		500
移動力		2
地形適正	平地410	0
	草原420	0
	森430	−1
	川440	−1
攻撃力		3
防御力		2
特殊能力	爆弾	―
武器	刀	1
	ライフル	3

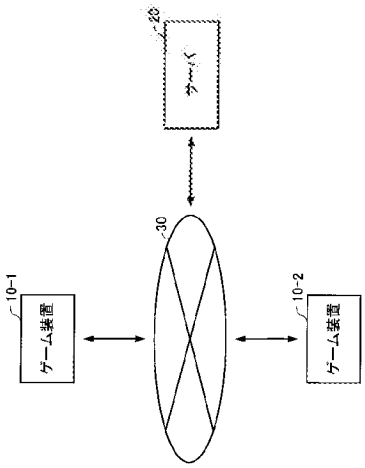
【図１２】



【図１３】

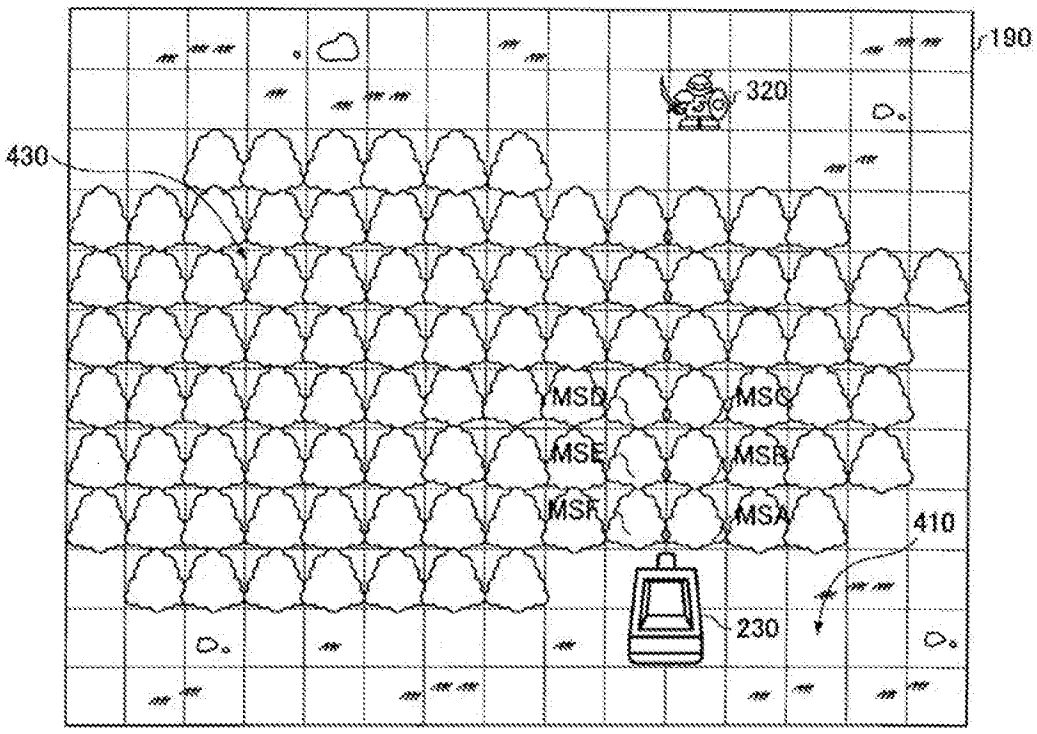


【図１４】

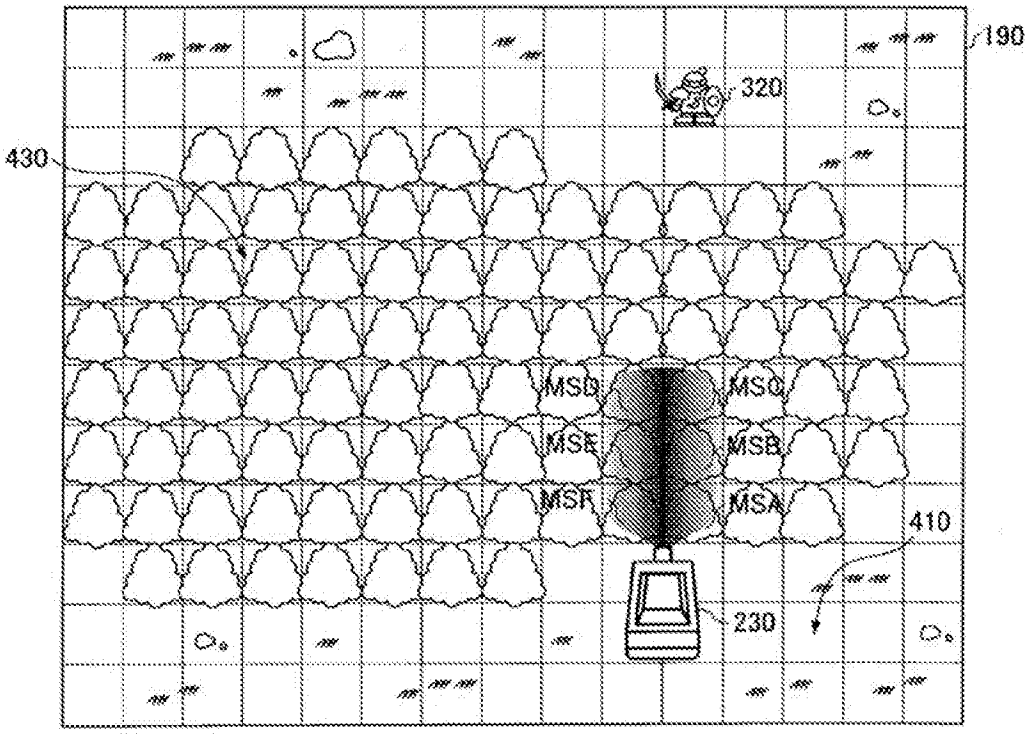


【図８】

(A)


190
320
430
MSD
MSC
MSE
MSB
MSF
MSA
410
230

(B)


190
320
430
MSD
MSC
MSE
MSB
MSF
MSA
410
230

Electronic Patent Application Fee Transmittal

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Filing Date:	29-Dec-2016
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First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Fumiko Matsui
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Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE- 2ND AND SUBSEQUENT REQUEST	1820	1	1900	1900
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First Named Inventor/Applicant Name:	Taiki EDA
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Deposit Account	
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Document Description	**Start**	**End**
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Transmittal Letter	2	2
Information Disclosure Statement (IDS) Form (SB08)	3	4
Miscellaneous Incoming Letter	5	5

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Foreign Reference	15	29
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	Non Patent Literature	11	57

Warnings:					
Information:					
6		137rce6.pdf	22007988 f3e51ff6c5863c2491ab6bcbebccb1826fb995da	yes	27

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Non Patent Literature	1	10
	Non Patent Literature	11	17
	Non Patent Literature	18	20
	Non Patent Literature	21	27

Warnings:	
Information:	

7		137rce7-O.pdf	13262279 3efc047977770d7e31e4ee3636108d72a4db0dcd	yes	52

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Non Patent Literature	1	30
Non Patent Literature	31	52

Warnings:

Information:

8		137rce8.pdf	18191215 235ac8e3e24634e9e3c5a3f2b90f80ea75f1d2eb	yes	33

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Non Patent Literature	1	9
Non Patent Literature	10	16
Non Patent Literature	17	33

Warnings:

Information:

9	Fee Worksheet (SB06)	fee-info.pdf	30699 4a1f41acaabd94877bf73afb687bfe1b9338d27d	no	2

Warnings:

Information:

Total Files Size (in bytes):	123065273

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22850 7590 05/09/2018

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

DATE MAILED: 05/09/2018

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	08/09/2018

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

Supercell
Exhibit 1002
Page 615

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

22850 7590 05/09/2018
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$960	$1000	08/09/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3717	463-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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Exhibit 1002
Page 616

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 05/09/2018

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	
ART UNIT	**PAPER NUMBER**
3717	

DATE MAILED: 05/09/2018

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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Exhibit 1002
Page 617

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, TAIKI	
	Examiner MASUD AHMED	Art Unit 3717	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *2/22/18*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *17-41*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☒ All b) ☐ Some *c) ☐ None of the:
   1. ☒ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

OPAP AKIMA-3 DEC 07 2017 PATENT & TRADEMARK OFFICE

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

☐ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Maki Saitoh
Registration No.: 72,208

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

OPAP DEC 07 2017 PATENT & TRADEMARK OFFICE

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

LIST OF REFERENCES CITED BY APPLICANT

ATTY DOCKET NO.	SERIAL NO.
481331US	15/393,646
INVENTOR(S) Taiki EDA	
FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.).

	AW	Japanese Office Action issued September 12, 2017 in Patent Application No. 2015-248965 (with English Translation)
	AX	KONAMI OFFICIAL GUIDE, "Perfect Series Palpitation Memorial 2 Perfect Guide"', KONAMI CORPORATION, December 20, 1999, first edition, P.31 and Partial English Translation, 5 pages
	AY	KONAMI OFFICIAL GUIDE, "Perfect Capture Series 47 Palpitation Memorial 2 Authorized-Guidebook Uncut Text", KONAMI CORPORATION, July 10, 2001, 6th printing, P.53 and Partial English Translation, 5 pages
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	03/30/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
		481331US	15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP 2002-143555	5-21-2002	JP (With English Translation)	X	
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Japanese Office Action issued February 27, 2018 in JP Application No. 2015-248965 (with English Translation) 7 pages
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached
Examiner	/MASUD AHMED/	Date considered 03/30/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Website Fundamental Information of Clash of Clans for Beginners, 9 pages
	AX	Website Information on Clash of Clans Data Linkage between iPhone and iPad, http://www.appbank.net/2013/06/25iphone-application/627513.php, 6 pages , September 8, 2017
	AY	Play Manual of Hotel Giant 2. 32 pages
	AZ	Website Clash of Clans Wiki Village Edit Mode, http://clashofclans.wikia.com/wiki/Village_Edit_Mode 07/24/2017, 2 pages

■ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	04/19/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
		481331US	15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT	
		Taiki EDA	
		FILING DATE	GROUP
		December 29, 2016	3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	Play Manual of Winning Eleven 2011, 20 pages
	AAB	Play Manual of SidMeiers Civilization, 116 pages
	AAC	
	AAD	
	AAE	
	AAF	
	AAG	
	AAH	
	AAI	
	AAJ	
	AAK	
	AAL	
	AAM	
	AAN	
	AAO	
	AAP	
	AAQ	

Examiner	/MASUD AHMED/	Date Considered	04/19/2018

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	Art Unit
	MASUD AHMED	3717

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	29-42	3/30/2018	MA

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	3/30/2018	MA
CONDUCTE NPL SEARCH ON GOOGLE FOR BUILDING GAMES	3/30/2018	MA
VERIFIED THE APPROVAL OF THE TD	3/30/2018	MA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	TEXT SEARCHED WITHIN ALL THE CLASSES AND THE SUBCLASSES INCLUDING FOREIGN DATABASES ON EAST	3/30/2018	MA

	/M.A./ Primary Examiner.Art Unit 3717

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

CPC						
Symbol					**Type**	**Version**
A63F		13	/	537	F	2014-09-02
A63F		13	/	31	I	2014-09-02
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CPC Combination Sets							
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NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	3/30/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
463	25	A	6	3	F	9 / 24 (2006.0)						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											

NONE		Total Claims Allowed:	
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/MASUD AHMED/ Primary Examiner.Art Unit 3717	3/30/18	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 18	
/MASUD AHMED/ Primary Examiner.Art Unit 3717 (Primary Examiner)	3/30/18 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 3A-3D

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L4	873	L3 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2018/03/30 19:23
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S7	12304	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
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S22	4940	S21 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
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S36	727	A63F13/69.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S37	1110	A63F2300/556.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:55
S38	956	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:55
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S42	5367	S41 and template	US-PGPUB; USPAT; USOCR;	AND	OFF	2017/03/03 16:28

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Exhibit 1002
Page 637

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S43	4354	S42 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S44	4354	S43 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S45	1172	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:28
S46	2	"14983984"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:37
S47	0	"9597594"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:38
S48	0	("9597594").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/03/03 16:38
S49	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/10 02:05
S50	50	S49 @ad<="20140409"	US-PGPUB;	AND	OFF	2017/05/10

Supercell
Exhibit 1002
Page 638

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			02:05
S51	114811	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S52	5536	S51 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S53	4392	S52 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
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S55	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2017/05/10 02:05
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			EPO; JPO; DERWENT; IBM_TDB			
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S62	14273	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S63	776	S62 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S64	616	S63 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S65	58	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/10 02:06

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Page 640

		("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.				
S66	50	S65 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06
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S69	11	(("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/11/12 19:46
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S80	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S81	838	S80 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S82	634	S81 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S83	4405	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/11/12 20:58
S84	3794	S83 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S85	121453	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S86	5969	S85 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58

S87	4457	S86 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
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S89	838	S88 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S90	634	S89 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S91	55	S76 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
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3/30/2018 7:41:23 PM
C:\Users\mahmed3\Documents\EAST\Workspaces\15393646-Eda.wsp

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	US 2011/0319170 A1	12/29/2011	Shimura et al.			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	EP 1 574 238 A1	09/14/2005	Europe	X	
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Partial Supplementary European Search Report Application No.14848832.3, dated April 19, 2017, 8 pages
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	06/07/2017

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

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BIB DATA SHEET

CONFIRMATION NO. 3602

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/393,646	12/29/2016	463	3717	481331US

APPLICANTS
Gree, Inc., Minato-ku, JAPAN;

INVENTORS
Taiki EDA, Tokyo, JAPAN;

**** CONTINUING DATA ***************************
This application is a CON of 14/983,984 12/30/2015 PAT 9597594
which is a CON of PCT/JP2014/075673 09/26/2014

**** FOREIGN APPLICATIONS ***************************
JAPAN 2014-080554 04/09/2014
JAPAN 2013-202721 09/27/2013

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
01/10/2017

Foreign Priority claimed ☑ Yes ☐ No 35 USC 119(a-d) conditions met ☑ Yes ☐ No Verified and Acknowledged /MASUD AHMED/ Examiner's Signature	☐ Met after Allowance MA Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		JAPAN	15	29	4

ADDRESS
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FILING FEE RECEIVED		
2740	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP 2002-143555	5-21-2002	JP (With English Translation)	X	
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Japanese Office Action issued February 27, 2018 in JP Application No. 2015-248965 (with English Translation) 7 pages
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached
Examiner		Date considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this information disclosure statement. 37 C.F.R. 1.704(d) And, each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1)

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Electronic Acknowledgement Receipt

EFS ID:	32184903
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Sandra Miles
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	28-MAR-2018
Filing Date:	29-DEC-2016
Time Stamp:	15:48:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	15597667 3ba2cba6d0871a8fbd2027ce887b7ffa4d00a052	yes	61

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Foreign Reference	10	61
	Non Patent Literature	3	9
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Transmittal Letter	1	1
Warnings:			
Information:			
	Total Files Size (in bytes):	15597667	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

(11)Publication number 2002-143555
(43)Date of publication of application 21.05.2002
(51)Int.Cl. A63F 13/10

(21)Application number 2001-095214
(22)Date of filing 29.03.2001
(71)Applicant KOEI:KK
(72)Inventor TAKEDA TOMOKAZU
TSUDA JUNPEI

(30)Priority
Priority number : 2000266717 Priority date : 04.09.2000 Priority country : JP

(54)FORMATION CONTROL METHOD, PROGRAM, RECORDING MEDIUM AND GAME DEVICE

(57)Abstract
PROBLEM TO BE SOLVED: To provide a control method that can handle many characters in a combat of group characters and can express omnipresence of an attacking capability or the like of the group.
SOLUTION: A formation formed by many characters displayed on a three- dimensional virtual space is selected from among a group of formations previously determined (S104). As the formation is split into a plurality of small groups having a specific formation, a player can interfere with them (S120 and 128). The position of each of the characters on the three-dimensional virtual space is computed, the attack value and/or defense value of each character is computed on the basis of density with other ally characters present near the character (S130), and the omnipresence of the strength of the attack power of the entire formation is shown (S132).

* NOTICES *

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CLAIMS

[Claim(s)]

[Claim 1]Are a formation control method for a group character battle which it is displayed on three-dimensional virtual space, and a group of a many character forms friend and foe's formation, and battles each other, and the aforementioned formation, A formation control method dividing into a plurality of small groups who have formation that it is chosen from predetermined formation groups, and a player can intervene, and respectively specific.

[Claim 2]The formation control method according to claim 1 an attack value and/or a defense value showing aggressivity and/or defense power of the aforementioned character existing near the character, and also calculating based on tightness with a character of an ally.

[Claim 3]The formation control method according to claim 1 or 2, wherein an aligning position of the aforementioned character is calculated or determined based on the aforementioned formation.

[Claim 4]The formation control method according to claim 3 with which formation under movement of the aforementioned group is characterized by the ability to maintain collective formation and similar figures in an aligning position of the aforementioned character.

[Claim 5]The formation control method according to claim 4 which formation under the aforementioned small group's movement is a small group's formation and similar figures in an aligning position of the aforementioned character, and is characterized by change of the aforementioned formation being possible by intervention of the aforementioned player.

[Claim 6]A formation control method of a description in any 1 item of Claim 5 to Claim 1, wherein a leader which commands the aforementioned small group can select from predetermined leader groups.

[Claim 7]The formation control method according to claim 6, wherein the aforementioned leader's individuality is related with the rush characteristic of expressing advance or a stop on the aforementioned small group's aforementioned three-dimensional virtual space.

[Claim 8]A formation control method of a description in any 1 item of Claim 7 to Claim 1, wherein the aforementioned formation group contains any at least two of a direction circle, members of ****, members of ****, members of scales, members of a line of flying wild geese, members of long, members of ****, members of ****, a common line abreast, members of ****, members of rectangular, members of ** form, and members of ****.

[Claim 9]It is a program which can perform a computer about a formation control method of a description in any 1 item of Claim 8 to Claim 1.

[Claim 10]A recording medium which recorded the program according to claim 9 and in which computer reading is possible.

[Claim 11]A group character battle program which it is displayed on three-dimensional virtual space, and a group of a many character forms friend and foe's formation, and battles each other is set to a game device memorizable to a storage part,

A game device comprising:

An input means for choosing formation which has respectively specific formation and was

divided into a plurality of small groups out of a predetermined formation group, and intervening in movement or a battle on the aforementioned small group's aforementioned three-dimensional virtual space.
The position calculation / a determination means to be based on formation chosen [aforementioned], and to calculate or determine a position of the aforementioned character on the aforementioned three-dimensional virtual space, The attack value / defense value calculating means which calculates tightness with other ally characters which exist near the aforementioned character based on a position which above-calculated, / was determined as an attack value and/or a defense value showing aggressivity and/or defense power of the character

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]The present invention relates to a formation control method, a recording medium, and a game device, and relates to the recording medium and game device which recorded the formation control method for the group character battle which it is displayed on three-dimensional virtual space, and the group of a many character forms friend and foe's formation, and battles each other especially, and the method.

[0002]

[Description of the Prior Art]Various game software is recorded on recording media, such as CD-ROM, and is sold from each company today. Such a recording medium is equipped with and used for a game device. Among game devices, the most common home video game equipment connects to a game device body input devices, such as a controller pad, and the television monitor which displays a game content, and is constituted. When a player inserts a recording medium in a game device body, automatically, Or a game can be enjoyed by depressing the predetermined button of an input device by loading the game program recorded on the recording medium to RAM which is a storage memory of a game device body, and a game's starting, and operating the button of an input device after that.

[0003]By the way, the game which a plurality of characters mainly are on different sides on two-dimensional coordinates, and battles is put on the market conventionally. for example, a family computer (Nintendo Co., Ltd.) -- it being put on the market from ASCII in 1985 and as business, If it will be put on the market from a ylem company in "BOKOSUKAWOZU" which the rank goes up, and 1988, a player determines the moving direction of each part party and an ally unit encounters an enemy unit whenever the soldier of an ally wins a battle, One is chosen from a plurality of formations decided preliminarily, and there is a "Napoleon record of war" etc. used as attack mode. As an object for computers (for NECCorp. PC-88X1), it was put on the market from the Kure software studio company in 1988, and when a player controls a character, the "silver ghost" etc. which can control directly the character which fell into the pinch and from which it can save it is known.

[0004]Such game software does not necessarily carry out command input waiting by a player during a battle, and a game is a game which advances in real time and repeats a battle also during a command input command.

It is called "a real-time simulation game."

A real-time simulation game belongs to the game genre which enjoys the process in which enemy troops are beaten while considering tactics, Since the command input of a player is received after fixed time lapse and an enemy attacks during command input always unlike the game of the "turn system" which an enemy does not attack, the oppressive feeling and a feeling of tactics which carry out false to a actual battle can be tasted.

[0005]On the other hand, as a conventional game about a mass movement, what moves in the coordinates top mainly expressed by two dimensions while a plurality of about five characters

build a rank is put on the market. For example, the Japanese-Unexamined-Patent-Application-Publication-No. No. 63613 [eight to] gazette has disclosed the technology which displays signs that set up preliminarily movement speed, and the time and probability of performing a turn, for every character, and it follows the hero character which is a leader of a rank, with an individual change. Invention about group character handling which moves to the target point which a plurality of characters which are expressed on three-dimensional virtual space and have a leader formed the group, and was set up preliminarily is described in these people's Japanese Patent Application No. No. 233595 [11 to]. In the present invention, a position and acceleration are calculated for a plurality of characters belonging to a group for every character, Acceleration for doubling with movement speed and a moving direction of acceleration for separating from a character of other allies for a prescribed distance or a character of other allies, etc. are calculated, and speed and a direction were changed according to a movement state of a character of an ally.
Therefore, operation of movement of each character can be imitated for mass movements, such as an animal, and can be expressed with reality.

[0006]invention about the group character battle method of it being displayed on three-dimensional virtual space, and a plurality of characters forming friend and foe's group, and battling each other is described in these people's Japanese Patent Application No. No. 339176 [11 to] as technology about a group battle. In the present invention, each character belonging to a group approaches in search of an enemy character in a self visual field range (searching for the enemy), and starts a battle.
Therefore, each character can express with reality signs that ** also battles by self judgment.

[0007]
[Problem to be solved by the invention]However, since it was mainly the battle in two dimensions in the conventional real-time simulation game, force like a actual battle could not be expressed but it was lacking in visibility. Therefore, since about the same image as a movie was displayed by rapid progress of the latest computer technology on the television monitor, it became far from the game with a sense of reality by it rather than a player carried out desire.
[0008]In the technology of the real-time simulation game mentioned above or the Japanese-Unexamined-Patent-Application-Publication-No. No. 63613 [eight to] gazette, If a player moves a leader one step, other characters will follow in footsteps one step, if the character of an ally besides the middle contacts an obstacle, it will become impossible for the character to advance and each character will not search for the enemy automatically, It says that a battle is started, when an enemy is contacted in the middle of a move, and it stops at the thought type game which enjoys tactics rather than rather enjoying vision. If a player determines the moving direction of each part party and an ally unit encounters an enemy unit, Change to a formation selection picture, when a player chooses one from a plurality of formations decided preliminarily, change to a battle screen and some which battle against an enemy unit's character have an ally unit's character, but. Since internal processing is not necessarily specially carried out in each character unit, it stops at a thought type game similarly. Therefore, it differs from the actual battle which move while each character maintains a surrounding ally and constant distance, or each character searches for the enemy itself, or changes a search-for-the-enemy movement state according to a situation, and there was a problem of sensing thing insufficient for the game itself.
[0009]In invention of this point, Japanese Patent Application No. No. 233595 [11 to] mentioned above, and Japanese Patent Application No. No. 339176 [11 to], Since internal processing was specially carried out in each character unit, it was not that to which its attention was paid about formation, formation, etc. as a group of what can express the moving operation and battle operation of each character in the inside of a group with reality.
[0010]It is difficult for a player to intervene and control especially by the group combat game which is a real-time simulation game and treats an abundant number of characters called what 10 - 1000 [what] about all the motions of each character as a matter of fact. Therefore, even if a player does not intervene, carrying out the motion with all the characters proper on three-dimensional virtual space with a predetermined algorithm is called for, and it is necessary to also secure the room in which a player can intervene as a game in such a group combat game. However, in the conventional group combat game, parameters, such as aggressivity

accompanying formation or its formation, were uniformly corrected by the **** affinity of JANKEN that the members of scales are strong to the members of ****, the members of **** are strong to the members of scales, and the members of **** are strong to the members of ****, etc., for example. Since formation comprises a whole group one and formation was not formed by a plurality of platoons in the conventional group combat game, For example, there was a surface difficult for tasting the method of the very tactical pleasure called concentrating an attack on one platoon of an enemy unit, or attacking from the weak portion or angle with which an enemy platoon is not strengthened.

[0011]In view of the above-mentioned case, in a group character battle, the present invention can treat a many character, and it makes it problem to provide the formation control method which can express the maldistribution of aggressivity etc. about a group, the recording medium, and a game device.

[0012]

[Means for solving problem]In order to solve an aforementioned problem, the first mode of the present invention, Are a formation control method for the group character battle which it is displayed on three-dimensional virtual space, and the group of a many character forms friend and foe's formation, and battles each other, and the aforementioned formation, It is chosen from predetermined formation groups, and is divided into a plurality of small groups who have formation that a player can intervene and respectively specific. In this mode, a many character is on different sides, a group is formed each other, and the formation of the group is chosen from predetermined formation groups. Formation is divided into the small group who has specific formation, respectively, and the player can intervene about a small group. Since the situation of the whole group can be grasped according to formation since the many character formed formation according to this mode, and intervention of the player was enabled about the small group who has specific formation, it can intervene about a many character for every small group.

[0013]In this case, if the attack value and/or defense value showing the aggressivity and/or defense power of a character are calculated based on tightness with other ally characters which exist near the character, Since the aggressivity and/or defense power of the character enlarge when many ally characters of others [neighborhood] with high tightness exist, the maldistribution of the strength part of the aggressivity of formation and/or defense power can be expressed.

[0014]If the aligning position of a character is calculated or determined based on formation, the aligning position of a character can be obtained according to the selected formation, and the maldistribution of the strength part of the aggressivity of the formation in the aligning position of the group concerned and/or defense power can be expressed. If it carries out as [maintain / the formation under collective movement / the collective formation and similar figures in the aligning position of a character] at this time, the maldistribution of strength parts, such as aggressivity, can be expressed maintaining the formation in an aligning position, and the formation of similar figures during movement. If the formation under a small group's movement is made into a small group's formation and similar figures in the aligning position of a character and change of formation is permitted by intervention of a player, The battle with a specific enemy small group is attained [while maintaining formation / in / for a specific small group / an aligning position /, and], expressing the maldistribution of the strength part of formation.

[0015]If it carries out as [select / from predetermined leader groups / the leader which commands a small group], a leader sociable for a player can be used as a small group's leader. If a leader's individuality is related with the rush characteristic of expressing the advance or the stop on a small group's three-dimensional virtual space, at this time, it can be made to depend for a small group's rush characteristic on a leader's individuality.

[0016]It may be made for any at least two of a direction circle, the members of ****, the members of ****, the members of scales, the members of a line of flying wild geese, the members of long, the members of ****, the members of ****, a common line abreast, the members of ****, the members of rectangular, the members of ** form, and the members of **** to be included for a formation group in the above-mentioned mode.

[0017]The second mode of the present invention is a program which can perform a computer about the formation control method of the 1st mode mentioned above. The 3rd mode of the present invention is a recording medium which recorded the program of the 2nd mode

mentioned above and in which computer reading is possible. According to these modes, enforcement of the formation control method of the 1st mode is attained on a computer by making a computer read the formation control method recorded on communication or a recording medium.
[0018]And the 4th mode of the present invention equips a game device memorizable to a storage part with the following for a group character battle program which it is displayed on three-dimensional virtual space, and a group of a many character forms friend and foe's formation, and battles each other.
An input means for choosing formation which has respectively specific formation and was divided into a plurality of small groups out of a predetermined formation group, and intervening in movement or a battle on the aforementioned small group's aforementioned three-dimensional virtual space.
The position calculation / a determination means to be based on formation chosen [aforementioned], and to calculate or determine a position of the aforementioned character on the aforementioned three-dimensional virtual space
The attack value / defense value calculating means which calculates tightness with other ally characters which exist near the aforementioned character based on a position which above-calculated, / was determined as an attack value and/or a defense value showing aggressivity and/or defense power of the character

[0019]
[Mode for carrying out the invention]Hereinafter, it describes about the embodiment which applied the present invention to the home video game device with reference to Drawings.
[0020](Elements of the Invention) As shown in Fig.1, the television monitor 4 and the input device 3 as an input means with which the home video game device 10 of this embodiment contained the loudspeaker 5 in the game device body 2 are connected. The game device body 2 has a medium reading part (refer to Fig.3) which can equip with the recording media 1, such as CD-ROM. The game program and game data which were recorded on the recording medium 1 are automatically loaded to the storage memory in the game device body 2 by equipping this medium reading part with a recording medium.
[0021]As shown in Fig.2, to the input device 3, operate the start button 30 and game character for starting games, such as a group combat game, or, The ** button 31 for responding to the selection inquiry from the game device body 2, the ** button 32, the O button 33, the x button 34, the ** button 35, the -> button 36 <- various buttons, such as a cross directions button set which comprises the button 37 and the ** button 38, are arranged.
[0022]As shown in Fig.3, the game device body 2 controlled the whole equipment, and is provided with CPU block 20 as position calculation / determination means, and an attack value / defense value calculating means. CPU block 20 is SCU (System Control Unit) which mainly controls data transfer with each part in the game device body 2. CPU which operates with a high-speed clock as a central processing unit, ROM basic control operation of the game device body 2 was remembered to be, It works as a work area of CPU, and comprises an internal bus which connects RAM and these which memorize temporarily the game program and various data which were recorded on the recording medium 1.
[0023]The external bus 25 is connected to SCU. The external bus 25, The input from the input devices 3, such as a controller pad, is received. To CPU block 20, input. The input receive section 21 which transmits, and sub CPU which is not illustrated. sub [the medium reading parts 22, such as a CD-ROM drive which read the game program recorded on the preparation recording medium 1, and it transmits to CPU block 20, and / which are not illustrated] -- the image processing part 23 which draws an image according to the information which was provided with CPU and VRAM and was transmitted from CPU block 20 -- and, It is connected to the acoustical-treatment part 24 which is provided with sub CPU which is not illustrated, for example, processes sound, such as back music and a light cavalryman's footstep. It is connected to the loudspeaker 5 by which the input receive section 21 builds the image processing part 23 in the input device 3, it was built in the television monitor 4, and the acoustical-treatment part 24 was built in the television monitor 4, respectively.
[0024](Operation) Next, a flow chart is referred to for operation of the home video game device 10 of this embodiment, It describes about the case where the soldier as a character belonging to the unit (henceforth the unit F) of a player and the soldier belonging to the unit

(henceforth the unit E) of the computer (CPU block 20) side battle. The recording medium 1 shall already be inserted in the game device body 2, a game program and game data shall be stored in RAM in CPU block 20, and initialization processing shall be made. In order to describe simply, in the following flow charts, it described focusing on operation of the unit F of a player, and omitted the description as that into which processing with the same said of the unit E of a computer is made.

[0025]As shown in the <time of alignment>Fig.4, CPU in CPU block 20 performs the battle routine for making each soldier belonging to the unit F and the unit E fight. In this battle routine, it stands by until the start button 30 shown in Fig.2 is first pushed at Step 102. In the following step 104, affirmation of judgment at Step 102 will perform the formation setting processing subroutine for setting up the unit's F (and the unit E) formation.

[0026]As shown in Fig.5, in this formation setting processing subroutine, First, in order to make one formation choose it as a player from predetermined formation groups in Step 212 as shown in Fig.17 - Fig.19, and the following table 1, The formation selection display which displays the icon of a formation group on the television monitor 4 is performed, and it stands by until a player chooses one of formation at Step 214. In the following step 216, selection of one of formation will incorporate the default value of the formation. In Step 216, as mentioned above, the computer side has also chosen the unit's E formation simultaneously.

[0027]

[Table 1]

陣形名	小隊の概要とキャラクタ数	対応図
方円陣 (円の陣)	第２、第３小隊は正方形（１０ｍ×１０ｍ、１００人）、他の小隊は矩形（１４ｍ×７ｍ、９８人）	図１７（Ａ）
円月陣 (月の陣)	各小隊は菱形（１４ｍ×１４ｍ、９８人）	図１７（Ｂ）
鶴翼陣 (鶴の陣)	各小隊は矩形（１４ｍ×７ｍ、９８人）	図１７（Ｃ）
魚鱗陣 (鱗の陣)	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１７（Ｄ）
雁行陣 (雁の陣)	各小隊は矩形（１４ｍ×７ｍ、９８人）	図１７（Ｅ）
長蛇陣 (蛇の陣)	各小隊は矩形（１７ｍ×６ｍ、１０２人）	図１８（Ａ）
衡軛陣 (牛の陣)	各小隊は矩形（１７ｍ×６ｍ、１０２人）	図１８（Ｂ）
鋒矢陣 (矢の陣)	第１、第３小隊は逆三角形（底辺１６ｍ×高さ１３ｍ、１０４人）、他の小隊は正三角形	図１８（Ｃ）
平横陣 (平の陣)	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１８（Ｄ）
錐行陣 (錐の陣)	各小隊は菱形（１４ｍ×１４ｍ、９８人）	図１８（Ｅ）
方形陣 (方の陣)	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１９（Ａ）
箕形陣 (箕の陣)	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１９（Ｂ）
鉤行陣 (鉤の陣)	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１９（Ｃ）

[0028]The formation of this example is square (10 m x 10 m, 100 persons) and rectangular (14 m x 7 m, or 17 m x 6 m). It is divided into the platoon as five small groups formed with either 98 persons or 102 persons, a triangle or an inverse triangle (16 m of base x13 m in height, 104 persons), and formation is formed in the position to five platoons' formation, and

the 1st platoon. Hereinafter, a player describes for convenience as that which chose "the members of **** (** of a drill)" as the unit F and from which the computer chose "the members of **** (** of a crane)" as the unit E. If formation is determined, and a platoon's arming and **** (refer to Table 3) which form the formation will also be determined according to the data stored in RAM at the time of initialization processing, this example will be followed and it will describe, In the members of ****, the 1st platoon - the 3rd platoon are infantry corps, and the 4th platoon and the 5th platoon are [the 1st platoon - all the 5th platoon] infantry corps in a short bow party and the members of ****. Although Table 1 showed the size of the formation about the case of a foot soldier system and a bow system, it may be made for the size and the number of soldiers of formation to differ from each other in the case of a horseriding system (also see Table 3).

[0029]Next, the distance on the three-dimensional virtual space of the unit E and the unit F is set up to assign and mention the soldier number for identifying a soldier below in Step 218 to all the soldiers who form formation, According to the default value of the formation incorporated at Step 216, the aligning position of all the soldiers belonging to the unit E and the unit F is calculated, respectively (or determination), and it stores in RAM. Next, in Step 220, an officer commanding and an element leader are automatically set up out of the soldier belonging to the unit F (and the unit E), and this setup information is stored in RAM. setting out of this officer commanding and an element leader -- first -- a platoon -- choosing any central soldier as an element leader substantially, and choosing the 1st platoon's leader as an officer commanding (in Fig.17 - Fig.19) In order to discriminate an officer commanding from other element leaders, it expresses with the black triangle. Next, in order to assign an officer commanding a specific game character, For example, as shown in the following table 2, display an officer commanding candidate's (Taso Tsao, Liu Bei, ****) icon on the television monitor 4, and make either choose it as a player and it displays further officer commanding subordinate's element leader's icon which the player selected on the television monitor 4, The element leader of the 2nd platoon - the 5th platoon is made to choose it as a player. Refer to each candidate's individuality expressed with ten-point evaluation to the radar chart about leadership, tactical strategy power, decision, fighting power, penetration, and popularity for a player by clicking and referring to "a help (H)" (refer to Fig.23) in the case of selection of an officer commanding and an element leader.

[0030]

[Table 2]

部隊長	曹操、劉備、孫堅
曹操配下 小隊長	夏侯惇、曹仁、曹洪、夏侯淵、張遼、 徐晃、李典、郭嘉、楽進、曹植
劉備配下 小隊長	関羽、張飛、諸葛亮、孫乾、黄忠、 馬超、趙雲、魏延、関平、馬忠
孫堅配下 小隊長	孫権、魯粛、黄蓋、韓当、程普、 朱治、呂蒙、甘寧、徐盛、丁奉

[0031]The attack value and defense value which express each soldier's aggressivity and defense power belonging to the unit F (and the unit E) with the following step 222. (hereinafter, it is uniformly called aggressivity and defense power without discriminating an attack value and a defense value from aggressivity and defense power.) -- it calculates, and in order to display the maldistribution of the aggressivity of formation and formation on the television monitor 4, the formation strength arithmetic subroutine which calculates each soldier's correction value is called.

[0032]As shown in Fig.6, in a formation strength arithmetic subroutine, When it judges whether a support soldier's count processing was completed and a negative judgment is carried out about all the soldiers at Step 302, a candidate soldier's position is read in Step 304, and it is judged whether processing of all the soldiers except a candidate soldier was completed at the following step 306. When a negative judgment is carried out at Step 306, it proceeds to the following step 308, and when an affirmative judgment is carried out, it returns to Step 302.

That is, in Step 302 - Step 306, as shown in Fig.20, processing is made by a candidate soldier's young numerical order about all the soldiers except the candidate soldier concerned at order (the same may be said of the unit E.).

[0033]In [in the following step 308 read other soldiers' position, and] Step 310, It judges whether other soldiers exist in a candidate soldier's support region, and returns to Step 306 at the time of a negative judgment, and in the following step 312, the counter of other soldiers' number N of support soldiers is incremented one at the time of an affirmative judgment, and it returns to Step 306. Namely, in Step 306 - Step 312, As shown in Fig.21 (A), when a candidate soldier is made into F1, the position is already acquired at Step 304 mentioned above, reads other soldiers' F2 position at Step 308, and is Step 310, Since it judges whether other soldiers F2 exist in the support region A1 as a 4 m wide and 8 m long predetermined region on three-dimensional virtual space in **** "foot soldier" and F2 which is other soldiers exists in it as shown in the following table 3, In [in Step 312, candidate soldier F1 considers it as the character which can support other soldiers F2, increment the counter of other soldiers' F2 number N of support soldiers one, return to Step 306, and] Step 306 next, Other next soldiers F3 are processed similarly, the counter of other soldiers' F3 number N of support soldiers is incremented one, and processing that even a number of other soldiers set up at Step 218 are the same is performed. Therefore, since other soldiers F2, F3, and F4 exist in the support region A1 of candidate soldier F1 in Steps 302-312 as shown in Fig.21 (B), The counter of the number N of support soldiers is incremented every [1], respectively as that in which other soldiers of these can receive support of candidate soldier F1, Since other soldiers F3 exist in the candidate soldier's F2 support region A2, as for other soldiers F3, the counter of the number N of support soldiers is incremented one (it accumulates). Processing about the same accumulation is performed even to a number of other soldiers (Fig.20 F500) set up at Step 218.

[0034]

[Table 3]

兵　科	兵　種	支援領域 a×b（m^2）	支援兵士数 Nの最大値
歩兵系	歩　兵 槍　兵	4m×8m	15
弓　系	短弓兵 弩兵	10m×2m	15
騎馬系	軽騎兵 槍騎兵 狩猟騎兵 象兵	8m×16m	7

[0035]Next, when an affirmative judgment is carried out at Step 302, In Step 314, judge whether the operation of the correction value was processed about all the soldiers, and at the time of a negative judgment, So that the number N of support soldiers may enlarge indefinitely and a candidate soldier may not exceed people's aggressivity and the maximum power considered as defense power in Step 316. It judges whether the number N of support soldiers exceeds the number Nmax of the maximum support soldiers shown in Table 3, and he proceeds to Step 320 at the time of a negative judgment, and proceeds the number N of support soldiers to Step 320 in Step 318 as the number Nmax of the maximum support soldiers of Table 3 (this example 15) at the time of an affirmative judgment. In the foot soldier and short bow soldier of this example, the number N of support soldiers takes the value of 0<=N<=15.

[0036]Next, in Step 320, the candidate soldier's Fn aggressivity A is calculated by a lower type (1). In this example, the basic aggressivity alpha is 50 as it is shown in the following table 4.

[0037]

[Mathematical formula 1]

$$攻撃力A＝基礎攻撃力\alpha＋支援攻撃力\delta_A \quad \cdots（1）$$
ただし、支援攻撃力δ_A＝支援係数k_A×支援兵士数N
支援係数k_A＝5

[0038]
[Table 4]

	基礎攻撃力α	基礎防御力β
歩兵系	50	50
弓　系	75	25
騎馬系	65	35

[0039]In the following step 322, the candidate soldier's Fn defense power D is calculated by a lower type (2). In this example, the basic defense power beta is 50 as it is shown in Table 4.
[0040]
[Mathematical formula 2]
$$防御力D＝基礎防御力\beta＋支援防御力\delta_D \quad \cdots（2）$$
ただし、支援防御力δ_D＝支援係数k_D×支援兵士数N
支援係数k_D＝5

[0041]Next, in Step 324, in order to display the strength of a candidate soldier's aggressivity on the television monitor 4, a candidate soldier's correction value is calculated as the number N of support soldiers (correction value = the number N of support soldiers), and it stores in RAM, and returns to Step 314. When judgment at Step 314 is affirmed, Since all the soldiers' processing ended, end a formation strength arithmetic subroutine and it proceeds to Step 224 of Fig.5, Identification, game character information (only transmission first time), and correction value of the position data of each soldier of a ******** soldier kind, an officer commanding, and an element leader are transmitted to RAM at Steps 218, 220, and 324 to the image processing part 23, respectively, A formation setting processing subroutine is ended and it proceeds to Step 106 of Fig.4. By this formation setting processing, the image processing part 23 draws that **** (a foot soldier and a short bow soldier) according to position data, and it draws the selected game character by an aligned state to an officer commanding and an element leader.
[0042]Here, it describes about the meaning of the color correction processing which sub CPU which the image processing part 23 does not illustrate performs, and the correction value mentioned above. At this embodiment, each dot of the image which forms a candidate soldier is denoted by RGB (red, green, blue) 256 gradation each on the television monitor 4 so that an image may serve as the movie average. When 1 dot of them is R= 150, G= 200, and B= 170 and the case where a correction value is 7 is assumed now, the sub CPU concerned, Each maximum gradation which should be carried out color correction to each maximum gradation 255 on the theory of RGB 240. (however, it being considered as the value) which exceeded, when the RGB concerned of 1 dot exceeds 240, and, Color correction processing which makes gradation of each RGB produced by calculating 150+(240-150) x7/15=192 about R, calculating 200+(240-200) x7/15=219 about G, and calculating 170+(240-170) x7/15=203 about B the color of the dot is performed. therefore, a correction value -- the dot concerned will approach "white", so that the value of the aggressivity A is large, if it puts in another way. However, since there is a case where it becomes pure white and it becomes impossible to identify a soldier's existence by a relation with a background when maximum gradation is set to 255, maximum gradation has been set as 240. The sub CPU concerned performs this color correction processing about all the dots which form a candidate soldier, and performs it similarly about all the soldiers further. The data of the computing equation of color correction processing, each maximum gradation which should be carried out color correction, etc. is transmitted to the image processing part 23 from CPU block 20 at the time of initialization processing. For this reason, as are shown in Fig.22, and it becomes what white is approached

for in 16 steps (a case with N= 0 support soldier is also included.) (it shines white and is visible) and is shown in Fig.23. When a player looks at a soldier with a large value of the aggressivity A on the display 4 about the aligning position of a character, the maldistribution of the strength part of aggressivity can be recognized among the whole formation. At Fig.23, the strong part of aggressivity is displayed with the ellipse. moreover -- in Fig.23 -- between the unit E and the units F -- the crossbow of a bow system -- it is considered as a distance (it is 200 m for example, on three-dimensional space) longer than the range of the crossbow which a soldier has (the range is set up for a long time from the short bow with which a short bow soldier has a range of a crossbow.). This setting out is performed in Step 218 mentioned above.

[0043]In the <time of movement and a battle>, next Step 106 of Fig.4, a virtual frame is calculated as pre-preparation for moving toward a mutual officer commanding, the unit E and the unit F maintaining formation, respectively. it is shown in Fig.24 (A) -- as -- around the center of the position of each element leader F_L -- the unit's F (and the unit E) region Ws and similar figures of formation -- predetermined twice (for example, 1.2 times) -- supposing the large virtual frame Wm, the position on the three-dimensional virtual space of the virtual frame Wm is calculated, and it stores in RAM. [of an aligned state] When each platoon of the unit F (and the unit E) moves, the virtual frame Wm is the region assumed virtually, in order to maintain formation. Therefore, when the unit F (and the unit E) moves, it thinks that this virtual frame Wm also moves simultaneously, and processing is made as what each soldier cannot move outside from the virtual frame Wm of the unit who belongs, respectively.

[0044]In the following step 108, it is judged whether the vertical-retrace-line interrupt once called to 1 / 60 seconds (16.6 milliseconds) which were in agreement with the vertical-retrace-line cycle of the television monitor 4 with a cycle occurred. In [if a negative decision is made at Step 108] the following step 110, Main processes, such as an acoustical treatment for making the acoustical-treatment part 24 synthesize the processing and the game sound effect to the input transmitted from the input receive section 21 of changing the moving direction of an officer commanding and an element leader, are performed, and it proceeds to Step 112. It is possible to make a moving direction change the element leader who chose any one of each element leaders of the unit F currently displayed on the television monitor 4 in operation of the input device 3 by the player in Step 110, presupposed that it is active and chose with a cross directions button set. If an affirmation decision is made at Step 108 on the other hand, it judges whether the processing about all the platoons was completed at Step 116, and when a negative judgment is carried out, it will judge with the flag set [whether the platoon of a processing object is / ****** / under battle and] up for every platoon in the following step 118. The default value (it means not being under battle) as which each platoon's flag means under movement at the beginning is set up (for example, 0).

[0045]When a negative decision is carried out at Step 118, in Step 120, the moving processing subroutine for moving the unit F in the direction (it is the direction of unit F about the unit E from the computer side) of unit E is performed. As shown in Fig.25 (A), a player the unit F from the formation of the aligned state shown in Fig.23, As it is made to proceed in the enemy unit's E direction of an officer commanding as a whole, checking the strength part of the aggressivity of formation maintaining the formation of the similar figures of the formation and is shown in Fig.25 (B) in consideration of distance with the enemy unit E. For example, the tactics to which it is made to move so that ****** may be largely bypassed to course W_A to the 1st platoon of an enemy in whom the enemy unit's E officer commanding exists the 5th platoon among the units F are stood, Since the large portion of the aggressivity A can be applied to the small portion of the defense power D of the 1st platoon of an enemy among the 5th platoon if it can be made to move to the unit's E 1st platoon side surface and back face, making full use of the cross directions button set of the input device 3, a possibility of defeating the unit E becomes very high. In a moving processing subroutine, movement on of each soldier's of the unit's F (and the unit E) three-dimensional virtual space is performed against the background of such tactics.

[0046]As shown in Fig.7, in a moving processing subroutine, in Step 402, it judges whether processing of all the soldiers of a candidate platoon ended, and it is judged at the time of a negative judgment whether the soldier of a processing object is an element leader in the following step 404. In the following step 406 at the time of an affirmative judgment, when it judges whether you are an officer commanding and an affirmative judgment is carried out at

Step 405, It judges whether the cross directions button set was pushed by the input incorporated at Step 110 of Fig.4, and proceeds to Step 410 at the time of a negative judgment, and in Step 408, intervention acceleration is calculated at the time of an affirmative judgment, and it stores it in RAM. In the operation of this intervention acceleration, when one of buttons is pushed among cross directions button sets, the predetermined acceleration stored in RAM by initialization processing is read. This intervention acceleration is the acceleration (the unit on three-dimensional virtual space: m/sec^2) (alphax, alphay, alphaz) of a direction according to the ** button 35, the -> button 36, the <- button 37, and the ** button 38, respectively (x, y, z), For example, it is set as (0, 10, 0), (10, 0, 0), (-10, 0, 0), and (0, -10, 0).

[0047]Next, in Step 410, the short-distance acceleration operation which calculates the acceleration which occurs in order to separate beyond constant distance for the purpose of contact and collision avoidance with the soldier of other allies is performed. In this short-distance acceleration operation, the short-distance consciousness angle and the short-distance consciousness radius which were stored in RAM by initialization processing are read first. A short-distance consciousness angle means here the angle of the field of view of the neighborhood which is visible by direction [a soldier] of the present face, and 190 degree is set to it by this example. A short-distance consciousness radius means the distance of the neighborhood in which a soldier is seen at a short-distance consciousness angle, and 3 m is set up in this example.

[0048]Next, the position of other soldiers who stored in RAM at the time of the last vertical-retrace-line interrupt processing (1 / 60 seconds before) is read, and other soldiers judge whether it is in the short distance region demarcated in a short-distance consciousness angle and a short-distance consciousness radius. When there are other soldiers, distance with the soldier is found and the repulsive force to which it corresponds to the distance is searched for. Since it aims at contact and collision avoidance with other soldiers for a short distance as mentioned above, Since it is desirable to make it separate from the soldier rapidly when other soldiers are close, as shown in Fig.26. When repulsive force is taken along a vertical axis and distance is taken along a horizontal axis, the relation between distance and repulsive force is calculated as what changes, for example like a secondary function so that repulsive force may increase rapidly, when distance with other soldiers is small. Therefore, repulsive force in case distance is 0 takes 100-m[/] sec^2, and a big value, for example, and when distance is equal to a short-distance consciousness radius, repulsive force serves as 0-m[/] sec^2. regarding as the acceleration which did division of the repulsive force searched for with the soldier's mass -- being concerned -- others -- every each component alphax, alphay, and alphaz is asked for the product of the vector and ** which turn on a candidate soldier (in this case, the 1st platoon's element leader) from a soldier, and let this be short-distance acceleration. Judge whether there is any another ally soldier in a short distance region, and it searches for repulsive force similarly [when it is] and, It adds to the short-distance acceleration which asked for acceleration and for which it asked previously from the repulsive force searched for at each component x, y, and z of every, stores in RAM as short-distance acceleration (alphax, alphay, alphaz), and proceeds to Step 412. Like the case where distance is equal to a short-distance consciousness radius, when there are not other soldiers in a short distance region on the other hand, since repulsive force is 0, as the short-distance acceleration (alphax, alphay, alphaz) (0, 0, 0) =, it is stored in RAM and proceeds to Step 412.

[0049]In Step 412, the direction acceleration for moving in the unit's E direction of an officer commanding in preparation for the case where a player does not intervene in the unit's F moving direction with a cross directions button set is calculated, and it stores in RAM. In the operation of this direction acceleration, the direction of [on three-dimensional virtual space] is calculated from the position of the officer commanding the last (1 / 60 seconds before) unit's E, and the unit's F officer commanding, and the direction acceleration stored in RAM by initialization processing is read. This direction acceleration is set as 1.2-m[/] sec^2 with the scalar value (absolute value). Therefore, it can ask for direction acceleration (alphax, alphay, alphaz) by calculating this scalar value for every direction component.

[0050]In [in the following step 414, read the intervention acceleration, the short-distance acceleration, and direction acceleration which were stored in RAM at Steps 408, 410, and 412, add to each component x, y, and z of every ask for total acceleration, and] the following step 416, The newest speed and the newest position are calculated, and it stores in RAM, and

proceeds to Step 418. here -- the present time -- t and elapsed time -- deltat and the speed V (the speed in Vt+delta t:time t+delta t --) Vt: If speed in the time t and acceleration are set to alpha (alphat: acceleration in the time t) and a position is set to P (the position in Pt+delta t:time t+delta t, Pt: position in the time t), The newest speed and the newest position can be obtained for every x, y, and z component with the equation of motion using Euler's method shown in a following formula (3). The last speed and position are stored in RAM, and elapsed-time deltat is known in 1 / 60 seconds.

[0051]

[Mathematical formula 3]

$$\left.\begin{aligned} V_{t+\delta t} &= V_t + \alpha_t \delta_t \\ P_{t+\delta t} &= P_t + V_t \delta_t + 0.5 \alpha_t \delta_t^2 \end{aligned}\right\} \cdots (3)$$

[0052]Next, in Step 418, the position of the newest virtual frame Wm of the platoon concerned is calculated from an officer commanding's (the 1st platoon's element leader) newest position, and it returns to Step 402.

[0053]When a negative judgment is carried out at Step 405 on the other hand, in Steps 420-433 -- Steps 406-418 -- the same -- an element leader's newest speed -- and the newest position calculation being carried out (Step 430), and, the newest virtual frame -- calculating (Step 432) -- a different point from Steps 406-418, In [when a negative judgment is carried out in Step 420, in Step 433, read an officer commanding's position, and] Step 432, The relative position of the element leader concerned to the officer commanding who calculated at Step 106 of the Fig.4 on the selected formation is read, and it is on the point of calculating the position of the element leader of the present to the present officer commanding's position concerned, and calculating the newest position of a virtual frame. If it puts in another way, when an officer commanding moves toward the enemy unit's E officer commanding when there is no intervention by the input device 3 of a player, and intervention is made, in Steps 406-418, a moving direction will be changed according to intervention. In Steps 420-433, when there is no intervention in the specific element leader by the input device 3 of a player, When an aligned state and the formation of similar figures are maintained (refer to Fig.25 (A)) and the intervention in a specific element leader is made, the platoon with the intervention changes a moving direction according to intervention (refer to the Fig.25 (B) unit's F 5th platoon), and other platoons maintain formation. For this reason, the unit's F formation will be changed by intervention of a player.

[0054]Like Step 410 mentioned above in Step 434 when a negative judgment was carried out at Step 404, short-distance acceleration is calculated and it stores in RAM, and it is the following step 436 and performs the middle distance acceleration operation which asks for the acceleration which occurs in order to move at the same speed as a nearby soldier. In this middle distance acceleration operation, the middle distance consciousness angle and middle distance consciousness radius which were stored in RAM by initialization processing are read. A middle distance consciousness angle means here the angle of the middle-distance field of view which is in sight by direction [a soldier] of the present face, and 170 degree smaller than a short-distance consciousness angle is set to it by this example. A middle distance consciousness radius means the distance where a soldier is seen at a middle distance consciousness angle, and let 7 larger m than a short-distance consciousness distance be a default value in this example. Next, the position of other soldiers who memorized to RAM last time (1 / 60 seconds before) is read, and other soldiers judge whether it is in the middle distance region demarcated in a middle distance consciousness angle and a middle distance consciousness radius.

[0055]When there are not other soldiers in a middle distance region, in order to make an element leader pursue with maximum velocity (for example, 5 m/(sec)), it asks for the direction vector (x, y, z) to an element leader first. The vector (x, y, z) which a direction vector is a unit vector which does not have a meaning about a size (length), and has a rudder injury meaning here is said. The direction vector (x, y, z) to an element leader can be obtained by searching for and unit-vector-izing the difference of a self position from an element leader's position. Next, acceleration is calculated by a lower type (4) and it stores in RAM. a formula (4) -- (-- the same also in a formula (5).) -- it sets, speed identification time means the time parameter used when asking for acceleration from movement speed, and it is set as 0.1 second in this example.

[0056]
[Mathematical formula 4]

$$\text{加速度}(x,y,z) = \{\ \text{小隊長 への方向ベクトル}(x,y,z) \times \text{最大速度}) - \text{現在の速度}(x,y,z)\} \ /\ \text{速度同一化時間} \quad \cdots (4)$$

[0057]When there are other soldiers in a middle distance region on the other hand, the acceleration which it is going to double with the mean velocity of other soldiers who are in a middle distance region with a following formula (5) is calculated, and it stores in RAM, and proceeds to Step 438.
[0058]
[Mathematical formula 5]

$$\left.\begin{aligned} &\text{平均速度}(x,y,z) = \text{中距離領域内にいる兵士の速度の総和}(x,y,z) \ /\ \text{中距離領域内にいる兵士数} \\ &\text{加速度}(x,y,z) = \{\text{平均速度}(x,y,z) - \text{現在の速度}(x,y,z)\} \ /\ \text{速度同一化時間} \end{aligned}\right\} \cdots (5)$$

[0059]the formula (3) which read the short-distance acceleration and middle distance acceleration which were stored at Steps 434 and 436 in Step 438, added to each component x, y, and z of every, asked for total acceleration, and was mentioned above in the following step 440 -- the present speed -- and position calculation is carried out. Next, it judges whether in Step 442, as shown in Fig.24 (B), the position of the candidate soldier Fn who calculated is placed in the last virtual frame Wm, proceeds to Step 446 at the time of an affirmative judgment, and is Step 444 at the time of a negative judgment, The position of the intersection P of the direction of the vector of total acceleration and the virtual frame Wm is calculated, and a position is corrected in the position. In Step 446, the newest speed and the newest position which were calculated at Step 440 and Step 444 are stored in RAM, and it returns to Step 402. When an affirmative judgment is carried out at Step 402, a moving processing subroutine is ended and it proceeds to Step 122 of Fig.4.
[0060]In [in Step 122, calculate distance with the nearest platoon's element leader among enemy platoons from the position of the officer commanding of the unit E who calculated by Step 416 of Fig.7, or 430, and the unit F, or an element leader, and] the following step 124, It judges whether it is smaller than the prescribed distance (both sides the case of a foot soldier system or a horseriding system 100 m, 50 m when [For example, it arms / of a platoon /. on the other hand or] both sides are bow systems) stored in RAM by initialization processing, and returns to Step 116 at the time of a negative judgment. thereby -- the display 4 top -- the unit E and the unit F -- each formation -- an aligned state -- turning on a mutual element leader, maintaining one 1.2 times the size of this in general () Or other enemy platoons are bypassed toward an enemy unit's specific platoon by intervention of a player, and signs that it moves while displaying the strength of the aggressivity A and/or the defense power D are displayed. When an affirmative judgment is carried out at Step 124 on the other hand, it returns to Step 116 as under the battle (default value:, for example, 1) of the flag of the platoon concerned.
[0061]When judgment at Step 118 is affirmed on the other hand, in the following step 128, the fight process subroutine against which the soldier belonging to the unit E and the unit F battles each other is performed. As shown in Fig.8, the element leader status value (Ls) data-processing subroutine which calculates the rush characteristic value which expresses with this fight process subroutine first advance or a stop of the element leader who shows Fig.9 in Step 502 is performed. Unless a player activates the element leader with the input device 3 at Step 110 of Fig.4, and an element leader pushes the ** button 38 of a cross directions button set and there is, That is, unless it is forcibly considered as a halt condition (Ls=1) by the player, as shown in a lower type (6), according to the rush characteristic value which moves forward or stops a self platoon according to an element leader's individuality, it rushes to the element leader of the enemy platoon nearest to the element leader concerned, for example. When are set to halt condition Ls=1 by intervention of a player, and a player depresses the button of cross directions button sets other than ** button 38, a halt condition (Ls=1) is released (Ls=0).
[0062]
[Mathematical formula 6]

$$\text{突撃特性値} = \text{係数k} \times (\text{戦術戦略力} + \text{戦闘力}) + \text{係数m} \times (\text{統率力} + \text{決断力}) - \text{係数m} \times (\text{洞察力} + \text{人望}) \quad \cdots (6)$$

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[0063]In order to judge whether the intervention for which the condition of the element leader concerned is considered as a stop by a player at Step 110 was made in Step 552 of Fig.9, the element leader status value Ls judges that it is 1, An element leader status value data-processing subroutine is ended at the time of an affirmation decision, it proceeds to Step 504 of Fig.8, and it is judged at the time of a negative decision whether counter C_L is 0 at Step 554. When an affirmative judgment is carried out at Step 554, according to the formula (6) mentioned above at the following step 556, read calculated rush characteristic value from the table related with the element leader of the platoon concerned, and it acquires the random number value of a prescribed range at Step 558, In the following step 560, it is judged whether rush characteristic value is smaller than a random number value. When an affirmative judgment is carried out, like the case where set the element leader status value Ls to one at Step 562, set counter C_L to one at the following step 564, and a negative judgment is carried out at Step 560, an element leader status value data-processing subroutine is ended, and it proceeds to Step 504 of Fig.8. In Step 566, it is judged whether counter C_L is 30, In Step 568, counter C_L is incremented one at the time of a negative judgment, and in Step 570, counter C_L is set to zero at the time of an affirmative judgment, it ends an element leader status value data-processing subroutine, and proceeds to Step 504 of Fig.8. Therefore, in an element leader status value data-processing subroutine, the ratios which take advance or a stop of the element leader concerned with the rush characteristic value related with an element leader's individuality differ.

[0064]Next, in Step 504 of Fig.8, it judges whether processing of all the soldiers of a processing-object platoon ended, and it judges whether a candidate soldier is an element leader at Step 506 at the time of a negative judgment, and it is judged at the time of an affirmative judgment whether the element leader status value Ls is 0 in the following step 508. When judgment at Step 508 is affirmed, it proceeds to Step 512, and when denied, as shown in the following table 5, it judges at Step 510 whether the status flag showing a soldier's condition serves as an attack or defense, and proceeds to Step 512 at the time of an affirmation decision.

[0065]

[Table 5]

状　態	状　態　の　概　略
索　敵	敵兵士を探す状態
接　近	敵との距離を戦闘半径内まで移動する状態
攻　撃	武器で敵にダメージを与えようとする状態
防　御	敵の武器から自己を守る状態
死　亡	兵士が死亡した状態
一時退却	敵と反対側に全力で移動する状態

[0066]In Step 512, the state processing subroutine which processes according to a candidate soldier's condition (default value of status flag floor line) is called. As shown in Fig.10, in this state processing subroutine, First, in Step 600, it is judged whether the soldier of a processing object is an element leader, Proceed to Step 605 at the time of a negative judgment, and it performs flight processing which judges whether an element leader's flag is death at the following step 601, and it mentions below at Step 604 at the time of an affirmative judgment at the time of an affirmative judgment, The number of survival soldiers of the platoon to whom the element leader of a processing object belongs in Step 602 at present is a predetermined number at the time of a negative judgment. (For example, 1/2 of the total number of soldiers at the time of alignment) ****** above is judged, status flag floor line is considered as retreat at Step 603 temporarily at the time of a negative judgment, and it proceeds to the following step 605 with the time of an affirmative judgment.

[0067]When status flag floor line judges whether they are a search for the enemy, approach, an attack, defense, and momentary retreat, respectively and is affirmed in Steps 605-609, respectively, At Steps 612-620, the subroutine of search-for-the-enemy processing, approach

processing, attack processing, defense processing, and momentary retreat processing is performed, a state processing subroutine is ended, and it returns to Step 504 of Fig.8.
[0068]As shown in Fig.11, in Step 632, by making an element leader into an enemy element leader in the formula (4) mentioned above, direction acceleration is calculated and it stores in RAM in a search-for-the-enemy processing subroutine. Next, at Step 634, the last speed and position are read, and the last enemy's position information is read and it is judged whether in Step 636, an enemy soldier exists in a candidate soldier's (in this case, element leader) visual field range (it is the same as the middle distance region mentioned above.). By judging whether it is a search-for-the-enemy state with reference to an enemy soldier's status flag, at the time of an affirmative judgment, judge whether it is under [non-battling] ****** in the following step 638, and at the time of an affirmation decision, In Step 640, the nearest enemy is chosen as a candidate for a battle, and it matches at the following step 642 by considering both status flag floor lines of a candidate soldier and an enemy soldier as approach, and proceeds to Step 644. When judgment (judgment) at Steps 636 and 638 is denied on the other hand, it proceeds to Step 644 similarly.
[0069]In Step 644, calculate a candidate soldier's short-distance acceleration in the same manner as the above, and This short-distance acceleration, In [read the direction acceleration stored in RAM at Step 632, calculate x, y, and the total acceleration (alphax, alphay, alphaz) added for every z component, respectively, and] the following step 646, By the formula (3) mentioned above, the newest speed and the newest position are calculated, and it stores in RAM, and ends a search-for-the-enemy processing subroutine.
[0070]As shown in Fig.12, in Step 650, by making an element leader into the enemy soldier for a battle in the formula (4) mentioned above, approach acceleration is calculated and it stores in RAM in an approach processing subroutine. Next, the last speed and position are read at Step 652, distance with an enemy soldier is calculated at Step 654, and it is judged in the following step 656 whether the distance is smaller than the set distance stored in RAM by initialization processing. This set distance changes variously with ****. For example, in the case of the foot soldier, in the case of 2 m and a spearman, it is carried out with 100 m in the case of 3 m and a short bow soldier. When judgment at Step 656 is denied, in order to judge or or whether it slows down [which proceeds toward an enemy soldier as it is], in Step 658, it is judged next whether it is inside of the speed distance which maintains speed. This speed distance also changes variously with ****, and, in the case of the foot soldier of this example, is made the same as the short distance region mentioned above. When a negative judgment is carried out at Step 658, it proceeds to Step 662, and when an affirmative judgment is carried out, the slowdown acceleration (for example, -2-m[/] sec^2) for reducing the speed which turns on an enemy soldier to the following step 660 is read from RAM stored at the time of initialization processing.
[0071]In Step 662, calculate a candidate soldier's short-distance acceleration in the same manner as the above, and This short-distance acceleration, In [calculate the approach acceleration calculated or read at Steps 650 and 660, and the total acceleration (alphax, alphay, alphaz) which added slowdown acceleration for every x, y, and z component, respectively, and] the following step 664, By a formula (3), the newest speed and the newest position are calculated, and it stores in RAM, and ends an approach processing subroutine.
[0072]When judgment at Step 656 is affirmed on the other hand, In Step 666, set a candidate soldier's newest speed to 0, and at the following step 668, When a random number is odd by calculating the newest speed and the newest position, storing in RAM, and acquiring a random number in the following step 670 by a formula (3), An approach processing subroutine is ended using [consider the enemy soldier's of an attack and the candidate soldier's concerned status flag for a candidate soldier's status flag floor line as defense, and] the status flag of a candidate soldier and an enemy soldier as reverse, when a random number is even.
[0073]As shown in Fig.13, in an attack processing subroutine, By judging whether the attack motion counter Am is 30, in order to judge whether drawing processing of the attack motion was instructed to the image processing part 23 at Step 682, and the attack motion was completed at the following step 684, It is judged whether time and attack motion counter Amx vertical-retrace-line interrupt time 1 / 60 second = 0.5 second which an attack motion takes passed. Since it is among an attack motion at the time of a negative judgment, in order to continue an attack motion, increment the value of the attack motion counter Am one at Step 708, and it ends an attack processing subroutine, At the time of an affirmative judgment, the

value of the attack motion counter Am is cleared at the following step 686 (referred to as 0).
[0074]In Step 688, the defense power D stored in last RAM of the enemy soldier who is a candidate for a battle is read, and the random number value in a predetermined number value range is acquired at the following step 690. Next, in Step 692, it is judged by judging whether a random number value is larger than a defense value whether the attack on an enemy soldier was successful. It proceeds to Step 704 at the time of a negative judgment, and subtracts 15 from an enemy soldier's physical strength Hp in Step 700 at the time of an affirmative judgment. The value of the physical strength Hp of each soldier before going into a fight process subroutine is set to 100, and since a difference with arms is expressed, for example, when an attack of the soldier of a bow system is successful, 101 is subtracted, and 50 is subtracted when an attack of the soldier of a horseriding system is successful. In the following step 702, it judges whether an enemy soldier's physical strength Hp is smaller than zero, and in Step 706, a candidate soldier's status flag floor line is considered as a search for the enemy at the time of an affirmative judgment, and it ends an attack processing subroutine by considering an enemy soldier's status flag floor line as death. On the other hand, in order to change offense and defense, at the time of a negative judgment, a candidate soldier's status flag floor line is considered as defense, and it ends an attack processing subroutine by considering an enemy soldier's status flag floor line as an attack.
[0075]As shown in Fig.14, in a defense processing subroutine, By judging whether the value of the defense motion counter Dm is 30, in order to judge whether drawing processing of the defense motion was instructed to the image processing part 23 at Step 712, and the defense motion was completed at the following step 714, It is judged whether the time which a defense motion takes, and 0.5 second passed. Since it is among a defense motion at the time of a negative judgment, in order to continue a defense motion, the defense motion counter Dm is incremented one at Step 718, an attack processing subroutine is ended, and the value of the defense motion counter Dm is cleared at the following step 716 at the time of an affirmative judgment.
[0076]In momentary retreat processing of Step 620 of Fig.10, When a self platoon's number of soldiers is set to one half at the time of alignment, as it is shown to the 3rd platoon of the enemy unit E of (Step 602 Reference) and Fig.25 (C). In the unit's F platoons 1, 2, and 4, it retreats to an opposite side, and in order to rush at the unit's F platoon again, processing for concentrating the soldier belonging to the 3rd platoon concerned, and heightening the aggressivity A is performed (refer to Fig.25 (D) and Step 522 mentioned below). In flight processing of Step 604 of Fig.10, if the soldier belonging to the platoon of the element leader concerned performs the flight motion which escapes from a battle region and the predetermined time concerned passes for a predetermined period (for example, 0.5 second), the soldier belonging to the platoon concerned will perform processing which disappears from on the television monitor 4. At Step 116 of Fig.4, processing of the platoon concerned processes the next platoon by this specified time elapse as what was ended.
[0077]When a negative decision is carried out at Step 510 of Fig.8 on the other hand, in Step 514, the standby process subroutine for standing by in order to heighten the aggressivity A and the defense power D (stop) is performed. As shown in Fig.15, in this standby process subroutine, at Step 720, a candidate soldier's newest speed is set to 0, and it stores in RAM, and stores in RAM by making the last position into the newest position by the following step 722.
[0078]When a negative judgment is carried out at Step 506 of Fig.8, in the following step 516, it is judged whether the element leader status value Ls is 0. When judgment at Step 516 is affirmed, it proceeds to Step 520, and when denied, it judges whether in Step 518, status flag floor line serves as an attack or defense, and proceeds to Step 520 at the time of an affirmation decision. In Step 520, a state processing subroutine is called like Step 512. When a negative judgment is carried out at Step 518 on the other hand, in Step 522, the concentration processing subroutine for concentrating around an element leader and reorganizing formation is performed.
[0079]As shown in Fig.16, in this concentration processing subroutine, the last element leader's position, a candidate soldier's position, and speed are called from RAM at Step 732, and in the following step 734, the concentration acceleration for concentrating near the element leader by the formula (4) mentioned above is calculated, and it stores in RAM. At Step 736, calculate a candidate soldier's short-distance acceleration in the same manner as the above, and Next, this

short-distance acceleration, At Step 734, the concentration acceleration stored in RAM is read, x, y, and the total acceleration (alphax, alphay, alphaz) added for every z component are calculated, respectively, and the newest speed and the newest position are calculated for every x, y, and z component by the above-mentioned formula (3) in Step 738.

[0080]In the following step 740, a candidate soldier's relative position to the element leader on the selected formation calculated at Step 106 of Fig.4 is read, and it calculates as a concentration position which should concentrate the present candidate soldier's position to the present element leader's position. Next, by judging whether it is in the prescribed range of the concentration position which the position of the candidate soldier who calculated at Step 738 calculated at Step 740 in Step 742 (for example, within the scope of the circle or ball demarcated at 1 m in radius on three-dimensional virtual space), Judge whether the candidate soldier concentrated in the concentration position, proceed to Step 746 at the time of a negative judgment, and at the time of an affirmative judgment, The newest speed is set to 0 (m/sec) in the following step 744, and the newest speed and the newest position which were calculated at Steps 738 and 744 are stored in RAM in Step 746.

[0081]When an affirmative judgment is carried out at Step 504 of Fig.8 on the other hand, a fight process subroutine is ended and it returns to Step 116 of Fig.4. A formation strength arithmetic subroutine is called in Step 130, and when an affirmative judgment is carried out at Step 116, like Step 222 of Fig.5, the aggressivity A, the defense power D, and a correction value are calculated, and it is Step 132 and transmits each soldier's position data and correction value to the image processing part 23. Since such processing is performed to every vertical-retrace-line interruption (1 / 60 seconds), on the television monitor 4, signs that change of the aggressivity A in a state of war changes every moment are expressed.

[0082]When the fight process subroutine shown in Fig.8 is summarized here, as shown in Fig.27, element leader F_L, In a forward condition, as long as there is no intervention (cease and desist order by the ** button 38) of a player, move in the direction of arrow FA in which the enemy element leader who is present in the nearest position of element leader F_L is, but. A match will be eventually played against the enemy element leader concerned, battling against the enemy soldier, if there is an enemy soldier (for example, E78) in un-fighting in the prescribed range of element leader F_L. As element leader F_L shows during advance Fig.28 (A) toward the enemy element leader concerned, move forward toward the enemy element leader concerned whom element leader F_L aims at, but the soldier who belongs to the platoon concerned on the other hand,. Since an enemy soldier will be searched for the enemy and battled in a forward condition, it will diffuse gradually by a lapse of time, and the formation of an aligned state or a movement state will collapse and go. Therefore, the number N of support soldiers decreases and the aggressivity A and the defense power D become small. On the other hand, if there is intervention by the ** button 38 of a player, as shown in Fig.28 (B). Since it will concentrate on the basis of element leader F_L except for the soldiers F16 and F60 who cannot concentrate unavoidably in a battle (attack flag floor line is an attack or defense) and formation will be prepared, A soldier's aggressivity A and defense power D will enlarge, and the strength part of formation can be recognized in the part which was displayed on the television monitor 4 and which shines white.

[0083]Next, by judging whether an officer commanding's status flag floor line is death in Step 112 of Fig.4, It judges whether the officer commanding died, and it proceeds to Step 134 at the time of an affirmative judgment, and it is judged at the time of a negative judgment whether the alignment command which aligns in an aligning position (refer to Step 106) was issued in the following step 114. This command is issued by operating the input device 3, and is incorporated into CPU block 20 by the main process of Step 110. When a negative judgment is carried out at Step 114, it returns to Step 108, and when an affirmative judgment is carried out, end processing is performed in Step 134. In this end processing, when an affirmative judgment is carried out at Step 112, When the image processing part 23 is made to draw the image in which all soldiers of the unit from whom the officer commanding died flee and an affirmative judgment is carried out at Step 114, the image processing part 23 is made to draw the image which returns a survival soldier to the aligning position calculated at Step 104, and reconstructs a rank, and a battle routine is ended.

[0084]As mentioned above, since selection of formation was permitted out of the predetermined formation group and formation was divided into a plurality of platoons who can operate a player (intervention) in this embodiment, The group character battle of an abundant

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number of characters of a player is attained by intervening in a group character battle at every platoon (merit). If it puts in another way so that there are many soldiers of other allies which exist near the soldier, the soldier's aggressivity A and defense power D enlarge, so that a soldier's tightness is high (it accumulates), since it was made like (Steps 302-312, 320, and 322 of Fig.6), For example, the group battle tactics in which aggressivity enlarges can be expressed with reality, so that aggressivity and defense power enlarge them, so that it is crowded with foot soldiers, or the bow soldier is developed horizontally. Since it enabled it to choose a unit's formation, the maldistribution of the strength part of the formation can be expressed with this embodiment from the difference in the size of each soldier's aggressivity, and defense power. Therefore, like before, the aggressivity of each soldier or a group and defense power calculate uniformly, or. Since each soldier's aggressivity, etc. are calculated to every predetermined time (1 / 60 seconds) unlike setting out of the aggressivity by the **** affinity of JANKEN which the formation of scales says that it is strong to the formation of **** and the formation of **** is strong to the formation of scales, and defense power, The appearance from which aggressivity etc. change every moment according to the collective situation can be expressed. And since it was made to make it draw after making (Steps 324, 132, and 224) and the image processing part 23 calculate the aggressivity A by color correction processing by calculating and transmitting a correction value at this embodiment, The large soldier of the aggressivity A shines white, and is seen, and the maldistribution of collective aggressivity can also be recognized promptly. Therefore, in consideration of an enemy unit's formation, an enemy soldier's arms, distance with an enemy, etc., tactics, such as attacking an enemy unit's weak part, can be enjoyed. In this embodiment, since it made it possible to attack the portion which does not concentrate an attack on an enemy platoon for every platoon or with which the enemy platoon's aggressivity is not strengthened as shown, for example in Fig.25 (C) (Steps 420-432), a group character battle can be enjoyed tactically truly.

[0085]In this embodiment, in order to define the neighborhood of a candidate soldier, the support region demarcated in horizontal a (m) and the length b (m) was used, but a support region does not need to be square, for example, can use various support regions, such as a circle, a ball, a triangle, and a polyhedron. Although the candidate soldier calculated the number of support soldiers in the above-mentioned embodiment as what is placed in the square center of an upper end and center of a lower end, it may be made to consider it as the center of not only this setting-out position but a support region, and any other positions. Although it was made to become the same as the center of the virtual frame Wm, and an element leader's position in this embodiment, it is, even if it calculates independently the position of the center of the virtual frame Wm, and an element leader, and it is **.

[0086]Although aggressivity and defense power were calculated linearly (linearly) in this embodiment according to the number N of support soldiers by the formula (1) and (2), For example, it may be made for aggressivity and defense power to enlarge suddenly as the number N of support soldiers enlarges like a quadratic function, and the color correction processing which the image processing part 23 performs is not brought close to white linearly, either, but it may be made to bring it close to white in quadratic function with a correction value. It was made to enlarge in both the above-mentioned embodiments as the number N of support soldiers enlarged aggressivity and defense power, but it may be made to become the logic which differs by aggressivity and defense power. As such an example, in a formula (2), the part where aggressivity is large may be made to consider support coefficient K_D as minus so that defense power may become small. In this embodiment, in order to calculate simply, made the correction value the same as the number N of support soldiers, but. Aggressivity (or defense power) is once calculated by the formula (1) and (2) mentioned above, and it may be made to calculate a correction value with reference to the table which has a correction value to which it is divided into 16 and the calculated aggressivity is corresponded to aggressivity, for example. If it does in this way, even if there is no aggressivity in the number N of support soldiers, and a linear relation, namely, also when the relation with aggressivity etc. to the number N of support soldiers has a quadratic function relation, proper color correction can be performed gradually.

[0087]Although the color correction processing of the image processing part 23 showed the example which corrects the whole soldier's color tone uniformly at this embodiment, for example a back face may be divided into 15, and a soldier's image may be shone sequentially white from the transverse-plane side from a soldier's transverse plane, or it may be made to

shine a soldier's predetermined part and arms white in 16 steps. Although the soldier was made to shine white in 16 steps according to aggressivity, it is not necessary to restrict to 16 steps and to limit to white in this embodiment. When a player watches the television monitor 4 by changing a soldier's color tone in short, the strength part of the aggressivity of the strong soldier of aggressivity or formation can be recognized. Therefore, the image from which only a plurality of color tones differ according to the stage of aggressivity about the same soldier, for example is prepared, and it may be made to choose one from the images prepared according to the correction value.

[0088]By this embodiment, when formation was chosen, arming and **** were also determined automatically again, but it may be made to permit arming of one or more platoons who form formation, and change of ****, and may be made to permit reselection of formation during movement of all groups further.

[0089]Although this embodiment showed the example which performs the operation of aggressivity, defense power, and a correction value for every vertical-retrace-line interruption about each soldier, It is a relation of load of sub CPU which neither CPU block 20 nor the image processing part 23 illustrates, and it may be made to make it with once five vertical-retrace-line interruption, and may make it, change the number of times to vertical-retrace-line interruption by the operation of aggressivity, defense power, and a correction value further for example, respectively.

[0090]By this embodiment, although sub CPU of the image processing part 23 was made to perform color correction processing, it may be made to perform CPU of CPU block 20 again. Although the program was transmitted to RAM in this embodiment by reading the recording medium 1 which recorded the game program by the medium reading part 22, it does not have the medium reading part 22, but a game program is memorized to ROM and it may be made to read a game program from this ROM to it. If it does in this way, it can be considered as a game special-purpose machine. Although described in the above-mentioned embodiment in the example which uses CD-ROM as a recording medium, Even if it is a ROM cartridge in which loading is possible to RAM of CPU block 20, a mass floppy (registered trademark) disk and a magnet optical disc, etc., if it has these medium reading parts, it cannot be overemphasized that the present invention is applicable.

[0091]And in this embodiment, although various preset values and a formula were shown as an example, it does not wait for argument for a person skilled in the art for various deformation to be possible for the present invention in the scope of the claim mentioned above, without being restricted to these.

[0092]

[Effect of the Invention]Since the many character formed formation according to the present invention as described above, Since the situation of the whole group can be grasped according to formation and intervention of the player was enabled about the small group who has specific formation, the effect that it can intervene about a many character for every small group can be acquired.

* NOTICES *

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q.This document has been translated by computer. So t(e translation may not reflect t(e original precisely.

2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

A [FIG. 1] It is an outline perspective view showing the connection mode of home video game equipment.

A [FIG. 2] It is a plan view of the input device used for home video game equipment.

A [FIG. 3] It is a schematic block diagram showing the composition of the game device body of the embodiment to which the present invention is applied.

A [FIG. 4] It is a flow chart which shows the battle routine of an embodiment.

A [FIG. 5] It is a flow chart of the formation setting processing subroutine which shows the details of Step 104 of a battle routine.

A [FIG. 6] It is a formation strength arithmetic subroutine which shows the details of Step 130 of a battle routine, and Step 222 of a formation setting processing subroutine.

A [FIG. 7] It is a flow chart of the moving processing subroutine which shows the details of Step 120 of a battle routine.

A [FIG. 8] It is a flow chart of the fight process subroutine which shows the details of Step 128 of a battle routine.

A [FIG. 9] It is a flow chart which shows the details of the element leader status value data-processing subroutine of Step 502 of a fight process routine.

A [FIG. 10] It is a flow chart of the state processing subroutine which shows the details of Steps 512 and 520 of a fight process routine.

A [FIG. 11] It is a flow chart of the search-for-the-enemy processing subroutine which shows the details of Step 612 of a state processing subroutine.

A [FIG. 12] It is a flow chart of the approach processing subroutine which shows the details of Step 614 of a state processing subroutine.

A [FIG. 13] It is a flow chart of the attack processing subroutine which shows the details of Step 616 of a state processing subroutine.

A [FIG. 14] It is a flow chart of the defense processing subroutine which shows the details of Step 618 of a state processing subroutine.

A [FIG. 15] It is a flow chart of the standby process subroutine which shows the details of Step 514 of a fight process subroutine.

A [FIG. 16] It is a flow chart of the concentration processing subroutine which shows the details of Step 522 of a fight process subroutine.

A [FIG. 17] It is explanatory view 1 of the formation which the unit E and the unit F can take, and, as for (A) - (E), a direction circle, the members of ****, the members of ****, the members of scales, and the members of a line of flying wild geese are shown, respectively.

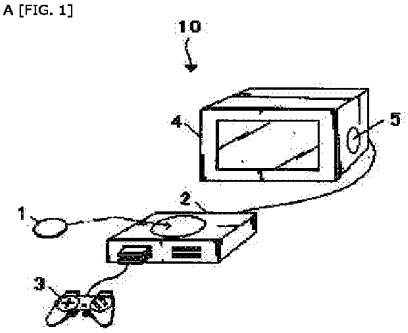
A [FIG. 18] It is explanatory view 2 of the formation which the unit E and the unit F can take, and, as for (A) - (E), the members of long, the members of ****, the members of ****, a common line abreast, and the members of **** are shown, respectively.

A [FIG. 19] It is explanatory view 3 of the formation which the unit E and the unit F can take, and, as for (A) - (C), the members of rectangular, the members of ** form, and the members of **** are shown, respectively.

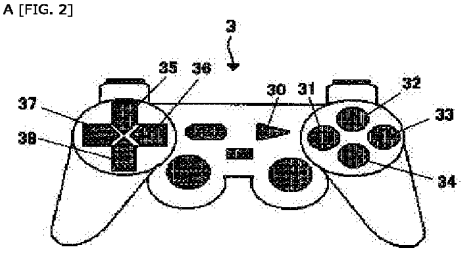
A [FIG. 20] It is an explanatory view for describing the procedure of the soldier except the candidate soldier and candidate soldier of Step 302 - Step 306 of a formation strength arithmetic subroutine.
A [FIG. 21] It is an explanatory view for describing the arithmetic contents of Step 302 of a formation strength arithmetic subroutine - Step 312, and (A) shows the concept of the operation in Step 306 - Step 312, and (B) shows the concept of the operation in the Step 302 - step 312 whole.
A [FIG. 22] It is an explanatory view for describing the stage of the size of each soldier's aggressivity, and defense power.
A [FIG. 23] It is an explanatory view of the screen displayed on the television monitor which shows the maldistribution of the formation before formation is formed and a moving processing subroutine is performed, and the strength part of the aggressivity of formation.
A [FIG. 24] It is an explanatory view which describes an example of the virtual frame of formation, (A) is an explanatory view for describing the relation of the size of a region with the time of alignment and movement, and (B) is an explanatory view for describing position correction when a soldier goes outside at the time of movement.
A [FIG. 25] It is an explanatory view of formation and formation, and (A) shows a movement state, (B) shows a retreat state, and, as for a battle, a movement state, and (C), (D) shows the end of a state of war temporarily.
A [FIG. 26] It is an explanatory view for describing the relation between distance with an ally soldier, and repulsive force.
A [FIG. 27] It is an explanatory view for describing an element leader's motion in a state of war.
A [FIG. 28] It is an explanatory view for describing a soldier's motion in a state of war, and (A) shows a soldier while an element leader's is moving forward motion, and (B) shows a motion of a soldier with an waiting element leader.
[Explanations of letters or numerals]
1 Recording medium
2 Game device body
3 Input device (input means)
4 Television monitor
20 CPU block (position calculation / determination means, an attack value / defense value calculating means)

DRAWINGS

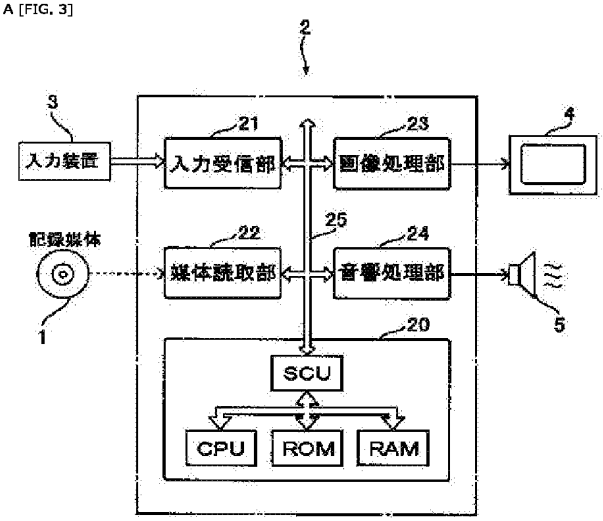
A [FIG. 1]



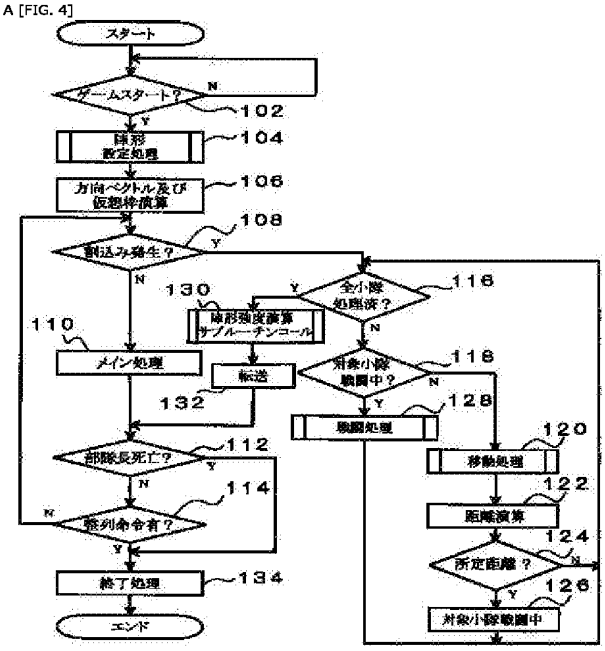
A [FIG. 2]



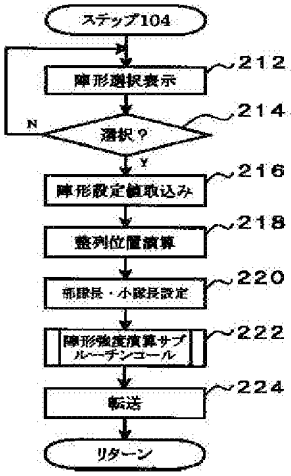
A [FIG. 3]



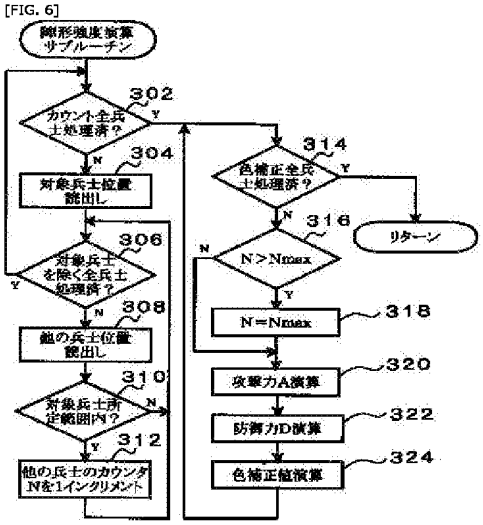
A [FIG. 4]



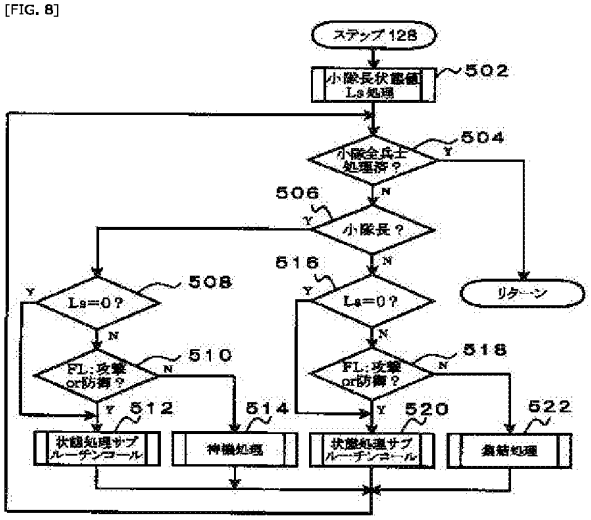
A [FIG. 5]



A [FIG. 6]



A [FIG. 8]

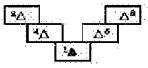


A [FIG. 17]

(A)

(B)

(C)



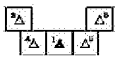
(D)

(E)

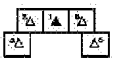
A [FIG. 19]

(A)

(B)



(C)



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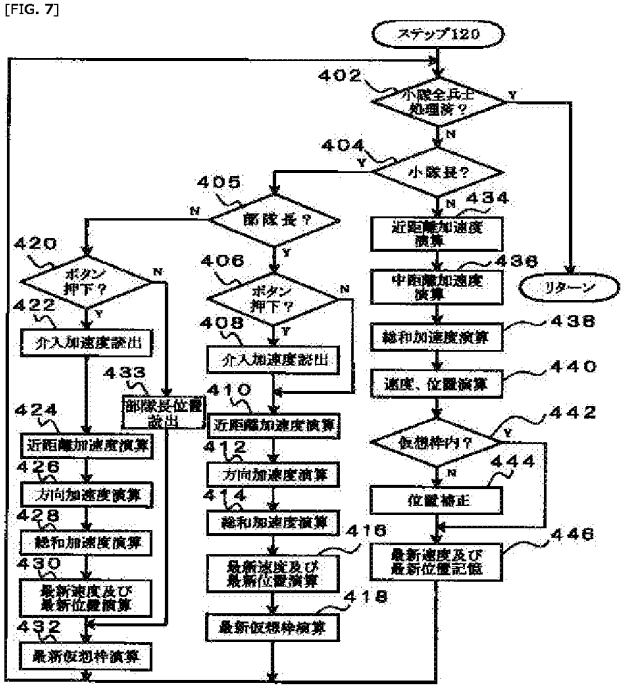
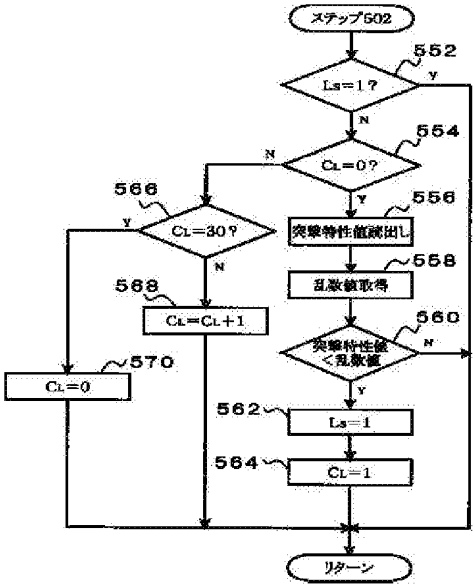
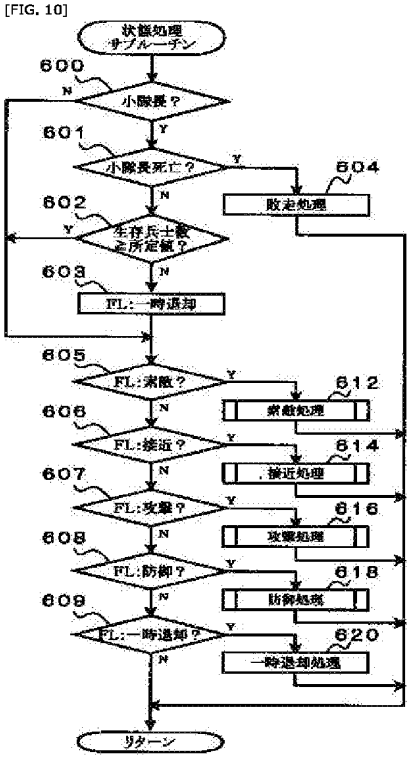


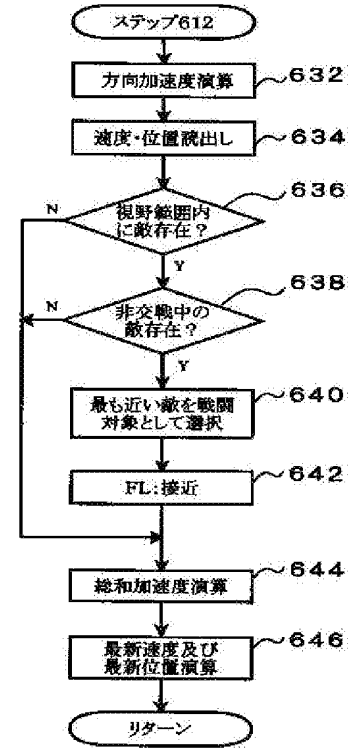
A [FIG. 9]



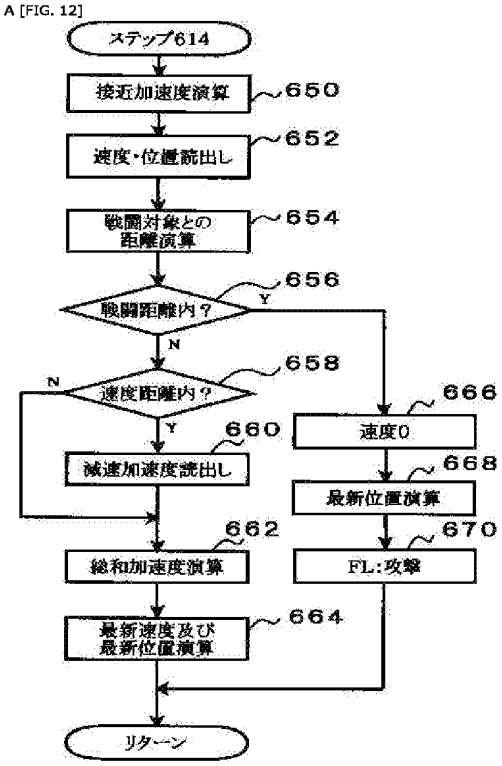
A [FIG. 10]



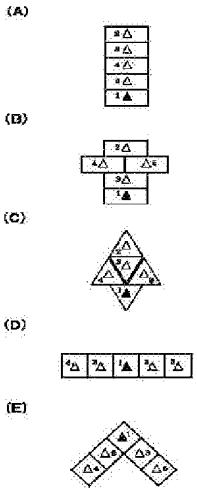
A [FIG. 11]



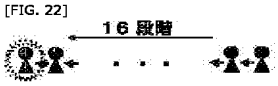
A [FIG. 12]



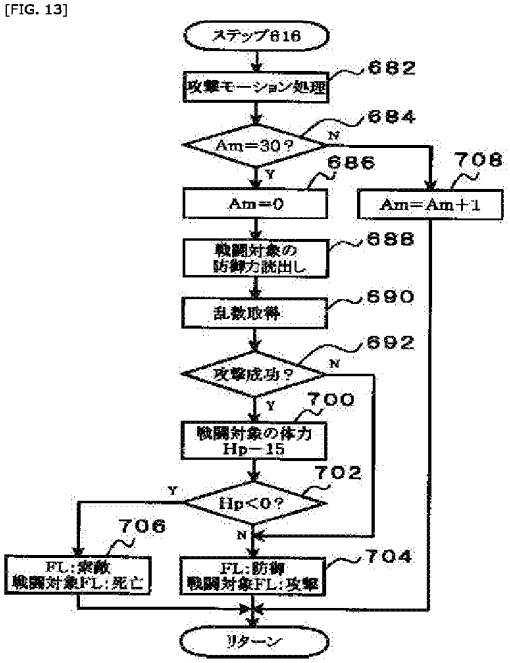
A [FIG. 18]



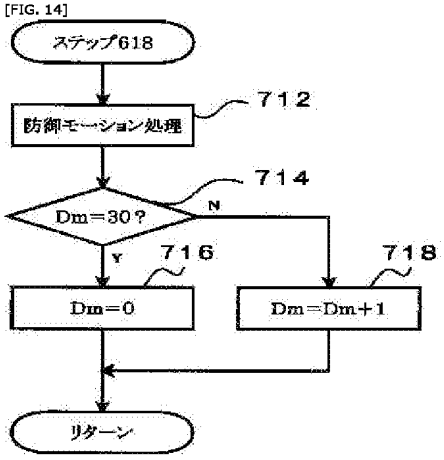
A [FIG. 22]



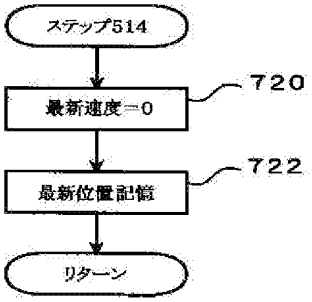
A [FIG. 13]



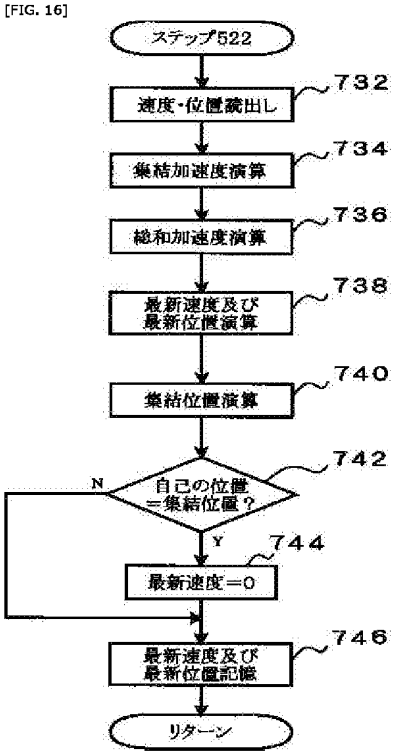
A [FIG. 14]



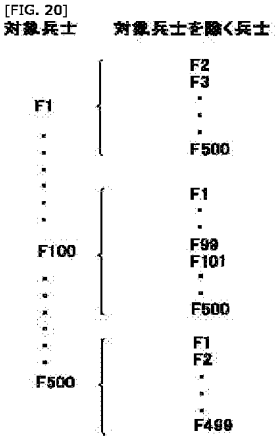
A [FIG. 15]



A [FIG. 16]

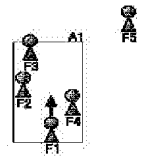


A [FIG. 20]

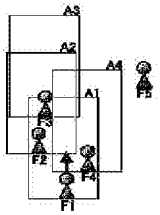


A [FIG. 21]

(A)

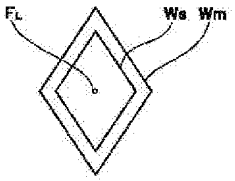


(B)

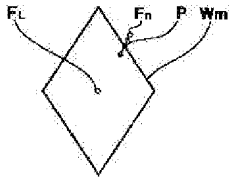


A [FIG. 24]

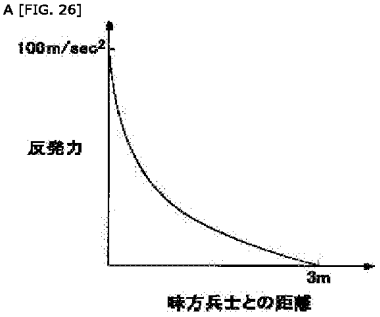
(A)



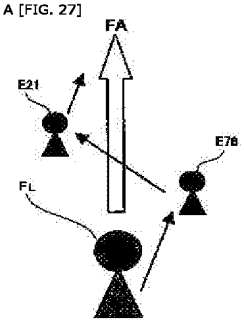
(B)



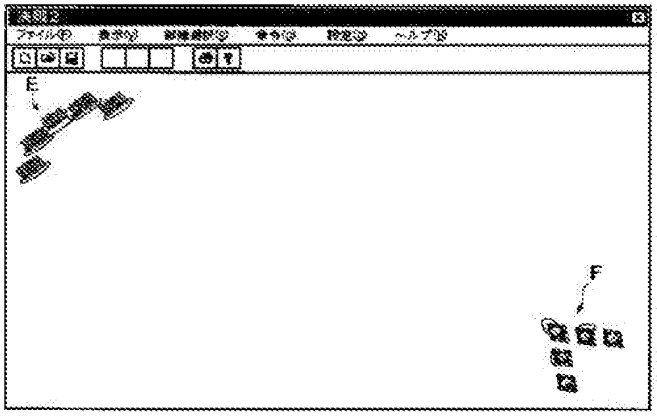
A [FIG. 26]



A [FIG. 27]

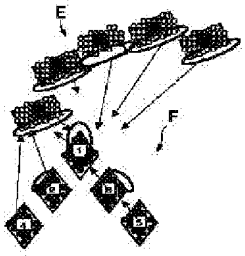


A [FIG. 23]



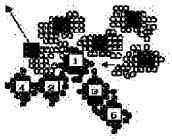
A [FIG. 25]

(A)



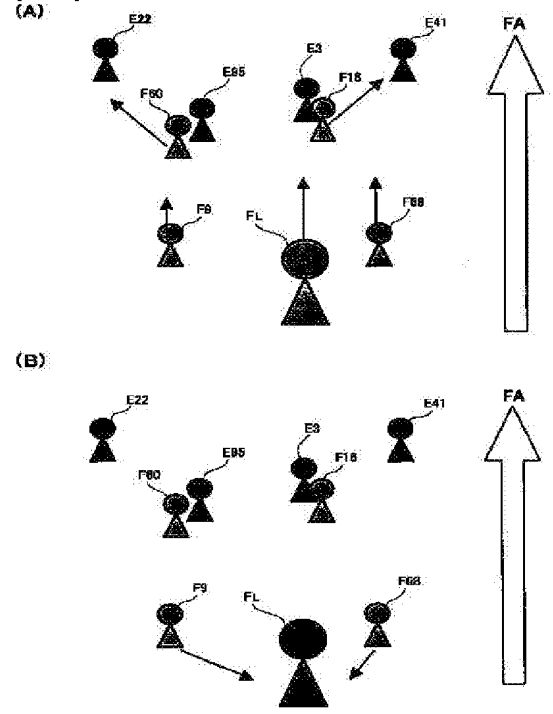
(B)

(C)



(D)

A [FIG. 28]


(A)
E22
E41
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FL
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(B)
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E85
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(71)出願人　595000427
株式会社光栄
横浜市港北区箕輪町１－18－12
(72)発明者　竹田　智一
神奈川県横浜市港北区箕輪町１丁目18番12号　株式会社コーエー内
(72)発明者　津田　順平
神奈川県横浜市港北区箕輪町１丁目18番12号　株式会社コーエー内
(74)代理人　100104721
弁理士　五十嵐　俊明

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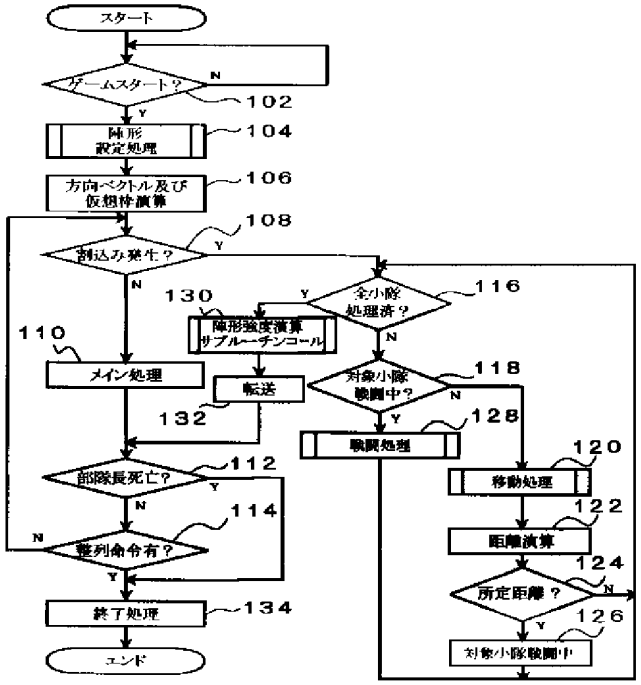
(54)【発明の名称】　陣形制御方法、プログラム、記録媒体及びゲーム装置

(57)【要約】
【課題】　集団キャラクタ戦闘において多数のキャラクタを扱うことができると共に集団について攻撃力等の偏在を表現可能な陣形制御方法を提供する。
【解決手段】　３次元仮想空間上に表示され多数のキャラクタにより形成される陣形が、予め定められた陣形群の中から選択される（Ｓ１０４）。その陣形は、それぞれ特定の隊形を有する複数の小集団に分割されており、プレイヤが介入可能である（Ｓ１２０、１２８）。また、３次元仮想空間上の各キャラクタの位置を演算し、各キャラクタの攻撃値及び／又は防御値が該キャラクタの近傍に存在する他味方のキャラクタとの密集度に基づいて演算され（Ｓ１３０）、陣形全体の攻撃力の強弱箇所の偏在が示される（Ｓ１３２）。



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【特許請求の範囲】

【請求項１】　３次元仮想空間上に表示され多数のキャラクタの集団が敵味方の陣形を形成して互いに戦闘する集団キャラクタ戦闘のための陣形制御方法であって、前記陣形は、予め定められた陣形群の中から選択され、かつ、プレイヤが介入可能でそれぞれ特定の隊形を有する複数の小集団に分割されることを特徴とする陣形制御方法。

【請求項２】　前記キャラクタの攻撃力及び／又は防御力を表す攻撃値及び／又は防御値が該キャラクタの近傍に存在する他味方のキャラクタとの密集度に基づいて演算されることを特徴とする請求項１に記載の陣形制御方法。

【請求項３】　前記キャラクタの整列位置が前記陣形に基づいて演算又は決定されることを特徴とする請求項１又は請求項２に記載の陣形制御方法。

【請求項４】　前記集団の移動中の陣形が前記キャラクタの整列位置における集団の陣形と相似形を維持可能であることを特徴とする請求項３に記載の陣形制御方法。

【請求項５】　前記小集団の移動中の隊形が前記キャラクタの整列位置における小集団の隊形と相似形であり、前記プレイヤの介入により前記陣形の変更が可能であることを特徴とする請求項４に記載の陣形制御方法。

【請求項６】　予め定められたリーダー群の中から前記小集団を統率するリーダーが選定可能であることを特徴とする請求項１乃至請求項５のいずれか１項に記載の陣形制御方法。

【請求項７】　前記リーダーの個性が前記小集団の前記３次元仮想空間上での前進又は停止を表す突撃特性と関連付けられたことを特徴とする請求項６に記載の陣形制御方法。

【請求項８】　前記陣形群が、方円陣、円月陣、鶴翼陣、魚鱗陣、雁行陣、長蛇陣、衡軛陣、鋒矢陣、平横陣、錐行陣、方形陣、箕形陣及び鈎行陣のうち少なくともいずれか２つを含むことを特徴とする請求項１乃至請求項７のいずれか１項に記載の陣形制御方法。

【請求項９】　請求項１乃至請求項８のいずれか１項に記載の陣形制御方法をコンピュータが実行可能なプログラム。

【請求項１０】　請求項９に記載のプログラムを記録したコンピュータ読取可能な記録媒体。

【請求項１１】　３次元仮想空間上に表示され多数のキャラクタの集団が敵味方の陣形を形成して互いに戦闘する集団キャラクタ戦闘プログラムを記憶部に記憶可能なゲーム装置において、

予め定められた陣形群の中から、それぞれ特定の隊形を有し複数の小集団に分割された陣形を選択すると共に、前記小集団の前記３次元仮想空間上の移動又は戦闘に介入するための入力手段と、

前記選択された陣形に基づいて、前記３次元仮想空間上の前記キャラクタの位置を演算又は決定する位置演算／決定手段と、

前記演算／決定された位置に基づいて、前記キャラクタの近傍に存在する他の味方キャラクタとの密集度を該キャラクタの攻撃力及び／又は防御力を表す攻撃値及び／又は防御値として演算する攻撃値／防御値演算手段と、

を備えたことを特徴とするゲーム装置。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】本発明は、陣形制御方法、記録媒体及びゲーム装置に係り、特に、３次元仮想空間上に表示され多数のキャラクタの集団が敵味方の陣形を形成して互いに戦闘する集団キャラクタ戦闘のための陣形制御方法、該方法を記録した記録媒体及びゲーム装置に関する。

【０００２】

【従来の技術】今日、種々のゲームソフトがＣＤ－ＲＯＭ等の記録媒体に記録されて各社から販売されている。このような記録媒体はゲーム装置に装着されて使用される。ゲーム装置のうち最も一般的な家庭用ゲーム装置は、ゲーム装置本体に、コントローラパッド等の入力装置と、ゲーム内容を表示するテレビモニタと、を接続して構成されている。プレイヤが記録媒体をゲーム装置本体に挿入すると、自動的に、又は、入力装置の所定ボタンを押下することにより、記録媒体に記録されたゲームプログラムがゲーム装置本体の記憶メモリであるＲＡＭにロードされてゲームがスタートし、その後は入力装置のボタンを操作することによりゲームを楽しむことができる。

【０００３】ところで従来、複数のキャラクタが主に２次元座標上で敵味方に分かれて戦闘するゲームが発売されている。例えば、ファミリーコンピュータ（仟天堂（株））用として、１９８５年にアスキー社から発売され、味方の兵士が戦闘に勝つごとにランクが上がっていく「ボコスカウォーズ」や、１９８８年にアイレム社から発売され、プレイヤが各部隊の進行方向を決定し味方部隊が敵部隊と遭遇すると、予め決められた複数のフォーメーションの中から１つを選び、戦闘モードとなる「ナポレオン戦記」等がある。また、コンピュータ用（ＮＥＣ（株）ＰＣ－８８Ｘ１用）としては、１９８８年に呉ソフトウエア工房社から発売され、プレイヤがキャラクタを制御することによりピンチに陥ったキャラクタを直接コントロールして救うことができる「シルバーゴースト」等が知られている。

【０００４】これらのゲームソフトは、戦闘中にプレイヤによるコマンド入力待ちをするわけではなく、コマンド入力命令中もゲームはリアルタイムに進行し戦闘を繰り返すゲームであり、「リアルタイムシミュレーションゲーム」と呼ばれている。リアルタイムシミュレーションゲームは、戦術を考えながら敵軍を打ち負かす過程を

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楽しむゲームジャンルに属し、一定時間経過後にプレイヤのコマンド入力を受け付けコマンド入力中は敵が攻撃しない「ターン制」のゲームとは異なり、いつでも敵が攻撃してくるので、実際の戦闘に疑似する緊迫感や戦術感を味わうことができる。

【０００５】一方、集団移動に関する従来のゲームとして、主に２次元で表現された座標上を、５つ程度の複数のキャラクタが隊列をつくりながら移動するものが発売されている。例えば、特開平第８－６３６１３号公報には、予めキャラクタごとに移動速度、方向転換を行う時期・確率を設定し、隊列のリーダーである主人公キャラクタに追従していく様子を個性的な変化をもって表示する技術が開示されている。また、本出願人の特願平第１１－２３３５９５号には、３次元仮想空間上に表現されリーダーを有する複数のキャラクタが集団を形成して予め設定された目標点に移動する集団キャラクタ移動方法に関する発明が記載されている。この発明によれば、集団に属する複数のキャラクタをキャラクタ毎に位置及び加速度を演算し、他の味方のキャラクタから所定距離離れるための加速度や他の味方のキャラクタの移動速度や移動方向に合わせるための加速度等を演算して味方のキャラクタの移動状況に応じて速さや方向を変更するようにしたので、各キャラクタの移動の動作を動物等の集団移動に擬してリアルに表現することができる。

【０００６】更に、集団戦闘に関する技術として、本出願人の特願平第１１－３３９１７６号には、３次元仮想空間上に表示され複数のキャラクタが敵味方の集団を形成して互いに戦闘する集団キャラクタ戦闘方法に関する発明が記載されている。この発明によれば、集団に属する各キャラクタが自己の視野範囲内の敵キャラクタを探して（索敵して）接近し、戦闘を開始するので、各キャラクタが恰も自己の判断で戦闘する様子をリアルに表現することができる。

【０００７】

【発明が解決しようとする課題】しかしながら、従来のリアルタイムシミュレーションゲームでは、主に２次元での戦闘であるため、実際の戦闘のような迫力を表現することができず、視覚性に乏しいものであった。従って、近時のコンピュータ技術の急速な進歩により、テレビモニタ上には映画並の画像が表示されることから、プレイヤが希求するより現実感のあるゲームからはほど遠いものとなっていた。

【０００８】また、上述したリアルタイムシミュレーションゲームや特開平第８－６３６１３号公報の技術では、プレイヤがリーダーを一歩動かすと他のキャラクタも一歩追随し、途中他の味方のキャラクタが障害物に接触すると、そのキャラクタは進行することができなくなったり、各キャラクタは自動的に索敵するのではなく、移動途中で敵に接触した場合に戦闘を開始するといったものであり、どちらかというと視覚を楽しむというより戦術を楽しむ思考型のゲームに止まるものであった。更に、プレイヤが各部隊の進行方向を決定し、味方部隊が敵部隊と遭遇すると、フォーメーション選択画面に切り替わり、プレイヤが予め決められた複数のフォーメーションの中から１つを選ぶと、戦闘画面に切り替わり、味方部隊のキャラクタが敵部隊のキャラクタと戦闘するものもあるが、各キャラクタ単位で特別に内部処理されているわけではないので、同様に思考型のゲームに止まるものであった。従って、各キャラクタが周りの味方と一定距離を保ちながら移動したり、各キャラクタが自ら索敵したり、状況に応じて索敵移動状態を変更したりする実際の戦闘とは異なっており、ゲーム自体に物足りなさを感じる、という問題点があった。

【０００９】この点、上述した特願平第１１－２３３５９５号及び特願平第１１－３３９１７６号の発明では、各キャラクタ単位で特別に内部処理されているので、集団の中での各キャラクタの移動動作や戦闘動作をよりリアルに表現することはできるものの、集団として陣形や隊形等について着目したものではなかった。

【００１０】特に、リアルタイムシミュレーションゲームであって何十～何千という夥しい数のキャラクタを扱う集団戦闘ゲームでは、個々のキャラクタの全ての動きについてプレイヤが介入して制御することは事実上困難である。従って、このような集団戦闘ゲームでは、プレイヤが介入しなくても、所定のアルゴリズムによって全てのキャラクタが３次元仮想空間上で適正な動きをすることが求められると共に、ゲームとしてプレイヤが介入できる余地も確保する必要がある。しかしながら、従来の集団戦闘ゲームでは、例えば、魚鱗陣が鶴翼陣に強く、鋒矢陣が魚鱗陣に強く、鶴翼陣が鋒矢陣に強いといったジャンケンの如き相性等により陣形やその陣形に伴う攻撃力等のパラメータが一律に補正されていた。更に、従来の集団戦闘ゲームでは、陣形は集団全体で一つで構成されており、複数の小隊で陣形を形成するものでもなかったので、例えば、敵部隊の一小隊に攻撃を集中したり、敵小隊の強化されていない弱い部分又は角度から攻撃するといった、真に戦術的な楽しみ方を味わうには難しい面があった。

【００１１】本発明は上記事案に鑑み、集団キャラクタ戦闘において多数のキャラクタを扱うことができると共に集団について攻撃力等の偏在を表現可能な陣形制御方法、該記録媒体及びゲーム装置を提供することを課題とする。

【００１２】

【課題を解決するための手段】上記課題を解決するために、本発明の第１の態様は、３次元仮想空間上に表示され多数のキャラクタの集団が敵味方の陣形を形成して互いに戦闘する集団キャラクタ戦闘のための陣形制御方法であって、前記陣形は、予め定められた陣形群の中から選択され、かつ、プレイヤが介入可能でそれぞれ特定の

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隊形を有する複数の小集団に分割されることを特徴とする。本態様では、多数のキャラクタが敵味方に分かれて互いに集団を形成し、その集団の陣形は予め定められた陣形群の中から選択される。また、陣形はそれぞれ特定の隊形を有する小集団に分割され、プレイヤは小集団について介入が可能である。本態様によれば、多数のキャラクタが陣形を形成するようにしたので、陣形により集団全体の情勢を把握することができると共に、特定の隊形を有する小集団についてプレイヤの介入を可能としたので、小集団毎に多数のキャラクタについて介入することができる。

【００１３】この場合において、キャラクタの攻撃力及び／又は防御力を表す攻撃値及び／又は防御値を該キャラクタの近傍に存在する他の味方キャラクタとの密集度に基づいて演算するようにすれば、密集度が高く近傍に他の味方キャラクタが多く存在するときには該キャラクタの攻撃力及び／又は防御力が大きくなるので、陣形の攻撃力及び／又は防御力の強弱箇所の偏在を表すことができる。

【００１４】また、キャラクタの整列位置を陣形に基づいて演算又は決定するようにすれば、選択された陣形に従ってキャラクタの整列位置を得ることができ、また、当該集団の整列位置での陣形の攻撃力及び／又は防御力の強弱箇所の偏在を表すことができる。このとき、集団の移動中の陣形がキャラクタの整列位置における集団の陣形と相似形を維持可能であるようにすれば、移動中に整列位置での陣形と相似形の陣形を維持したまま攻撃力等の強弱箇所の偏在を表すことができる。更に、小集団の移動中の隊形をキャラクタの整列位置における小集団の隊形と相似形とし、プレイヤの介入により陣形の変更を許容するようにすれば、特定の小集団を整列位置における隊形を維持しつつ、また、隊形の強弱箇所の偏在を表しつつ、特定の敵小集団との戦闘が可能となる。

【００１５】更に、予め定められたリーダー群の中から小集団を統率するリーダーを選定可能であるようにすれば、プレイヤにとって親しみやすいリーダーを小集団のリーダーとすることができる。このとき、リーダーの個性を小集団の３次元仮想空間上の前進又は停止を表す突撃特性に関連付けるようにすれば、小集団の突撃特性をリーダーの個性に依存させることができる。

【００１６】上記態様において、陣形群を、方円陣、円月陣、鶴翼陣、魚鱗陣、雁行陣、長蛇陣、衡軛陣、鋒矢陣、平横陣、錐行陣、方形陣、箕形陣及び鈎行陣のうち少なくともいずれか２つを含むようにしてもよい。

【００１７】また、本発明の第２の態様は、上述した第１態様の陣形制御方法をコンピュータが実行可能なプログラムである。更に、本発明の第３の態様は、上述した第２態様のプログラムを記録したコンピュータ読取可能な記録媒体である。これらの態様によれば、通信により、又は、記録媒体に記録された陣形制御方法をコンピュータに読み取らせることで、コンピュータ上で第１態様の陣形制御方法の実施が可能となる。

【００１８】そして、本発明の第４の態様は、３次元仮想空間上に表示され多数のキャラクタの集団が敵味方の陣形を形成して互いに戦闘する集団キャラクタ戦闘プログラムを記憶部に記憶可能なゲーム装置において、予め定められた陣形群の中から、それぞれ特定の隊形を有し複数の小集団に分割された陣形を選択すると共に、前記小集団の前記３次元仮想空間上の移動又は戦闘に介入するための入力手段と、前記選択された陣形に基づいて、前記３次元仮想空間上の前記キャラクタの位置を演算又は決定する位置演算／決定手段と、前記演算／決定された位置に基づいて、前記キャラクタの近傍に存在する他の味方キャラクタとの密集度を該キャラクタの攻撃力及び／又は防御力を表す攻撃値及び／又は防御値として演算する攻撃値／防御値演算手段と、を備えたことを特徴とする。

【００１９】

【発明の実施の形態】以下、図面を参照して本発明を家庭用ビデオゲーム装置に適用した実施の形態について説明する。

【００２０】（構成）図１に示すように、本実施形態の家庭用ビデオゲーム装置１０は、ゲーム装置本体２に、スピーカ５を内蔵したテレビモニタ４及び入力手段としての入力装置３が接続されている。ゲーム装置本体２は、ＣＤ－ＲＯＭ等の記録媒体１を装着可能な媒体読取部（図３参照）を有している。この媒体読取部に記録媒体を装着することにより記録媒体１に記録されたゲームプログラムやゲームデータが自動的にゲーム装置本体２内の記憶メモリにロードされる。

【００２１】図２に示すように、入力装置３には、集団戦闘ゲーム等のゲームを開始するためのスタートボタン３０やゲームキャラクタを操作したり、ゲーム装置本体２からの選択問い合わせに応答するための□ボタン３１、△ボタン３２、○ボタン３３、×ボタン３４、及び、＾ボタン３５、→ボタン３６、←ボタン３７、﹀ボタン３８で構成される十字方向ボタンセット等の種々のボタンが配置されている。

【００２２】図３に示すように、ゲーム装置本体２は装置全体の制御を行い、位置演算／決定手段及び攻撃値／防御値演算手段としてのＣＰＵブロック２０を備えている。ＣＰＵブロック２０は、ゲーム装置本体２内の各部とのデータ転送を主に制御するＳＣＵ（System Control Unit）、中央演算処理装置として高速クロックで作動するＣＰＵ、ゲーム装置本体２の基本制御動作が記憶されたＲＯＭ、ＣＰＵのワークエリアとして働くと共に記録媒体１に記録されたゲームプログラム及び種々のデータを一時的に記憶するＲＡＭ及びこれらを接続する内部バスで構成されている。

【００２３】ＳＣＵには外部バス２５が接続されてい

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る。外部バス２５は、コントローラパッド等の入力装置３からの入力を受信してＣＰＵブロック２０へ入力情報を転送する入力受信部２１、図示しないサブＣＰＵを備え記録媒体１に記録されたゲームプログラムを読み取りＣＰＵブロック２０へ転送するＣＤ－ＲＯＭドライブ等の媒体読取部２２、図示しないサブＣＰＵ及びＶＲＡＭを備えＣＰＵブロック２０から転送された情報に従って画像を描画する画像処理部２３、及び、図示しないサブＣＰＵを備え、例えば、バックミュージックや軽騎兵の足音等の音響を処理する音響処理部２４、に接続されている。また、入力受信部２１は入力装置３に、画像処理部２３はテレビモニタ４に、音響処理部２４はテレビモニタ４に内蔵されたスピーカ５にそれぞれ接続されている。

【００２４】（動作）次に、本実施形態の家庭用ビデオゲーム装置１０の動作についてフローチャートを参照して、プレイヤの部隊（以下、部隊Ｆという。）に属するキャラクタとしての兵士とコンピュータ（ＣＰＵブロック２０）側の部隊（以下、部隊Ｅという。）に属する兵士とが戦闘する場合について説明する。なお、ゲーム装置本体２には既に記録媒体１が挿入されゲームプログラム、ゲームデータがＣＰＵブロック２０内のＲＡＭに格納され、初期設定処理がなされているものとする。また、説明を簡単にするために、以下のフローチャートにおいては、プレイヤの部隊Ｆの動作を中心に記載して、コンピュータの部隊Ｅについても同様の処理がなされるものとしてその記載を省略した。

【００２５】＜整列時＞図４に示すように、ＣＰＵブロック２０内のＣＰＵは、部隊Ｆと部隊Ｅとに属するそれぞれの兵士を交戦させるための戦闘ルーチンを実行する。この戦闘ルーチンでは、まず、ステップ１０２で、図２に示したスタートボタン３０が押下されるまで待機する。ステップ１０２での判断が肯定されると、次のステップ１０４において、部隊Ｆ（及び部隊Ｅ）の陣形を設定するための陣形設定処理サブルーチンが実行される。

【００２６】図５に示すように、この陣形設定処理サブルーチンでは、まず、ステップ２１２において、図１７～図１９及び下表１に示すように、予め定められた陣形群の中から１つの陣形をプレイヤに選択させるために、陣形群のアイコンをテレビモニタ４に表示する陣形選択表示を行い、ステップ２１４でプレイヤがいずれかの陣形を選択するまで待機する。いずれかの陣形が選択されると、次のステップ２１６において、その陣形のデフォルト値を取り込む。なお、ステップ２１６では、上述したように、コンピュータ側も同時に部隊Ｅの陣形を選択している。

【００２７】

【表１】

陣形名	小隊の概要とキャラクタ数	対応図
方円陣（円の陣）	第２、第３小隊は正方形（１０ｍ×１０ｍ、１００人）、他の小隊は矩形（１４ｍ×７ｍ、９８人）	図１７（Ａ）
円月陣（月の陣）	各小隊は菱形（１４ｍ×１４ｍ、９８人）	図１７（Ｂ）
鶴翼陣（鶴の陣）	各小隊は矩形（１４ｍ×７ｍ、９８人）	図１７（Ｃ）
魚鱗陣（鱗の陣）	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１７（Ｄ）
雁行陣（雁の陣）	各小隊は矩形（１４ｍ×７ｍ、９８人）	図１７（Ｅ）
長蛇陣（蛇の陣）	各小隊は矩形（１７ｍ×６ｍ、１０２人）	図１８（Ａ）
衡軛陣（牛の陣）	各小隊は矩形（１７ｍ×６ｍ、１０２人）	図１８（Ｂ）
鋒矢陣（矢の陣）	第１、第３小隊は逆三角形（底辺１６ｍ×高さ１３ｍ、１０４人）、他の小隊は正三角形	図１８（Ｃ）
平横陣（平の陣）	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１８（Ｄ）
錐行陣（錐の陣）	各小隊は菱形（１４ｍ×１４ｍ、９８人）	図１８（Ｅ）
方形陣（方の陣）	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１９（Ａ）
箕形陣（箕の陣）	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１９（Ｂ）
鈎行陣（鈎の陣）	各小隊は正方形（１０ｍ×１０ｍ、１００人）	図１９（Ｃ）

【００２８】本例の陣形は、正方形（１０ｍ×１０ｍ、１００人）、矩形（１４ｍ×７ｍ又は１７ｍ×６ｍ、９８人又は１０２人）、三角形又は逆三角形（底辺１６ｍ×高さ１３ｍ、１０４人）のいずれかで形成される５つ

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の小集団としての小隊に分割されており、５つの小隊の隊形及び第１小隊に対する位置で陣形が形成されている。以下、便宜的に、プレイヤが部隊Ｆに「錐行陣（錐の陣）」を、コンピュータが部隊Ｅに「鶴翼陣（鶴の陣）」を選択したものとして説明する。なお、陣形が決定されると、その陣形を形成する小隊の兵科及び兵種（表３参照）も初期設定処理時にＲＡＭに格納したデータに従って決定され、本例に則して説明すれば、鶴翼陣では第１小隊～第３小隊が歩兵隊であり、第４小隊及び第５小隊が短弓隊、錐行陣では第１小隊～第５小隊の全てが歩兵隊である。なお、表１では歩兵系、弓系の場合についての隊形の大きさを示したが、騎馬系の場合には隊形の大きさや兵士数は異なっているようにしてもよい（表３も参照）。

【００２９】次にステップ２１８では、陣形を形成する全ての兵士に兵士を識別するための兵士番号を割り振り、後述するように部隊Ｅと部隊Ｆとの３次元仮想空間上での距離を設定して、ステップ２１６で取り込んだ陣形のデフォルト値に従って、部隊Ｅ及び部隊Ｆに属する全兵士の整列位置をそれぞれ演算（又は決定）してＲＡＭに格納する。次にステップ２２０では、部隊Ｆ（及び部隊Ｅ）に属する兵士の中から部隊長及び小隊長を自動的に設定してＲＡＭにこの設定情報を格納する。この部隊長及び小隊長の設定では、まず、小隊のほぼ中央の任意の兵士を小隊長として選択し、第１小隊のリーダーを部隊長として選択して（図１７～図１９では、部隊長を他の小隊長と識別するために黒三角で表している。）、次に、部隊長に特定のゲームキャラクタを割り当てるために、例えば下表２に示すように、テレビモニタ４に部隊長候補（曹操、劉備、孫堅）のアイコンを表示し、プレイヤにいずれかを選択させ、更に、プレイヤが選択した部隊長配下の小隊長のアイコンをテレビモニタ４に表示して、第２小隊～第５小隊の小隊長をプレイヤに選択させる。なお、プレイヤは部隊長及び小隊長の選択の際に、「ヘルプ（Ｈ）」（図２３参照）をクリックして参照することにより、統率力、戦術戦略力、決断力、戦闘力、洞察力、人望について１０点評価でレーダーチャートに表した各候補の個性を参照することができる。

【００３０】

【表２】

部隊長	曹操、劉備、孫堅
曹操配下小隊長	夏侯惇、曹仁、曹洪、夏侯淵、張遼、徐晃、李典、郭嘉、楽進、曹植
劉備配下小隊長	関羽、張飛、諸葛亮、孫乾、黄忠、馬超、趙雲、魏延、関平、馬忠
孫堅配下小隊長	孫権、程普、黄蓋、韓当、程普、朱治、呂蒙、甘寧、徐盛、上奉

【００３１】次のステップ２２５では、部隊Ｆ（及び部隊Ｅ）に属する各兵士の攻撃力及び防御力を表す攻撃値及び防御値（以下、攻撃値、防御値を攻撃力、防御力と識別しないで一律に攻撃力、防御力という。）を演算し、テレビモニタ４に陣形及び隊形の攻撃力の偏在を表示するために各兵士の色補正値を演算する陣形強度演算サブルーチンが呼び出される。

【００３２】図６に示すように、陣形強度演算サブルーチンでは、ステップ３０２で、全兵士について支援兵士のカウント処理が終了したか否かを判断し、否定判断されたときは、ステップ３０４において対象兵士の位置を読み出し、次のステップ３０６で対象兵士を除く全兵士の処理が終了したかを判断する。ステップ３０６で否定判断されたときは次のステップ３０８へ進み、肯定判断されたときはステップ３０２へ戻る。すなわち、ステップ３０２～ステップ３０６では、図２０に示すように、対象兵士の番号の若い順に、当該対象兵士を除く全兵士について順に処理がなされる（部隊Ｅについても同じ。）。

【００３３】次のステップ３０８では、他の兵士の位置を読み出して、ステップ３１０において、対象兵士の支援領域内に他の兵士が存在するか否かを判断し、否定判断のときはステップ３０６へ戻り、肯定判断のときは次のステップ３１２において他の兵士の支援兵士数Ｎのカウンタを１インクリメントしてステップ３０６へ戻る。すなわち、ステップ３０６～ステップ３１２では、図２１（Ａ）に示すように、対象兵士をＦ１とすると、その位置は上述したステップ３０４で既に取得しており、ステップ３０８で他の兵士Ｆ２の位置を読み出し、ステップ３１０で、下表３に示すように、兵種「歩兵」の場合には３次元仮想空間上で横４ｍ×縦８ｍの所定領域としての支援領域Ａ１内に、他の兵士Ｆ２が存在するか否かを判断し、他の兵士であるＦ２が存在しているので、ステップ３１２において、対象兵士Ｆ１が他の兵士Ｆ２を支援可能なキャラクタとして、他の兵士Ｆ２の支援兵士数Ｎのカウンタを１インクリメントして、ステップ３０６に戻り、次にステップ３０６において、次の他の兵士Ｆ３について同様に処理して他の兵士Ｆ３の支援兵士数Ｎのカウンタを１インクリメントし、ステップ２１８で設定された数の他の兵士まで、同様の処理を行う。従って、ステップ３０２～３１２では、図２１（Ｂ）に示すように、対象兵士Ｆ１の支援領域Ａ１内に他の兵士Ｆ２、Ｆ３、Ｆ４が存在するので、これらの他の兵士は対象兵士Ｆ１の支援を受けられるものとして支援兵士数Ｎのカウンタがそれぞれ１ずつインクリメントされ、対象兵士Ｆ２の支援領域Ａ２内には他の兵士Ｆ３が存在するので他の兵士Ｆ３は支援兵士数Ｎのカウンタが１インクリメントされる（累積される）。同様の累積についての処理がステップ２１８で設定された数の他の兵士（図２０ではＦ５００）まで行われる。

【００３４】

【表３】

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兵　科	兵　　種	支援領域 a×b（m²）	支援兵士数 Nの最大値
歩兵系	歩　兵 槍　兵	４ｍ×８ｍ	１５
弓　系	短弓兵 弩兵	１０ｍ×２ｍ	１５
騎馬系	軽騎兵 槍騎兵 狩猟騎兵 象兵	８ｍ×１６ｍ	７

【００３５】次にステップ３０２で肯定判断されたときは、ステップ３１４において、色補正値の演算を全兵士について処理したか否かを判断し、否定判断のときは、ステップ３１６において、支援兵士数Ｎが無制限に大きくなり、対象兵士が人の攻撃力、防御力として考えられる最大の力を超えないように、支援兵士数Ｎが表３に示す最大支援兵士数Ｎｍａｘを超えるか否かを判断し、否定判断のときはステップ３２０に進み、肯定判断のときは、ステップ３１８において、支援兵士数Ｎを表３の最大支援兵士数Ｎｍａｘ（本例では、１５）としてステップ３２０に進む。なお、本例の歩兵や短弓兵では支援兵士数Ｎは０≦Ｎ≦１５の値をとる。

【００３６】次にステップ３２０では、対象兵士Ｆｎの攻撃力Ａを下式（１）により演算する。なお、基礎攻撃力αは下表４に示す通り、本例の場合には５０である。

【００３７】

【数１】

$$攻撃力A＝基礎攻撃力\alpha＋支援攻撃力\delta_A \quad …（1）$$

ただし、支援攻撃力δ_A＝支援係数k_A×支援兵士数Ｎ

支援係数k_A＝５

【００３８】

【表４】

	基礎攻撃力α	基礎防御力β
歩兵系	５０	５０
弓　系	７５	２５
騎馬系	６５	３５

【００３９】次のステップ３２２では、対象兵士Ｆｎの防御力Ｄを下式（２）により演算する。なお、基礎防御力βは表４に示す通り、本例の場合には５０である。

【００４０】

【数２】

$$防御力D＝基礎防御力\beta＋支援防御力\delta_D \quad …（2）$$

ただし、支援防御力δ_D＝支援係数k_D×支援兵士数Ｎ

支援係数k_D＝５

【００４１】次にステップ３２４では、対象兵士の攻撃力の強弱をテレビモニタ４上に表示するために、対象兵士の色補正値を支援兵士数Ｎ（色補正値－支援兵士数Ｎ）として演算しＲＡＭに格納して、ステップ３１４へ戻る。ステップ３１４での判断が肯定されたときは、全ての兵士の処理が済んだので、陣形強度演算サブルーチンを終了して図５のステップ２２４へ進み、ステップ２１８、２２０及び３２４でそれぞれＲＡＭに格納した兵種の各兵士の位置データ、部隊長及び小隊長の識別及びゲームキャラクタ情報（転送初回のみ）及び色補正値を画像処理部２３へ転送して、陣形設定処理サブルーチンを終了して、図４のステップ１０６に進む。この陣形設定処理により、画像処理部２３は、その兵種（歩兵や短弓兵）を位置データに従って描画すると共に、部隊長及び小隊長には選択されたゲームキャラクタを整列状態で描画する。

【００４２】ここで、画像処理部２３の図示しないサブＣＰＵが実行する色補正処理、及び、上述した色補正値の意味について説明する。本実施形態では、画像が映画並となるように、対象兵士を形成する画像の各ドットがＲＧＢ（赤、緑、青）各２５６階調でテレビモニタ４上に表される。今、そのうちの１ドットがＲ＝１５０、Ｇ－２００、Ｂ－１７０であり、色補正値が７の場合を想定すると、当該サブＣＰＵは、ＲＧＢの理論上の各最大階調２５５に対して、色補正すべき各最大階調を２４０（ただし、当該１ドットのＲＧＢが２４０を超えるときはその超えた値）とし、Ｒについて１５０－（２４０－１５０）×７／１５－１９２、Ｇについて２００＋（２４０－２００）×７／１５＝２１９、Ｂについて１７０＋（２４０－１７０）×７／１５－２０３、を演算して、得られた各ＲＧＢの階調をそのドットの色とする色補正処理を行う。従って、色補正値、換言すれば、攻撃力Ａの値が大きいほど、当該ドットは「白」に近づくこととなる。しかしながら、最大階調を２５５とすると真白となり背景との関係で兵士の存在を識別することができなくなる場合があることから、最大階調を２４０に設定している。当該サブＣＰＵは、対象兵士を形成する全てのドットについてこの色補正処理を行い、更に、全兵士についても同様に行う。なお、色補正処理の演算式や色補正すべき各最大階調等のデータは、初期設定処理の

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時点でＣＰＵブロック２０から画像処理部２３へ転送されている。このため、図２２に示すように、１６段階（支援兵士数Ｎ－０の場合も含む。）で白に近づく（白く光って見える）こととなり、図２３に示すように、キャラクタの整列位置についてプレイヤが攻撃力Ａの値の大きい兵士をディスプレイ４上で見ると、陣形全体のうち攻撃力の強弱箇所の偏在を認識できることとなる。なお、図２３では攻撃力の強い箇所を楕円で表示している。また、図２３において、部隊Ｅと部隊Ｆとの間は、弓系の弩兵が有する弩の射程距離より長い距離（例えば、３次元空間上で２００ｍ）とされている（弩の射程距離は、短弓兵が有する短弓より射程距離が長く設定されている。）。この設定は、上述したステップ２１８において行われている。

【００４３】＜移動・戦闘時＞次に、図４のステップ１０６では、部隊Ｅ及び部隊Ｆがそれぞれ陣形を保ちつつ互いの部隊長に向かって移動するための前準備として、仮想枠の演算を行う。図２４（Ａ）に示すように、各小隊長F_Lの位置を中心として、部隊Ｆ（及び部隊Ｅ）の整列状態の隊形の領域Ｗｓと相似形で所定倍（例えば、１．２倍）大きい仮想枠Ｗｍを想定して、仮想枠Ｗｍの３次元仮想空間上の位置を演算してＲＡＭに格納する。仮想枠Ｗｍは、部隊Ｆ（及び部隊Ｅ）の各小隊が移動するときに、隊形を保つために仮想的に想定した領域である。従って、部隊Ｆ（及び部隊Ｅ）が移動するときには、この仮想枠Ｗｍも同時に移動するものと考え、各兵士はそれぞれ属する部隊の仮想枠Ｗｍから外へは移動できないものとして処理がなされる。

【００４４】次のステップ１０８では、テレビモニタ４の垂直帰線周期と一致した、１／６０秒（１６．６ミリ秒）に一度の周期で呼び出される垂直帰線割込が発生したか否かを判定する。ステップ１０８で否定判定がなされると、次のステップ１１０において、部隊長・小隊長の移動方向を変更する等の入力受信部２１から転送された入力情報に対する処理やゲーム効果音を音響処理部２４に合成させるための音響処理等のメイン処理を実行して、ステップ１１２へ進む。なお、ステップ１１０でのプレイヤによる入力装置３の操作では、テレビモニタ４に表示されている部隊Ｆの各小隊長のうちいずれか１つを選択してアクティブとし、選択した小隊長を十字方向ボタンセットにより移動方向を変更させることが可能である。一方、ステップ１０８で肯定判定がなされると、ステップ１１６で全小隊についての処理が終了したか否かを判断し、否定判断されたときは、次のステップ１１８において処理対象の小隊が戦闘中か否かを小隊毎に設定されるフラグにより判定する。なお、各小隊のフラグは当初移動中を意味する（戦闘中でないことを意味する）デフォルト値が設定されている（例えば、０）。

【００４５】ステップ１１８で否定判定されたときは、ステップ１２０において、部隊Ｆを部隊Ｅ方向（コンピュータ側からは部隊Ｅを部隊Ｆ方向）に移動させるための移動処理サブルーチンが実行される。図２５（Ａ）に示すように、プレイヤは部隊Ｆを図２３に示した整列状態の陣形から、その陣形の相似形の陣形を維持しつつかつ陣形の攻撃力の強弱箇所を確認しながら全体として敵部隊Ｅの部隊長方向に進ませ、敵部隊Ｅとの距離を考慮し、図２５（Ｂ）に示すように、例えば、部隊Ｆのうち第５小隊を敵部隊Ｅの部隊長が存在する敵第１小隊へ経路W_Aに沿ってを大きく迂回するように移動させる戦術を立て、入力装置３の十字方向ボタンセットを駆使して部隊Ｅの第１小隊側面や背面に移動させることができれば、第５小隊のうち攻撃力Ａの大きい部分を敵第１小隊の防御力Ｄの小さい部分に当てることができるので、部隊Ｅに勝利する可能性が極めて高くなる。移動処理サブルーチンでは、このような戦術を背景に、部隊Ｆ（及び部隊Ｅ）の各兵士の３次元仮想空間上での移動を実行するものである。

【００４６】図７に示すように、移動処理サブルーチンでは、ステップ４０２において、対象小隊の全兵士の処理が済んだか否かを判断し、否定判断のときは、次のステップ４０４において、処理対象の兵士が小隊長か否かを判断する。肯定判断のときは、ステップ４０５で部隊長か否かを判断し、肯定判断されたときは次のステップ４０６において、図４のステップ１１０で取り込んだ入力情報により十字方向ボタンセットが押下されたか否かを判断し、否定判断のときはステップ４１０に進み、肯定判断のときは、ステップ４０８において、介入加速度を演算してＲＡＭに格納する。この介入加速度の演算では、十字方向ボタンセットのうちいずれかのボタンが押下されたときに、初期設定処理でＲＡＭに格納された所定の加速度を読み出す。この介入加速度は、↑ボタン３５、→ボタン３６、←ボタン３７、↓ボタン３８に応じて、それぞれ（ｘ，ｙ，ｚ）方向の加速度（３次元仮想空間上の単位：ｍ／ｓｅｃ^2）（αｘ，αｙ，αｚ）で、例えば、（０，１０，０）、（１０，０，０）、（－１０，０，０）、（０，－１０，０）に設定されている。

【００４７】次にステップ４１０では、他の味方の兵士との接触・衝突回避を目的として一定距離以上離れようとするために発生する加速度を演算する近距離加速度演算を行う。この近距離加速度演算では、まず、初期設定処理でＲＡＭに格納した近距離知覚角度及び近距離知覚半径を読み出す。ここに、近距離知覚角度とは、兵士の現在の顔の向きで見える近傍の視界の角度をいい、本例では１９０度が設定されている。また、近距離知覚半径とは、近距離知覚角度で兵士が見える近傍の距離をいい、本例では３ｍが設定されている。

【００４８】次に、前回の垂直帰線割込処理時（１／６０秒前）にＲＡＭに格納した他の兵士の位置を読み出し、他の兵士が近距離知覚角度及び近距離知覚半径で画

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定される近距離領域内にいるか否かを判断する。他の兵士がいる場合には、その兵士との距離を求め、その距離に対応する反発力を求める。上述したように、近距離では他の兵士との接触・衝突回避を目的としているので、他の兵士が近接しているときは急激にその兵士から離れるようにすることが望ましいことから、図２６に示すように、縦軸に反発力、横軸に距離をとったときに、距離と反発力の関係は、例えば２次関数のように、他の兵士との距離が小さい場合には急激に反発力が増加するように変化するものとして演算する。従って、距離が０の場合の反発力は、例えば、１００ｍ／ｓｅｃ^{2}と大きな値をとり、距離が近距離知覚半径に等しい場合は、反発力は０ｍ／ｓｅｃ^{2}となる。求めた反発力を兵士の質量で除算した加速度とみなし、当該他の兵士から対象兵士（この場合は第１小隊の小隊長）に向かうベクトルと、の積を、各成分αｘ、αｙ、αｚ毎に求め、これを近距離加速度とする。そして、更に別の味方兵士が近距離領域内にいるか否かを判断し、いる場合には同様にして反発力を求め、求めた反発力から加速度を求め、先に求めた近距離加速度に各成分ｘ，ｙ，ｚごとに加算して近距離加速度（αｘ，αｙ，αｚ）としてＲＡＭに格納してステップ４１２に進む。一方、他の兵士が近距離領域内にいない場合には、距離が近距離知覚半径に等しい場合と同様に、反発力は０であるので、近距離加速度（αｘ，αｙ，αｚ）＝（０，０，０）として、ＲＡＭに格納してステップ４１２へ進む。

【００４９】ステップ４１２では、プレイヤが十字方向ボタンセットで部隊Ｆの進行方向に介入しない場合に備え部隊Ｅの部隊長方向に移動するための方向加速度を演算してＲＡＭに格納する。この方向加速度の演算では、前回（１／６０秒前）の部隊Ｅの部隊長と部隊Ｆの部隊長との位置から３次元仮想空間上の方向を演算し、初期設定処理でＲＡＭに格納した方向加速度を読み出す。この方向加速度はスカラ値（絶対値）で１．２ｍ／ｓｅｃ^{2}に設定されている。従って、このスカラ値を方向成分毎に演算することにより方向加速度（αｘ，αｙ，αｚ）を求めることができる。

【００５０】次のステップ４１４では、ステップ４０８、４１０、４１２でＲＡＭに格納した介入加速度、近距離加速度及び方向加速度を読み出して、各成分ｘ，ｙ，ｚごとに加算して総和加速度を求め、次のステップ４１６において、最新速度及び最新位置を演算しＲＡＭに格納してステップ４１８に進む。ここで、現在の時間をｔ、経過時間をδｔ、速度Ｖ（Ｖｔ-δｔ：時刻ｔ+δｔにおける速度、Ｖｔ：時刻ｔにおける速度）、加速度をα（αｔ：時刻ｔにおける加速度）、位置をＰ（Ｐｔ-δｔ：時刻ｔ+δｔにおける位置、Ｐｔ：時刻ｔにおける位置）とすると、最新速度及び最新位置は次式（３）に示すオイラー法を用いた運動方程式によりｘ，ｙ，ｚ成分毎に得ることができる。なお、前回の速度及び位置はＲＡＭに格納されており、経過時間δｔは１／６０秒で既知である。

【００５１】

【数３】

$$\left.\begin{aligned} V_{t+\delta t} &= V_t + \alpha_t \delta_t \\ P_{t+\delta t} &= P_t + V_t \delta_t + 0.5 \alpha_t \delta_t^2 \end{aligned}\right\} \cdots (3)$$

【００５２】次にステップ４１８では、部隊長（第１小隊の小隊長）の最新位置から当該小隊の最新の仮想枠Ｗｍの位置を演算して、ステップ４０２へ戻る。

【００５３】一方、ステップ４０５で否定判断されたときは、ステップ４２０～４３３において、ステップ４０６～４１８と同様に小隊長の最新速度及び最新位置演算し（ステップ４３０）、最新仮想枠を演算する（ステップ４３２）が、ステップ４０６～４１８と異なる点は、ステップ４２０において否定判断されたときに、ステップ４３３において部隊長の位置を読み出して、ステップ４３２において、選択された陣形上での図４のステップ１０６で演算した部隊長に対する当該小隊長の相対位置を読み出し、現在の部隊長の位置に対する現在の当該小隊長の位置を演算して仮想枠の最新位置を演算する点にある。換言すれば、ステップ４０６～４１８では、プレイヤの入力装置３による介入がない場合には、部隊長は敵部隊Ｅの部隊長に向かって移動し、介入がなされた場合には、介入に応じて移動方向を変更する。また、ステップ４２０～４３３では、プレイヤの入力装置３による特定の小隊長への介入がない場合には、整列状態と相似形の陣形が維持され（図２５（Ａ）参照）、特定の小隊長への介入がなされた場合には、その介入のある小隊は介入に応じて移動方向を変更し（図２５（Ｂ）部隊Ｆの第５小隊参照）、他の小隊は陣形を維持する。このため、部隊Ｆの陣形はプレイヤの介入により変更されることとなる。

【００５４】ステップ４０４で否定判断されたときは、ステップ４３４において、上述したステップ４１０と同様に、近距離加速度を演算してＲＡＭに格納し、次のステップ４３６で、近傍の兵士と同じ速度で移動しようとするために発生する加速度を求める中距離加速度演算を行う。この中距離加速度演算では、初期設定処理でＲＡＭに格納した中距離知覚角度及び中距離知覚半径を読み出す。ここに、中距離知覚角度とは、兵士の現在の顔の向きで見える中距離の視界の角度をいい、本例では近距離知覚角度より小さい１７０度が設定されている。また、中距離知覚半径とは、中距離知覚角度で兵士が見える距離をいい、本例では近距離知覚距離より大きい７ｍがデフォルト値とされている。次に、前回（１／６０秒前に）ＲＡＭに記憶した他の兵士の位置を読み出し、他の兵士が中距離知覚角度及び中距離知覚半径で画定される中距離領域内にいるか否かを判断する。

【００５５】中距離領域内に他の兵士がいない場合に

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は、最大速度（例えば、５ｍ／ｓｅｃ）で小隊長を追跡させるために、まず、小隊長への方向ベクトル（ｘ，ｙ，ｚ）を求める。ここに、方向ベクトルとは、大きさ（長さ）について意味を持たない単位ベクトルで、方向だけが意味を持つベクトル（ｘ，ｙ，ｚ）をいう。小隊長への方向ベクトル（ｘ，ｙ，ｚ）は、小隊長の位置から自己の位置の差を求め、単位ベクトル化することにより得ることができる。次に、下式（４）により加速度を演算してＲＡＭに格納する。なお、式（４）（式（５）においても同じ。）において、速度同一化時間とは、移動速度から加速度を求めるときに使用される時間パラメータをいい、本例では０．１秒に設定されている。

【００５６】

【数４】

$$\text{加速度}(x,y,z) = \{\text{小隊長への方向ベクトル}(x,y,z) \times \text{最大速度} - \text{現在の速度}(x,y,z)\} / \text{速度同一化時間} \quad \cdots(4)$$

【００５７】一方、中距離領域内に他の兵士がいる場合には、次式（５）により中距離領域内にいる他の兵士の平均速度に合わせようとする加速度を演算しＲＡＭに格納してステップ４３８へ進む。

【００５８】

【数５】

$$\text{平均速度}(x,y,z) = \text{中距離領域内にいる兵士の速度の総和}(x,y,z) / \text{中距離領域内にいる兵士数}$$
$$\text{加速度}(x,y,z) = \{\text{平均速度}(x,y,z) - \text{現在の速度}(x,y,z)\} / \text{速度同一化時間} \quad \cdots(5)$$

【００５９】ステップ４３８では、ステップ４３４、４３６で格納した近距離加速度、中距離加速度を読み出して、各成分ｘ，ｙ，ｚごとに加算して総和加速度を求め、次のステップ４４０において、上述した式（３）により現在の速度及び位置演算する。次にステップ４４２において、図２４（Ｂ）に示すように、演算した対象兵士Ｆｎの位置が前回の仮想枠Ｗｍ内に位置するか否かを判断し、肯定判断のときはステップ４４６へ進み、否定判断のときは、ステップ４４４で、総和加速度のベクトルの方向と仮想枠Ｗｍとの交点Ｐの位置を演算し、その位置に位置を補正する。ステップ４４６では、ステップ４４０及びステップ４４４で演算した最新速度及び最新位置をＲＡＭに格納してステップ４０２へ戻る。ステップ４０２で肯定判断されたときは、移動処理サブルーチンを終了して、図４のステップ１２２に進む。

【００６０】ステップ１２２では、図７のステップ４１６又は４３０で演算した部隊Ｅ及び部隊Ｆの部隊長又は小隊長の位置から敵小隊のうち最も近い小隊の小隊長との距離を演算し、次のステップ１２４において、初期設定処理でＲＡＭに格納した所定距離（例えば、小隊の兵科の一方又は双方が弓系の場合には１００ｍ、双方とも歩兵系又は騎馬系の場合には５０ｍ）より小さいか否かを判断し、否定判断のときはステップ１１６へ戻る。これにより、ディスプレイ４上には、部隊Ｅ及び部隊Ｆがそれぞれの陣形を、整列状態の概ね１．２倍の大きさを保ちつつ、互いの小隊長に向かって（又は、プレイヤの介入により敵部隊の特定の小隊に向かって他の敵小隊を迂回して）、攻撃力Ａ及び／又は防御力Ｄの強弱を表示しながら移動していく様子が表示される。一方、ステップ１２４で肯定判断されたときは、当該小隊のフラグの戦闘中（デフォルト値：例えば１）としてステップ１１６へ戻る。

【００６１】一方、ステップ１１８での判断が肯定されたときは、次のステップ１２８において、部隊Ｅ及び部隊Ｆに属する兵士が互いに戦闘する戦闘処理サブルーチンが実行される。図８に示すように、この戦闘処理サブルーチンでは、まず、ステップ５０２において、図９に示す小隊長の前進又は停止を表す突撃特性値の演算を行う小隊長状態値（Ｌｓ）演算処理サブルーチンが実行される。なお、小隊長は、図４のステップ１１０でプレイヤが入力装置３によりその小隊長をアクティブにして十字方向ボタンセットの↓ボタン３８を押下しない限り、すなわち、プレイヤにより強制的に停止状態（Ｌｓ＝１）とされない限り、例えば、下式（６）に示すように、小隊長の個性により自己の小隊を前進又は停止させる突撃特性値に従って、当該小隊長に最も近い敵小隊の小隊長に対して突撃を行う。また、プレイヤの介入により停止状態Ｌｓ＝１とされた場合には、プレイヤが↓ボタン３８以外の十字方向ボタンセットのボタンを押下することにより、停止状態（Ｌｓ＝１）が解除される（Ｌｓ＝０）。

【００６２】

【数６】

$$\text{突撃特性値} = \text{係数}k \times (\text{戦術戦略力} + \text{戦闘力}) + \text{係数}m \times (\text{統率力} + \text{決断力}) - \text{係数}m \times (\text{洞察力} + \text{人望}) \quad \cdots(6)$$

【００６３】図９のステップ５５２では、ステップ１１０でプレイヤにより当該小隊長の状態を停止とさせる介入がなされたか否かを判断するために小隊長状態値Ｌｓが１か否かの判定を行い、肯定判定のときは小隊長状態値演算処理サブルーチンを終了して図８のステップ５０４へ進み、否定判定のときはステップ５５４でカウンタＣ$_1$が０か否かを判断する。ステップ５５４で肯定判断されたときは、次のステップ５５６で上述した式（６）に従って演算済の突撃特性値を当該小隊の小隊長と関連付けられたテーブルから読み出し、ステップ５５８で所

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定範囲の乱数値を取得して、次のステップ５６０において、突撃特性値が乱数値より小さいか否かを判断する。肯定判断されたときは、ステップ５６２で小隊長状態値Ｌｓを１とし、次のステップ５６４でカウンタ$Ｃ_{L}$を１として、ステップ５６０で否定判断された場合と同様に、小隊長状態値演算処理サブルーチンを終了して図８のステップ５０４へ進む。ステップ５６６では、カウンタ$Ｃ_{L}$が３０か否かを判断し、否定判断のときはステップ５６８においてカウンタ$Ｃ_{L}$を１インクリメントし、肯定判断のときはステップ５７０においてカウンタ$Ｃ_{L}$を０として、小隊長状態値演算処理サブルーチンを終了して図８のステップ５０４へ進む。従って、小隊長状態値演算処理サブルーチンでは、小隊長の個性に関連付けられた突撃特性値により当該小隊長の前進又は停止を採る割合が異なってくる。

【００６４】次に、図８のステップ５０４では、処理対象小隊の全兵士の処理が済んだか否かを判断し、否定判断のときは、ステップ５０６で対象兵士が小隊長か否かを判断し、肯定判断のときは、次のステップ５０８において、小隊長状態値Ｌｓが０か否かを判断する。ステップ５０８での判断が肯定されたときは、ステップ５１２へ進み、否定されたときは、下表５に示すように、兵士の状態を表す状態フラグが攻撃又は防御となっているかをステップ５１０で判断し、肯定判定のときはステップ５１２に進む。

【００６５】

【表５】

状　態	状　態　の　概　略
索　敵	敵兵士を探す状態
接　近	敵との距離を戦闘半径内まで移動する状態
攻　撃	武器で敵にダメージを与えようとする状態
防　御	敵の武器から自己を守る状態
死　亡	兵士が死亡した状態
一時退却	敵と反対側に全力で移動する状態

【００６６】ステップ５１２では、対象兵士の状態（状態フラグＦＬのデフォルト値）に応じて処理を行う状態処理サブルーチンが呼び出される。図１０に示すように、この状態処理サブルーチンでは、まず、ステップ６００において、処理対象の兵士が小隊長か否かを判断し、否定判断のときはステップ６０５へ進み、肯定判断のときは次のステップ６０１で小隊長のフラグが死亡か否かを判断し肯定判断のときにはステップ６０４で後述する敗走処理を行い、否定判断のときはステップ６０２において処理対象の小隊長の属する小隊の現時点の生存兵士数が所定数（例えば、整列時の全兵士数の１／２）以上か否かを判断し、否定判断のときはステップ６０３で状態フラグＦＬを一時退却とし、肯定判断のときと共に次のステップ６０５へ進む。

【００６７】ステップ６０５～６０９では、状態フラグＦＬがそれぞれ索敵、接近、攻撃、防御、一時退却か否かを判断し、それぞれ肯定されたときには、ステップ６１２～６２０で、索敵処理、接近処理、攻撃処理、防御処理、一時退却処理のサブルーチンを実行して状態処理サブルーチンを終了し、図８のステップ５０４へ戻るものである。

【００６８】図１１に示すように、索敵処理サブルーチンでは、ステップ６３２において、上述した式（４）において小隊長を敵小隊長とすることにより方向加速度を演算してＲＡＭに格納する。次にステップ６３４で前回の速度及び位置を読み出し、ステップ６３６において対象兵士（この場合は小隊長）の視野範囲（上述した中距離領域と同じ。）内に敵兵士が存在するか否かを、前回の敵の位置情報を読み出して判定する。肯定判断のときは、次のステップ６３８において、敵兵士の状態フラグを参照して索敵状態か否かを判断することにより非戦闘中か否かを判定し、肯定判定のときは、ステップ６４０において最も近い敵を戦闘対象として選択し、次のステップ６４２で対象兵士及び敵兵士の状態フラグＦＬを共に接近としてマッチングを行って、ステップ６４４へ進む。一方、ステップ６３６、６３８での判断（判定）が否定されたときも同様にステップ６４４へ進む。

【００６９】ステップ６４４では、対象兵士の近距離加速度を上記と同様にして演算し、この近距離加速度と、ステップ６３２でＲＡＭに格納した方向加速度を読み出して、それぞれｘ，ｙ，ｚ成分毎に加算した総和加速度（αx，αy，αz）を演算し、次のステップ６４６において、上述した式（３）により、最新速度及び最新位置を演算しＲＡＭに格納して、索敵処理サブルーチンを終了する。

【００７０】図１２に示すように、接近処理サブルーチンでは、ステップ６５０において、上述した式（４）において小隊長を戦闘対象の敵兵士とすることにより接近加速度を演算してＲＡＭに格納する。次にステップ６５２で前回の速度及び位置を読み出し、ステップ６５４で敵兵士との距離を演算し、次のステップ６５６において、その距離が初期設定処理でＲＡＭに格納された設定距離より小さいか否かを判断する。この設定距離は兵種により種々異なっている。例えば、歩兵の場合には２ｍ、槍兵の場合には３ｍ、短弓兵の場合には１００ｍとされている。ステップ６５６での判断が否定された場合には、次にステップ６５８において、そのまま敵兵士に向かって進むか減速するかを判断するために速度を維持する速度距離内か否かを判断する。この速度距離も兵種によって種々異なっており、本例の歩兵の場合には、上

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述した近距離領域と同じとされている。ステップ６５８で否定判断されたときはステップ６６２へ進み、肯定判断されたときは、次のステップ６６０で敵兵士に向かう速度を落とすための減速加速度（例えば、－２ｍ／ｓｅｃ^2）を初期設定処理時に格納したＲＡＭから読み出す。

【００７１】ステップ６６２では、対象兵士の近距離加速度を上記と同様にして演算し、この近距離加速度と、ステップ６５０、６６０で演算又は読み出した接近加速度、減速加速度をそれぞれｘ，ｙ，ｚ成分毎に加算した総和加速度（αｘ，αｙ，αｚ）を演算し、次のステップ６６４において、式（３）により、最新速度及び最新位置を演算しＲＡＭに格納して、接近処理サブルーチンを終了する。

【００７２】一方、ステップ６５６での判断が肯定されたときは、ステップ６６６において対象兵士の最新速度を０とし、次のステップ６６８で、式（３）により、最新速度及び最新位置を演算しＲＡＭに格納し、次のステップ６７０において、乱数を取得することにより乱数が奇数の場合には、対象兵士の状態フラグＦＬを攻撃、当該対象兵士の敵兵士の状態フラグを防御とし、乱数が偶数の場合には対象兵士及び敵兵士の状態フラグを逆として、接近処理サブルーチンを終了する。

【００７３】図１３に示すように、攻撃処理サブルーチンでは、ステップ６８２で攻撃モーションの描画処理を画像処理部２３に指示し、次のステップ６８４で攻撃モーションが終了したか否かを判断するために攻撃モーションカウンタＡｍが３０か否かを判断することにより、攻撃モーションに要する時間、攻撃モーションカウンタＡｍ×垂直帰線割込時間１／６０秒＝０．５秒が経過したか否かを判定する。否定判断のときは、攻撃モーション中なので、攻撃モーションを続行するためにステップ７０８で攻撃モーションカウンタＡｍの値を１インクリメントして攻撃処理サブルーチンを終了し、肯定判断のときは、次のステップ６８６で攻撃モーションカウンタＡｍの値をクリアする（０とする）。

【００７４】ステップ６８８では、戦闘対象である敵兵士の前回ＲＡＭに格納した防御力Ｄを読み出して、次のステップ６９０で所定数値範囲内の乱数値を取得する。次にステップ６９２では、乱数値が防御値より大きいか否かを判断することにより、敵兵士に対する攻撃が成功したか否かを判定する。否定判断のときはステップ７０４へ進み、肯定判断のときは、ステップ７００において、敵兵士の体力Ｈｐから１５を減算する。なお、戦闘処理サブルーチンに入る前の各兵士の体力Ｈｐの値は１００とされており、武器による差異を表すために、例えば、弓系の兵士の攻撃が成功した場合には１０１が減算され、騎馬系の兵士の攻撃が成功した場合には５０が減算される。次のステップ７０２では、敵兵士の体力Ｈｐが０より小さいか否かを判断し、肯定判断のときは、ステップ７０６において、対象兵士の状態フラグＦＬを索敵とし、敵兵士の状態フラグＦＬを死亡として、攻撃処理サブルーチンを終了する。一方、否定判断のときは、攻守を変えるために、対象兵士の状態フラグＦＬを防御とし、敵兵士の状態フラグＦＬを攻撃として、攻撃処理サブルーチンを終了する。

【００７５】図１４に示すように、防御処理サブルーチンでは、ステップ７１２で防御モーションの描画処理を画像処理部２３に指示し、次のステップ７１４で防御モーションが終了したか否かを判断するために防御モーションカウンタＤｍの値が３０か否かを判断することにより、防御モーションに要する時間、０．５秒が経過したか否かを判定する。否定判断のときは、防御モーション中なので、防御モーションを続行するためにステップ７１８で防御モーションカウンタＤｍを１インクリメントして攻撃処理サブルーチンを終了し、肯定判断のときは、次のステップ７１６で防御モーションカウンタＤｍの値をクリアする。

【００７６】図１０のステップ６２０の一時退却処理では、自己の小隊の兵士数が撃列時の１／２となった時点で（ステップ６０２参照）、図２５（Ｃ）の敵部隊Ｅの第３小隊に示すように、部隊Ｆの小隊１、２、４とは反対側に退却して、再度部隊Ｆの小隊に突撃するために当該第３小隊に属する兵士を集結して攻撃力Ａを高めるための処理が実行される（図２５（Ｄ）及び後述するステップ５２２参照）。また、図１０のステップ６０４の敗走処理では、所定時間（例えば、０．５秒）、当該小隊長の小隊に属する兵士が戦闘領域から逃走する敗走モーションを行い、当該所定時間が過ぎると、当該小隊に属する兵士がテレビモニタ４上から姿を消す処理を行う。なお、この所定時間経過により、図４のステップ１１６では、当該小隊の処理は終了したものとして次の小隊の処理を行う。

【００７７】一方、図８のステップ５１０で否定判定されたときは、ステップ５１４において、攻撃力Ａ及び防御力Ｄを高めるために待機（停止）するための待機処理サブルーチンが実行される。図１５に示すように、この待機処理サブルーチンでは、ステップ７２０で、対象兵士の最新速度を０としてＲＡＭに格納し、次のステップ７２２で前回の位置を最新位置としてＲＡＭに格納する。

【００７８】また、図８のステップ５０６で否定判断されたときは、次のステップ５１６において、小隊長状態値Ｌｓが０か否かを判断する。ステップ５１６での判断が肯定されたときは、ステップ５２０へ進み、否定されたときは、ステップ５１８において状態フラグＦＬが攻撃又は防御となっているかを判断し、肯定判定のときはステップ５２０に進む。ステップ５２０では、ステップ５１２と同様に、状態処理サブルーチンが呼び出される。一方、ステップ５１８で否定判断されたときは、ス

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テップ５２２において、小隊長の周りに集結し隊形を立て直すための集結処理サブルーチンが実行される。

【００７９】図１６に示すように、この集結処理サブルーチンでは、ステップ７３２で前回の小隊長の位置並びに対象兵士の位置及び速度をＲＡＭから呼び出し、次のステップ７３４において、上述した式（４）により小隊長近傍に集結するための集結加速度を演算しＲＡＭに格納する。次にステップ７３６で、対象兵士の近距離加速度を上記と同様にして演算し、この近距離加速度と、ステップ７３４でＲＡＭに格納した集結加速度を読み出して、それぞれｘ，ｙ，ｚ成分毎に加算した総和加速度（αｘ，αｙ，αｚ）を演算し、ステップ７３８において、上記式（３）により、ｘ，ｙ，ｚ成分毎に最新速度及び最新位置を演算する。

【００８０】次のステップ７４０では、図４のステップ１０６で演算した選択された隊形上での小隊長に対する対象兵士の相対位置を読み出し、現在の小隊長の位置に対する現在の対象兵士の位置を集結すべき集結位置として演算する。次にステップ７４２において、ステップ７３８で演算した対象兵士の位置がステップ７４０で演算した集結位置の所定範囲内（例えば、３次元仮想空間上で半径１ｍで画定される円又は球の範囲内）かを判断することにより、対象兵士が集結位置に集結したか否かを判定し、否定判断のときはステップ７４６へ進み、肯定判断のときは、次のステップ７４４において最新速度を０（ｍ／ｓｅｃ）として、ステップ７４６において、ステップ７３８、７４４で演算した最新速度及び最新位置をＲＡＭに格納する。

【００８１】一方、図８のステップ５０４で肯定判断されたときは、戦闘処理サブルーチンを終了して、図４のステップ１１６に戻る。ステップ１１６で肯定判断されたときは、ステップ１３０において陣形強度演算サブルーチンを呼び出し、図５のステップ２２２と同様に、攻撃力Ａ、防御力Ｄ及び色補正値を演算し、ステップ１３２で、各兵士の位置データ及び色補正値を画像処理部２３へ転送する。このような処理は垂直帰線割込（１／６０秒）毎に行われるので、テレビモニタ４上には戦闘状態での攻撃力Ａの変化が刻々と変化していく様子が表される。

【００８２】ここで、図８に示した戦闘処理サブルーチンについてまとめると、図２７に示すように、小隊長Ｆ$_L$は、前進状態では、プレイヤの介入（↓ボタン３８による停止命令）がない限り、小隊長Ｆ$_L$の最も近い位置にいる敵小隊長のいる矢印ＦＡ方向に移動するが、小隊長Ｆ$_L$の所定範囲内に非交戦中の敵兵士（例えば、Ｅ７８）がいるとその敵兵士と戦闘をしながら最終的に当該敵小隊長と対戦することとなる。一方、当該小隊に属する兵士は、小隊長Ｆ$_L$が当該敵小隊長に向かって前進中には、図２８（Ａ）に示すように、小隊長Ｆ$_L$が目指す当該敵小隊長に向かって前進するが、前進状態では敵兵士を索敵して戦闘することとなるので、時間の経過により徐々に拡散し、整列状態や移動状態の隊形が崩れて行くこととなる。従って支援兵士数Ｎが少なくなり攻撃力Ａ、防御力Ｄは小さくなる。これに対し、プレイヤの↓ボタン３８による介入があると、図２８（Ｂ）に示すように、戦闘中（攻撃フラグＦＬが攻撃又は防御）でやむを得ず集結できない兵士Ｆ１６、Ｆ６０を除いて小隊長Ｆ$_L$のもとに集結し隊形を整えることとなるので、兵士の攻撃力Ａ、防御力Ｄが大きくなると共に、隊形の強弱箇所をテレビモニタ４に表示された白く光る箇所で認識することができることとなる。

【００８３】次に、図４のステップ１１２では、部隊長の状態フラグＦＬが死亡か否かを判断することにより、部隊長が死亡したか否かを判断し、肯定判断のときはステップ１３４へ進み、否定判断のときは、次のステップ１１４において、整列位置（ステップ１０６参照）に整列する整列命令が出されたか否かを判断する。この命令は入力装置３を操作することにより出され、ステップ１１０のメイン処理でＣＰＵブロック２０に取り込まれる。ステップ１１４で否定判断されたときは、ステップ１０８に戻り、肯定判断されたときは、ステップ１３４において終了処理を行う。この終了処理では、ステップ１１２で肯定判断されたときは、部隊長が死亡した部隊の兵士全員が敗走する画像を画像処理部２３に描画させ、ステップ１１４で肯定判断されたときは、生存兵士をステップ１０４で演算した整列位置に戻して隊列を組み直す画像を画像処理部２３に描画させて、戦闘ルーチンを終了する。

【００８４】以上のように、本実施形態では、予め定められた陣形群の中から陣形の選択を許容し、かつ、陣形をプレイヤが操作（介入）可能な複数の小隊に分割したので、プレイヤは小隊（長）毎に集団キャラクタ戦闘に介入することにより夥しい数のキャラクタの集団キャラクタ戦闘が可能となる。また、兵士の近傍に存在する他の味方の兵士数が多いほど、換言すれば、兵士の密集度が高いほど、その兵士の攻撃力Ａ及び防御力Ｄが大きくなる（累積される）ようにしたので（図６のステップ３０２～３１２、３２０、３２２）、例えば、歩兵は密集しているほど攻撃力、防御力が大きくなったり、弓兵は横に展開しているほど攻撃力が大きくなるという、集団戦闘戦術をリアルに表現することができる。また、本実施形態では、部隊の陣形を選択できるようにしたので、各兵士の攻撃力、防御力の大きさの違いから、その陣形の強弱箇所の偏在を表すことができる。従って、従来のように、各兵士や集団の攻撃力、防御力が一律に演算されたり、魚鱗の隊形が鶴翼の隊形に強く鋒矢の隊形が魚鱗の隊形に強いというようなジャンケンの如き相性による攻撃力、防御力の設定とは異なり、所定時間（１／６０秒）毎に各兵士の攻撃力等を演算するので、集団の情勢に応じて刻々と攻撃力等が変化していく様を表すこと

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ができる。しかも、本実施形態では、攻撃力Ａを、色補正値を演算・転送することにより（ステップ３２４、１３２、２２４）、画像処理部２３に色補正処理で演算させた後描画させるようにしたので、攻撃力Ａの大きい兵士が白く光って見えると共に、集団の攻撃力の偏在も直ちに認識することができる。従って、敵部隊の隊形、敵兵士の武器、敵との距離等を考慮して、敵部隊の弱い箇所を攻める等の戦術を楽しむことができる。更に、本実施形態では、例えば図２５（Ｃ）に示したように、小隊毎に敵小隊に攻撃を集中したり敵小隊の攻撃力が強化されていない部分を攻撃することを可能としたので（ステップ４２０～４３２）、真に集団キャラクタ戦闘を戦術的に楽しむことができる。

【００８５】なお、本実施形態では、対象兵士の近傍を定義するために、横ａ（ｍ）、縦ｂ（ｍ）で画定される支援領域を用いたが、支援領域は四角である必要はなく、例えば、円、球、三角、多面体等種々の支援領域を用いることができる。また、上記実施形態では、対象兵士が四角形の上端中央や下端中央に位置しているものとして支援兵士数を演算したが、この設定位置に限らず、支援領域の中央その他任意の位置とするようにしてもよい。更に、本実施形態では、仮想枠Ｗｍの中心と小隊長の位置と同じとなるようにしたが、仮想枠Ｗｍの中心と小隊長との位置とを別々に演算するようにしてもい。

【００８６】また、本実施形態では、式（１）（２）で支援兵士数Ｎに応じてリニアに（直線的に）攻撃力、防御力を演算したが、例えば、二次関数のように支援兵士数Ｎが大きくなるにつれて攻撃力、防御力が急に大きくなるようにしてもよく、画像処理部２３が行う色補正処理でもリニアに白に近づけるのではなく、色補正値により二次関数的に白に近づけるようにしてもよい。更に、上記実施形態では、攻撃力と防御力を共に支援兵士数Ｎが大きくなるに従って大きくなるようにしたが、攻撃力と防御力とで異なるロジックとなるようにしてもよい。このような一例として、攻撃力が大きい箇所は防御力が小さくなるように、式（２）において支援係数K_Dをマイナスとするようにしてもよい。また更に、本実施形態では演算を簡単にするために色補正値を支援兵士数Ｎと同じとしたが、上述した式（１）（２）により、一旦攻撃力（又は防御力）を演算し、その演算された攻撃力を例えば、１６分割され攻撃力に対応する色補正値を有するテーブルを参照して、色補正値を演算するようにしてもよい。このようにすれば、攻撃力等が支援兵士数Ｎとリニアな関係になくても、すなわち、支援兵士数Ｎと攻撃力等との関係が二次関数的な関係にある場合にも段階的に適正な色補正を行うことができる。

【００８７】更に、本実施形態では、画像処理部２３の色補正処理で、兵士全体の色調を一律に補正する例を示したが、例えば、兵士の画像を兵士の正面から背面を１５分割して正面側から順次白く光らせたり、兵士の所定の部位や武器を１６段階で白く光らせるようにしてもよい。また更に、本実施形態では、攻撃力に応じて兵士を１６段階で白く光るようにしたが、１６段階に限る必要はなく、また、白に限定する必要もない。要は、兵士の色調を変更することによりプレイヤがテレビモニタ４を見たときに攻撃力の強い兵士や隊形の攻撃力の強弱箇所を認識できればよい。従って、例えば、同じ兵士について攻撃力の段階に応じて複数の色調のみが異なる画像を用意しておき、色補正値に応じて用意された画像の中から１つを選ぶようにしてもよい。

【００８８】更にまた、本実施形態では、陣形を選択すると兵科、兵種も自動的に決定されるようにしたが、陣形を形成する１つ又は複数の小隊の兵科、兵種の変更を許容するようにしてもよく、更に、集団全部の移動中に陣形の再選択を許容するようにしてもよい。

【００８９】また、本実施形態では、攻撃力、防御力及び色補正値の演算を各兵士について垂直帰線割込毎に行う例を示したが、ＣＰＵブロック２０や画像処理部２３の図示しないサブＣＰＵの負荷の関係で、例えば、垂直帰線割込５回に一度とするようにしてもよく、更に、攻撃力、防御力及び色補正値の演算で垂直帰線割込に対する回数をそれぞれ異ならせるようにしてもよい。

【００９０】更にまた、本実施形態では、画像処理部２３のサブＣＰＵに色補正処理を実行させたが、ＣＰＵブロック２０のＣＰＵに実行させるようにしてもよい。また、本実施形態ではゲームプログラムを記録した記録媒体１を媒体読取部２２で読み取ることによりＲＡＭへプログラムを転送するようにしたが、媒体読取部２２を備えずＲＯＭにゲームプログラムを記憶してこのＲＯＭからゲームプログラムを読み出すようにしてもよい。このようにすれば、ゲーム専用機とすることができる。更に、上記実施形態では、記録媒体としてＣＤ－ＲＯＭを使用する例で説明したが、ＣＰＵブロック２０のＲＡＭにロード可能なＲＯＭカートリッジや大容量のフロッピー（登録商標）ディスク、マグネットオプティカルディスク等であっても、これらの媒体読取部を備えていれば本発明を適用することができることはいうまでもない。

【００９１】そして、本実施形態では、種々の設定値、計算式を一例として示したが、本発明はこれらに限られることなく、上述した特許請求の範囲において種々の変形が可能であることは当業者にとって論を待たない。

【００９２】

【発明の効果】以上説明したように、本発明によれば、多数のキャラクタが陣形を形成するようにしたので、陣形により集団全体の情勢を把握することができると共に、特定の隊形を有する小集団についてプレイヤの介入を可能としたので、小集団毎に多数のキャラクタについて介入することができる、という効果を得ることができる。

【図面の簡単な説明】

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【図１】家庭用ゲーム装置の接続態様を示す概略斜視図である。
【図２】家庭用ゲーム装置に使用される入力装置の平面図である。
【図３】本発明を適用した実施形態のゲーム装置本体の構成を示す概略ブロック図である。
【図４】実施形態の戦闘ルーチンを示すフローチャートである。
【図５】戦闘ルーチンのステップ１０４の詳細を示す陣形設定処理サブルーチンのフローチャートである。
【図６】戦闘ルーチンのステップ１３０及び陣形設定処理サブルーチンのステップ２２２の詳細を示す陣形強度演算サブルーチンである。
【図７】戦闘ルーチンのステップ１２０の詳細を示す移動処理サブルーチンのフローチャートである。
【図８】戦闘ルーチンのステップ１２８の詳細を示す戦闘処理サブルーチンのフローチャートである。
【図９】戦闘処理ルーチンのステップ５０２の小隊長状態値演算処理サブルーチンの詳細を示すフローチャートである。
【図１０】戦闘処理ルーチンのステップ５１２及び５２０の詳細を示す状態処理サブルーチンのフローチャートである。
【図１１】状態処理サブルーチンのステップ６１２の詳細を示す索敵処理サブルーチンのフローチャートである。
【図１２】状態処理サブルーチンのステップ６１４の詳細を示す接近処理サブルーチンのフローチャートである。
【図１３】状態処理サブルーチンのステップ６１６の詳細を示す攻撃処理サブルーチンのフローチャートである。
【図１４】状態処理サブルーチンのステップ６１８の詳細を示す防御処理サブルーチンのフローチャートである。
【図１５】戦闘処理サブルーチンのステップ５１４の詳細を示す待機処理サブルーチンのフローチャートである。
【図１６】戦闘処理サブルーチンのステップ５２２の詳細を示す集結処理サブルーチンのフローチャートである。
【図１７】部隊Ｅ及び部隊Ｆが採りうる陣形の説明図その１であり、（Ａ）～（Ｅ）はそれぞれ、方円陣、円月陣、鶴翼陣、魚鱗陣、雁行陣を示している。
【図１８】部隊Ｅ及び部隊Ｆが採りうる陣形の説明図その２であり、（Ａ）～（Ｅ）はそれぞれ、長蛇陣、衡軛陣、鋒矢陣、半横陣、錘行陣を示している。
【図１９】部隊Ｅ及び部隊Ｆが採りうる陣形の説明図その３であり、（Ａ）～（Ｃ）はそれぞれ、方形陣、箕形陣、鈎行陣を示している。
【図２０】陣形強度演算サブルーチンのステップ３０２～ステップ３０６の対象兵士及び対象兵士を除く兵士の処理手順を説明するための説明図である。
【図２１】隊形強度演算サブルーチンのステップ３０２～ステップ３１２の演算内容を説明するための説明図であり、（Ａ）はステップ３０６～ステップ３１２での演算の概念を示し、（Ｂ）はステップ３０２～ステップ３１２全体での演算の概念を示す。
【図２２】各兵士の攻撃力、防御力の大きさの段階を説明するための説明図である。
【図２３】陣形が形成され移動処理サブルーチンが実行される前の陣形及び隊形の攻撃力の強弱箇所の偏在を示すテレビモニタに表示された画面の説明図である。
【図２４】隊形の仮想枠の一例を説明する説明図であり、（Ａ）は整列時と移動時との領域の大きさの関係を説明するための説明図であり、（Ｂ）は移動時に兵士が外に出たときの位置補正を説明するための説明図である。
【図２５】陣形及び隊形の説明図であり、（Ａ）は移動状態、（Ｂ）は戦闘及び移動状態、（Ｃ）は一時退却状態、（Ｄ）は戦闘状態の終盤を示す。
【図２６】味方兵士との距離と反発力との関係を説明するための説明図である。
【図２７】戦闘状態における小隊長の動きを説明するための説明図である。
【図２８】戦闘状態における兵士の動きを説明するための説明図であり、（Ａ）は小隊長が前進中の兵士の動きを示し、（Ｂ）は小隊長が待機中の兵士の動きを示す。
【符号の説明】
１　記録媒体
２　ゲーム装置本体
３　入力装置（入力手段）
４　テレビモニタ
２０　ＣＰＵブロック（位置演算／決定手段、攻撃値／防御値演算手段）

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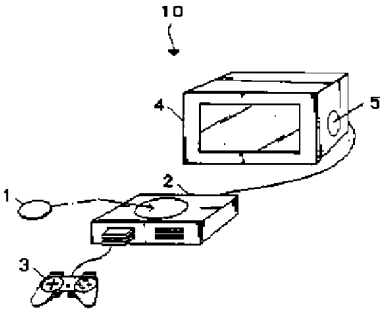
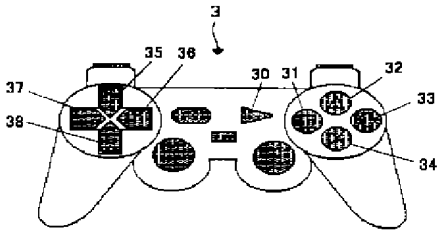
【図１】



【図２】



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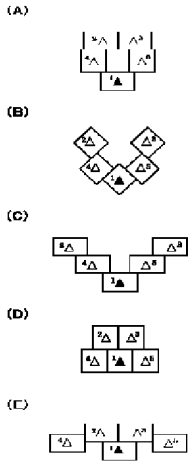
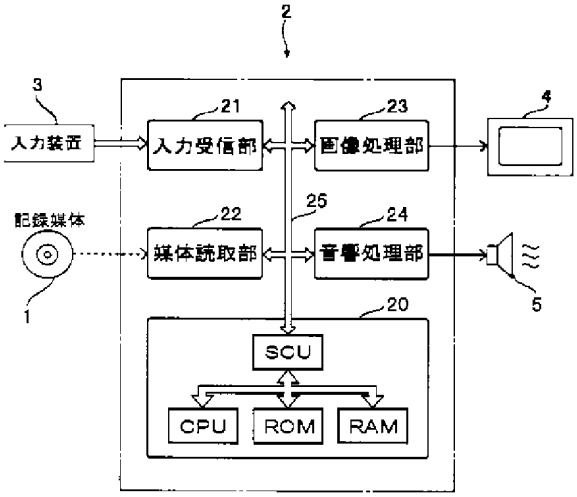


【図４】

【図３】



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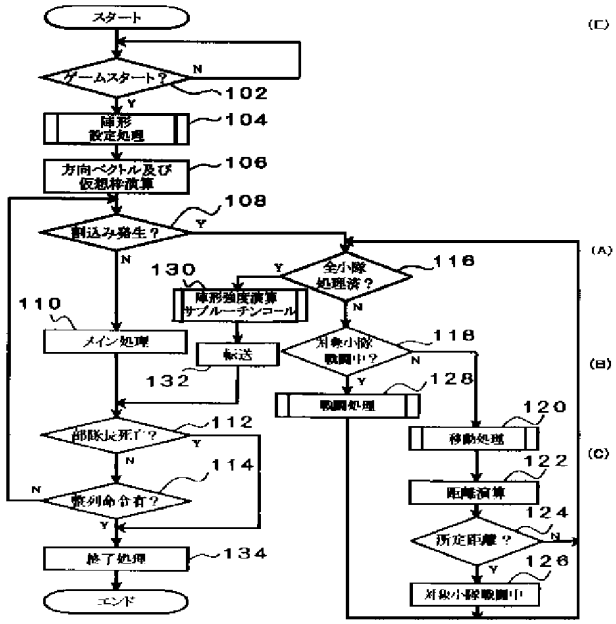
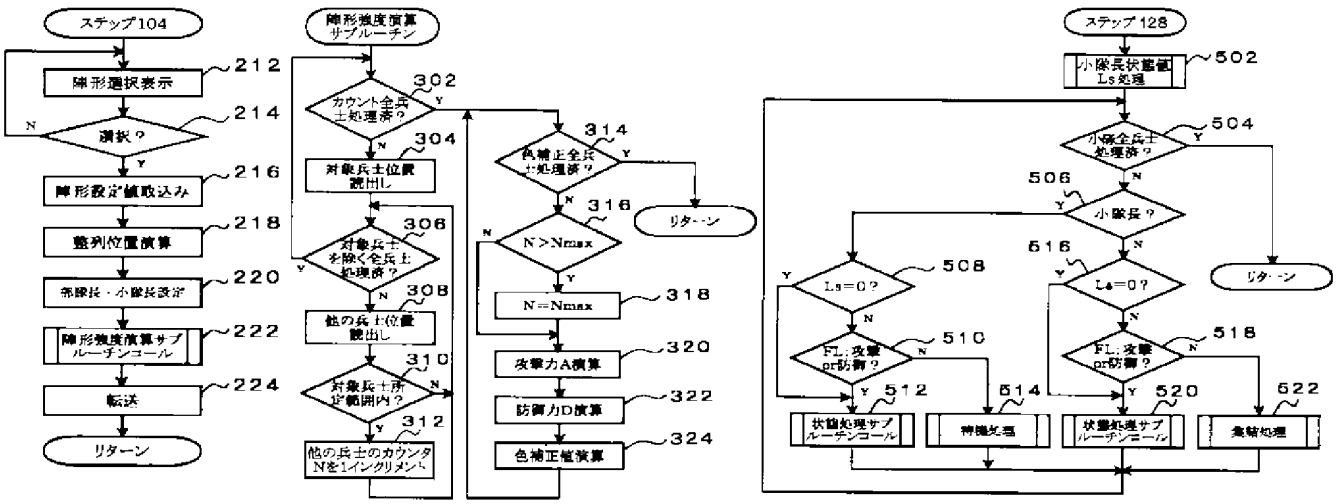


【図５】

【図６】

【図８】



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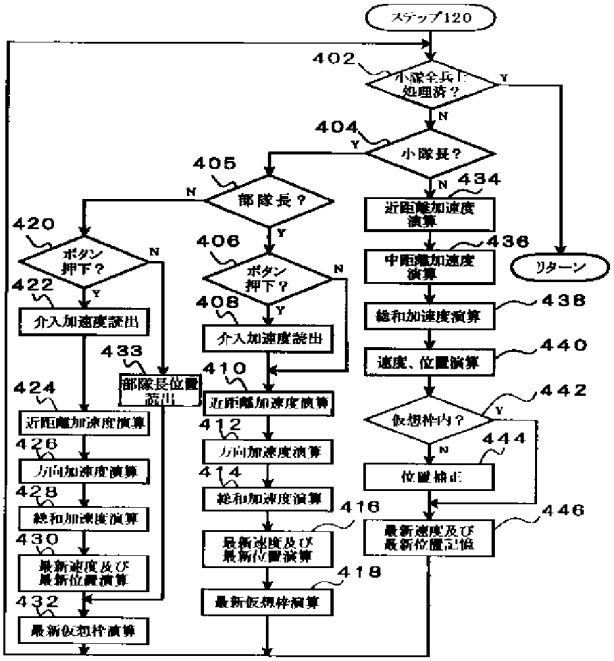
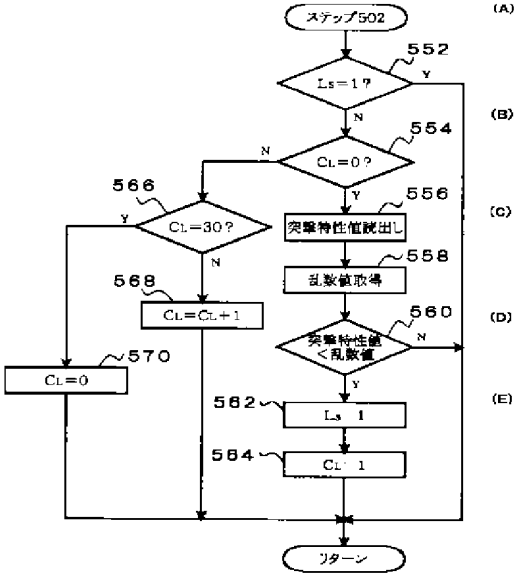
【図７】



【図９】



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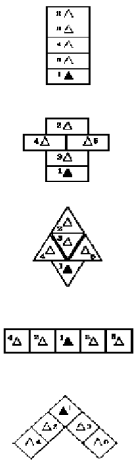
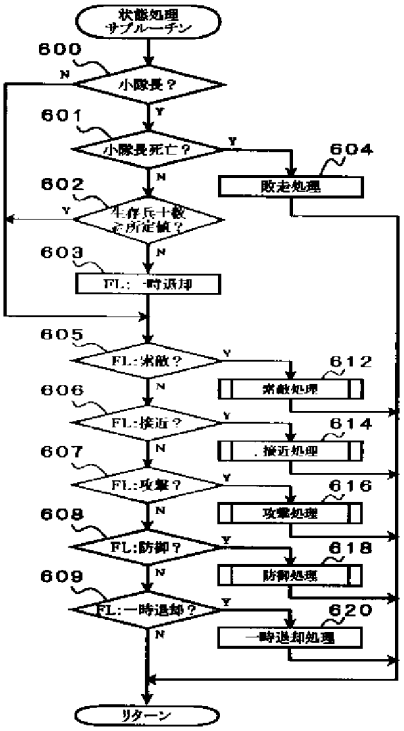
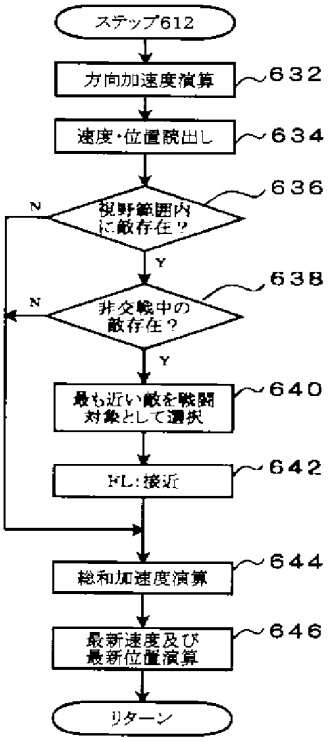


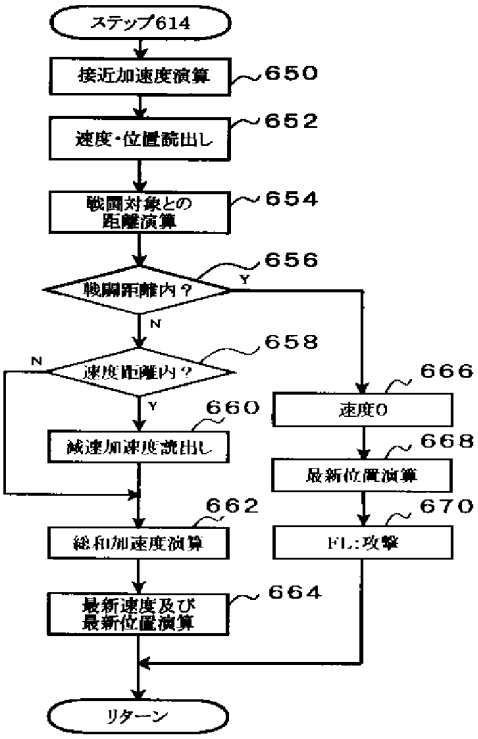
【図１２】

【図１０】



【図１１】





【図２２】

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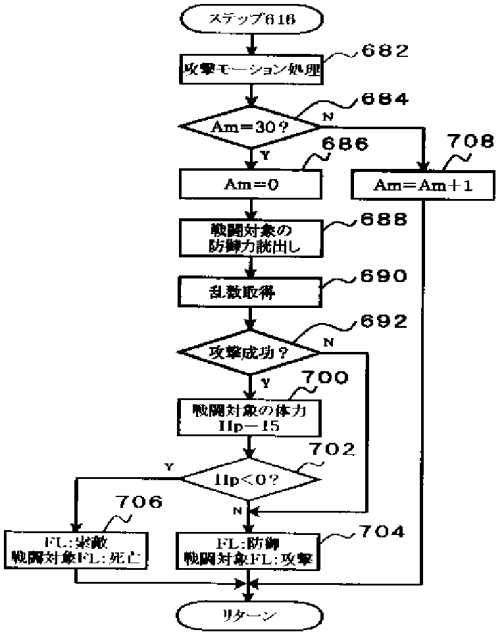
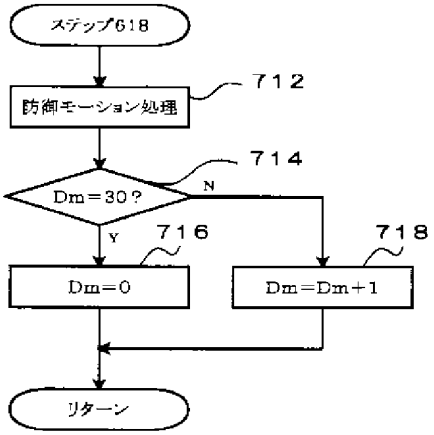
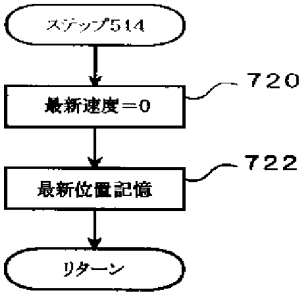
【図１３】



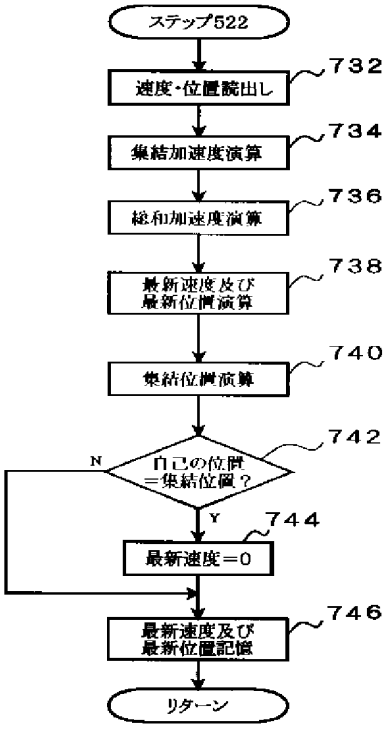
【図１４】



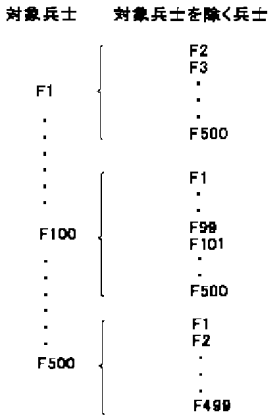
【図１５】



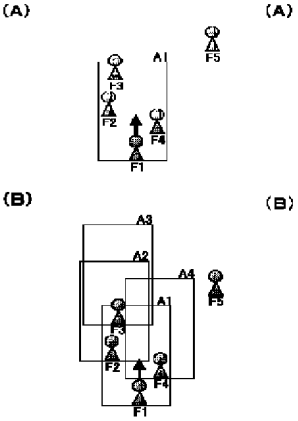
【図１６】



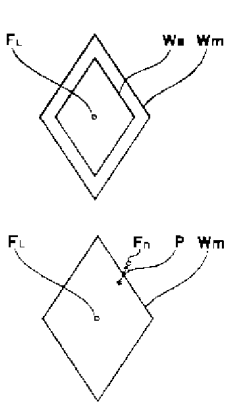
【図２０】



【図２１】



【図２４】



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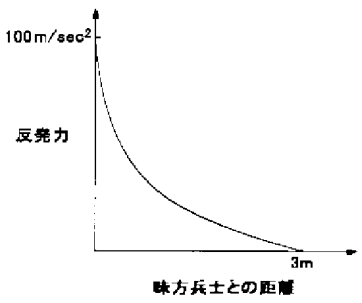
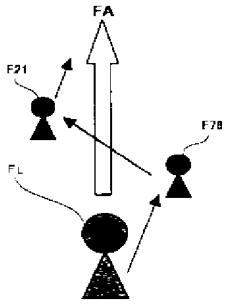


【図２７】



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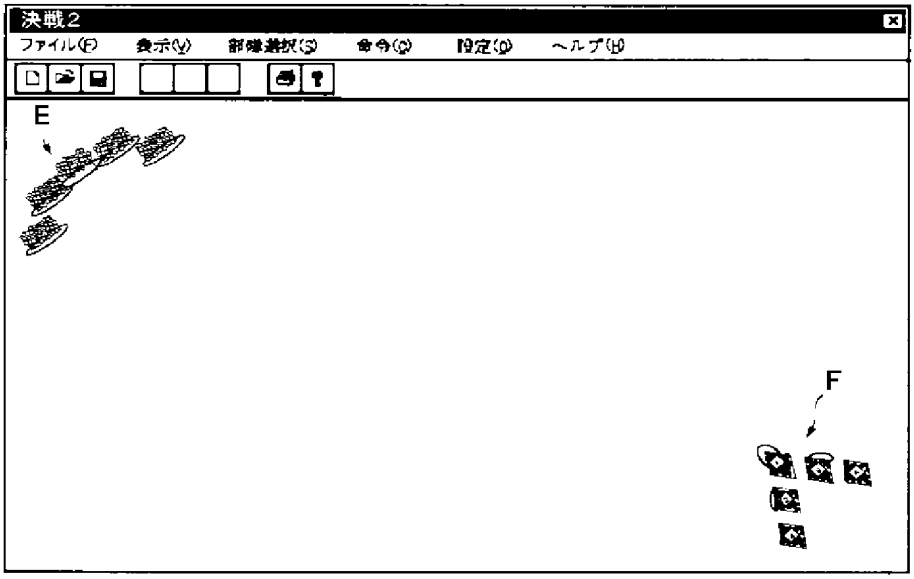
Page 701

【図２３】



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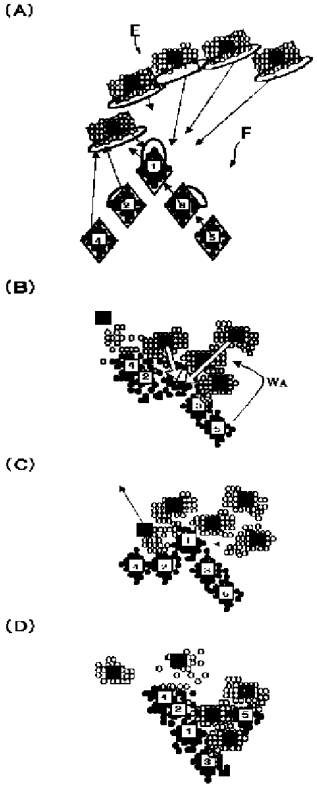
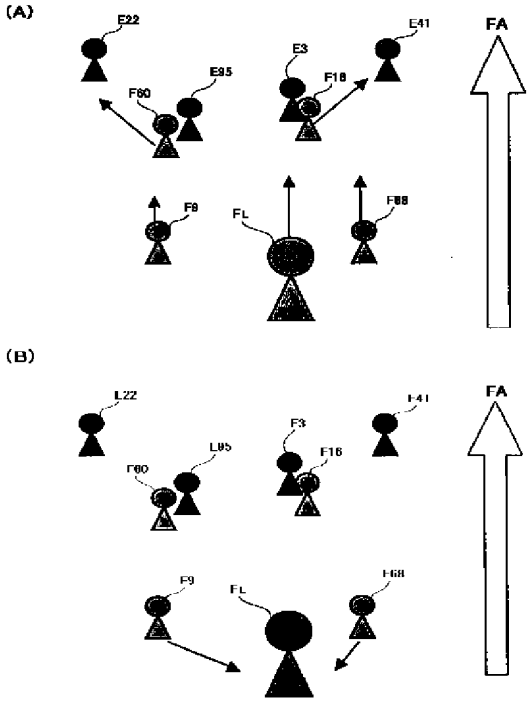


【図２８】



Supercell
Exhibit 1002
Page 702

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Website Fundamental Information of Clash of Clans for Beginners, 9 pages
	AX	Website Information on Clash of Clans Data Linkage between iPhone and iPad, http://www.appbank.net/2013/06/25iphone-application/627513.php, 6 pages , September 8, 2017
	AY	Play Manual of Hotel Giant 2. 32 pages
	AZ	Website Clash of Clans Wiki Village Edit Mode, http://clashofclans.wikia.com/wiki/Village_Edit_Mode 07/24/2017, 2 pages

■ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
	481331US	15/393,646
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT	
	Taiki EDA	
	FILING DATE	GROUP
	December 29, 2016	3717

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	Play Manual of Winning Eleven 2011, 20 pages
	AAB	Play Manual of SidMeiers Civilization, 116 pages
	AAC	
	AAD	
	AAE	
	AAF	
	AAG	
	AAH	
	AAI	
	AAJ	
	AAK	
	AAL	
	AAM	
	AAN	
	AAO	
	AAP	
	AAQ	

Examiner	Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Philippe Jean-Claude Signore/Sandra Miles
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	240	240
		Total in USD ($)		**240**

Electronic Acknowledgement Receipt

EFS ID:	32130158
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Philippe Jean-Claude Signore/Sandra Miles
Filer Authorized By:	Philippe Jean-Claude Signore
Attorney Docket Number:	481331US
Receipt Date:	22-MAR-2018
Filing Date:	29-DEC-2016
Time Stamp:	15:25:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$240
RAM confirmation Number	032318INTEFSW15261800
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	263640 874fd42fabe8a7da46734ed82378603df4cf05c9	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	2
	Information Disclosure Statement (IDS) Form (SB08)	3	4

Warnings:

Information:

2		481331US_References_final_3.pdf	23659478 1619b7d23fbf59c4ec00b1065d98ec50ff558dc2	yes	185

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Non Patent Literature	1	9
	Non Patent Literature	10	15
	Non Patent Literature	16	47
	Non Patent Literature	48	49
	Non Patent Literature	50	69
	Non Patent Literature	70	185

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30683 dea67d351febca8102000afed35be793955 3423a	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	23953801

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy, English translations of the categories of cited documents for foreign search reports or English translations of foreign Office Actions which provide the statement of relevancy for the foreign language references cited therein, or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

■ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

DOCKET NO.: 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:
Taiki EDA

SERIAL NO:	15/393,646	GROUP: 3717
FILED:	December 29, 2016	EXAMINER: AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	

STATEMENT OF RELEVANCY

References AW-AZ and AAA-AAB are provided herein based on a concurrent proceeding in a foreign jurisdiction.

DOCKET NO: 481331US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
TAIKI EDA	: EXAMINER: AHMED, MASUD
SERIAL NO: 15/393,646	:
FILED: DECEMBER 29, 2016	: GROUP ART UNIT: 3717
FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	:

AMENDMENT

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

In response to the Office Action dated November 16, 2017, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

IN THE CLAIMS

Please amend the claims as follows:

1-16. (Canceled)

17. (Original) A method performed by a portable electronic device, the method comprising:

executing a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by a second player;

receiving a command to create a template from the first player;

creating, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

creating a plurality of images that each correspond to one of the plurality of templates;

displaying a screen including the plurality of images;

receiving a selection corresponding to one of the displayed images; and

applying a template corresponding to the received selection to a predetermined area within the game space.

18. (Original) The method of claim 17, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

19. (Original) The method of claim 17, comprising:

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displaying an interface including the game space and images corresponding to a plurality of game contents; and

receiving a command to allocate at least one of the plurality of game contents in an area of the game space; and

allocating the at least one of the plurality of game contents to the area of the game space based on the received command.

20. (Original) The method of claim 19, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

21. (Original) The method of claim 17, comprising:

allocating the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

22. (Original) The method of claim 17, comprising:

registering the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the portable electronic device.

23-29. (Canceled)

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Page 714

30. (New) One or more non-transitory computer readable media, including computer-program instructions, which when executed by an electronic device, cause the electronic device to:

execute a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by another player;

receive a command to create a template from the first player;

create, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

create a plurality of images that each correspond to one of the plurality of templates;

display a screen including the plurality of images;

receive a selection corresponding to one of the displayed images; and

apply a template corresponding to the received selection to the game space.

31. (New) The one or more non-transitory computer readable media of claim 30, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

32. (New) The one or more non-transitory computer readable media of claim 30, wherein the computer-program instructions, when executed by the electronic device, cause the electronic device to:

display an interface including the game space and images corresponding to a plurality of game contents;

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receive a command to allocate at least one of the plurality of game contents in an area of the game space; and

allocate the at least one of the plurality of game contents to the area of the game space based on the received command.

33. (New) The one or more non-transitory computer readable media of claim 32, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

34. (New) The one or more non-transitory computer readable media of claim 30, wherein the computer-program instructions, when executed by the electronic device, cause the electronic device to:

allocate the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

35. (New) The one or more non-transitory computer readable media of claim 30, wherein the computer-program instructions, when executed by the electronic device, cause the electronic device to:

register the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the portable electronic device.

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36. (New) An electronic device comprising:

circuitry configured to

execute a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by another player;

receive a command to create a template from the first player;

create, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

create a plurality of images that each correspond to one of the plurality of templates;

display a screen including the plurality of images;

receive a selection corresponding to one of the displayed images; and

apply a template corresponding to the received selection to the game space.

37. (New) The electronic device of claim 36, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

38. (New) The electronic device of claim 36, wherein the circuitry is configured to:

display an interface including the game space and images corresponding to a plurality of game contents;

receive a command to allocate at least one of the plurality of game contents in an area of the game space; and

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Page 717

allocate the at least one of the plurality of game contents to the area of the game space based on the received command.

39. (New) The electronic device of claim 38, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

40. (New) The electronic device of claim 36, wherein the circuitry is configured to:

allocate the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

41. (New) The electronic device of claim 36, wherein the circuitry is configured to:

register the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the portable electronic device.

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REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 17-22 and 30-41 are pending in the present application. Claims 30-41 are newly added; and claims 1-16 and 23-29 are canceled without prejudice or disclaimer by the present amendment. Support for the new claims is self-evident from the originally filed specification. No new matter is presented.

In the Office Action, claims 1-16 are rejected under 35 U.S.C. § 102§ as anticipated by Shuman et al. (EP 1574238); and claims 17-29 are indicated as allowed.

Applicant appreciatively acknowledges the indication of allowable subject matter. In response, and without acceding to the outstanding grounds of rejection, claims 1-16 are canceled by the present amendment thereby rendering the outstanding rejection under 35 U.S.C. § 102§ moot.

New claims 30-41 are added by the present amendment. Claims 30-35 are computer-readable medium claims, which recite features similar to those recited in method claims 17-22. Similarly new claims 36-41 are apparatus claims that recite features similar to those recited in claims 17-22. Accordingly, Applicant respectfully submits that claims 30-41 are also allowable over the applied references.

Applicant also acknowledges the indication that the claims were analyzed for subject matter eligibility and found to be directed to patent-eligible subject matter under 35 U.S.C. § 101. Since the outstanding Office Action was issued the CAFC also issued a decision in ***Core Wireless*** on January 25, 2018 that further supports the analysis that the claims in the present application are directed to patent-eligible subject matter.

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Page 719**

Consequently, no further issues are believed to be outstanding in the present application and the present application including claims 17-22 and 30-41 is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Attorney of Record
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

Supercell
Exhibit 1002
Page 720

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Bradley Davis Lytle/Sandra Miles
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 1 month with $0 paid	1251	1	200	200
Miscellaneous:				
			Total in USD ($)	**200**

Electronic Acknowledgement Receipt

EFS ID:	31854598
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	22-FEB-2018
Filing Date:	29-DEC-2016
Time Stamp:	08:20:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$200
RAM confirmation Number	022218INTEFSW08245200
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Amendment.pdf	7188086 af9aa5230f2c2fce8501692db771fbf9121f5449	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Extension of Time	2	2
	Amendment/Req. Reconsideration-After Non-Final Reject	3	3
	Claims	4	9
	Applicant Arguments/Remarks Made in an Amendment	10	11

Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30840 0b8dcf0ee539825edb69740848bce334788eb982	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	7218926		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) Taiki EDA

SERIAL NO: 15/393,646 ART UNIT: 3717

FILING DATE: December 29, 2016 EXAMINER: AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FEE TRANSMITTAL

☐ No additional fee is required

☐ Small entity status of this application under 37 C.F.R. §1.9 and §1.27 is claimed.

☐ Track 1 Prioritized Examination

The Fee has been calculated as shown below:

FOR	NUMBER FILED	NUMBER EXTRA	RATE	CALCULATIONS
TOTAL CLAIMS	18 - 29 =	0	x $100 =	$ 0.00
INDEPENDENT CLAIMS	3 - 4 =	0	x $460 =	$ 0.00
☐ MULTIPLE DEPENDENT CLAIMS (If applicable)			+ $820 =	$0.00
■ ***PETITION FOR EXTENSION OF TIME (1) MONTH***			+ $200 =	$200.00
☐ NON-ELECTRONIC FILING FEE			+ $400 =	$0.00
			BASIC FEES	$0.00
			TOTAL OF ABOVE CALCULATIONS	$ 200.00
☐ REDUCTION BY 50% FOR FILING BY SMALL ENTITY				$0.00
☐ FILING IN NON-ENGLISH LANGUAGE			+ $140 =	$0.00
			TOTAL	$ 200.00

☐ Please charge Deposit Account No. **15-0030** in the amount of _____

■ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount of **$200.00**.

■ The Director is hereby authorized to charge any additional fees which may be required for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to Deposit Account No. **15-0030**, with the **EXCEPTION** of deficiencies in fees for multiple dependent claims in new applications.

■ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 15-0030.

Submitted by: /Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Taiki EDA

SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

REQUEST FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

It is hereby requested that a **one** month extension of time be granted to March 16, 2018 for

■ filing a response to the Official Action dated: November 16, 2017

☐ responding to the requirements in the Notice of Allowability dated:

☐ responding to the Notice to File Missing Parts of Application dated:

☐ filing a Notice of Appeal. A timely response to the final rejection, due has been filed.

☐ filing an Appeal Brief. A Notice of Appeal was filed on:

☐ Applicant claims small entity status. See 37 CFR 1.27.

The required fee of $200.00 is being made by credit card payment online (if electronically filed), or is attached hereto (if paper filed), and any further charges may be made against the Attorney of Record's Deposit Account No. **15-0030**.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
15/393,646	12/29/2016	

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **02/22/2018**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 18	Minus	** 29	= 0	X $100 =	0
Independent (37 CFR 1.16(h))	* 3	Minus	***4	= 0	X $460 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
TIA BENTLEY

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

OPAP AKIMA-3 DEC 07 2017 PATENT & TRADEMARK OFFICE

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

☐ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Maki Saitoh
Registration No.: 72,208

OPAP DEC 07 2017 PATENT & TRADEMARK OFFICE

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

LIST OF REFERENCES CITED BY APPLICANT

ATTY DOCKET NO.	SERIAL NO.
481331US	15/393,646
INVENTOR(S) Taiki EDA	
FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.).

	AW	Japanese Office Action issued September 12, 2017 in Patent Application No. 2015-248965 (with English Translation)
	AX	KONAMI OFFICIAL GUIDE, "Perfect Series Palpitation Memorial 2 Perfect Guide"', KONAMI CORPORATION, December 20, 1999, first edition, P.31 and Partial English Translation, 5 pages
	AY	KONAMI OFFICIAL GUIDE, "Perfect Capture Series 47 Palpitation Memorial 2 Authorized-Guidebook Uncut Text", KONAMI CORPORATION, July 10, 2001, 6th printing, P.53 and Partial English Translation, 5 pages
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ARTIFACT SHEET

Enter artifact number below. Artifact number is application number + artifact type code (see list below) + sequential letter (A, B, C …). The first artifact folder for an artifact type receives the letter A, the second B, etc..
Examples: 59123456PA, 59123456PB, 59123456ZA, 59123456ZB

15393646ZA

Indicate quantity of a single type of artifact received but not scanned. Create individual artifact folder/box and artifact number for each Artifact Type.

☐ CD(s) containing:

- computer program listing — Doc Code: Artifact — ☐ Artifact Type Code: P
- pages of specification and/or sequence listing and/or table — Doc Code: Artifact — ☐ Artifact Type Code: S
- content unspecified or combined — Doc Code: Artifact — ☐ Artifact Type Code: U
- voluntary electronic submission — Doc Code: Artifact — ☐ Artifact Type Code: T

☐ Stapled Set(s) Color Documents or B/W Photographs
Doc Code: Artifact Artifact Type Code: C

☐ Microfilm(s)
Doc Code: Artifact Artifact Type Code: F

☐ Video tape(s)
Doc Code: Artifact Artifact Type Code: V

☐ Model(s)
Doc Code: Artifact Artifact Type Code: M

☐ Bound Document(s)
Doc Code: Artifact Artifact Type Code: B

☐ Confidential Information Disclosure Statement or Other Documents marked Proprietary, Trade Secrets, Subject to Protective Order, Material Submitted under MPEP 724.02, etc.
Doc Code: Artifact Artifact Type Code X

2 Other, description: **COLOR NPL**
Doc Code: Artifact Artifact Type Code: Z

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 11/16/2017

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

NOTIFICATION DATE	DELIVERY MODE
11/16/2017	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
tfarrell@oblon.com

Office Action Summary	Application No. 15/393,646	Applicant(s) EDA, TAIKI	
	Examiner MASUD AHMED	Art Unit 3717	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 11/09/17.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) 1-29 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☒ Claim(s) 17-29 is/are allowed.

7)☒ Claim(s) 1-16 is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 11-13) Office Action Summary Part of Paper No./Mail Date 2017-1-12

Supercell
Exhibit 1002
Page 733

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

DETAILED ACTION

Examiner's Comment: 35 USC § 101

1. **Examiner analyzed the claims using the May 2016 Update to Subject Matter Eligibility[1].**

2. Examiner determined that the claimed invention is necessarily rooted in computer technology and thus not drawn to an abstract idea. For example, the claimed invention is drawn towards online gaming wherein the claimed hardware and software components interact to deliver an immersive virtual gaming environment. The claimed invention sets forth requirements for how to operate these interconnected components online, and over the Internet, to remote users. Thus, the claimed invention aligns with the facts of the Federal Circuit decisions in at least ***DDR Holdings*** and ***Enfish.*** Hence, Examiner finds that the claims are patent-eligible under 35 USC §101.

Allowable Subject Matter

Claims 17-29 are allowed.

Claim Rejections - 35 USC § 102

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

Claims 1-16 are rejected under 35 U.S.C. 102 (e) as being anticipated by EP 1574238.

[1] This guidance is publically available at: http://www.uspto.gov/sites/default/files/documents/ieg-may-2016-memo.pdf

Regarding claims 1-16, Shuman teaches a method for controlling a computer comprising: recording a type ID and a position for a game content arranged within a game space, in a storage; creating and storing in the storage a template defining the type ID and the position of the game contents selected from game contents arranged within the game space based on a command from a player; displaying a template stored in the storage based on a command from the player; arranging game contents defined by the template selected from the displayed template based on a command from the player, to the positions defined by the selected template (features of claim 1) 2. The method according to claim 1, wherein the computer creates the template defining the type ID and the position of the game contents arranged within an area within the game space, wherein the area is selected by the player, in the creating step (features of claim 2) 3. The method according to claims 1 or 2, wherein the game contents are game contents to fight back against an attack by a different player or to protect against the attack (features of claim 3) 4. The method according to any one of claims 1 to 3, wherein the computer creates the template defining the type ID and the position of the game contents arranged within a first game space of a plurality of game spaces, in the creating step, and the computer arranges the game contents defined by the selected template to the positions within a second game space of the plurality of game spaces, in the arranging step (features of claim 4) 5. The method according to any one of claims 1 to 4, wherein the computer displays the plurality of templates so that the player can select a template depending on an attack by a different player, in the displaying step (features of claim 5) (see paragraph 24,26,29,40,41,54)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MASUD AHMED whose telephone number is (571)270-1315. The examiner can normally be reached on 10 AM -7 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kang Hu can be reached on (571)270-1344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP 2011-142997	07-28-2011	Japan		X
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Office Action for corresponding JP application No. 2016-255511 mail date 4/25/2017, 15 pages (with English translation)
	AX	Office Action for corresponding JP application No. 2016-255512 mail date 4/25/2017, 12 pages (with English translation)
	AY	Taku YAMAZAKI et al., Super Family Computer Fire Emblem: Lineage of Crusades Walkthrough Guide Book, T2 Publishing Co., Ltd., July 20, 1996, 2nd impression, 5 pages.
	AZ	V Jump Books Game Series: Final Fantasy Tactics, Shueisha, Inc., January 18, 1998, 3rd impression, 5 pages

☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

/MASUD AHMED/ 11/12/2017

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A./

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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
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BIB DATA SHEET

CONFIRMATION NO. 3602

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/393,646	12/29/2016	463	3717	481331US

APPLICANTS
Gree, Inc., Minato-ku, JAPAN;

INVENTORS
Taiki EDA, Tokyo, JAPAN;

**** CONTINUING DATA ***************************
This application is a CON of 14/983,984 12/30/2015 PAT 9597594
which is a CON of PCT/JP2014/075673 09/26/2014

**** FOREIGN APPLICATIONS ***************************
JAPAN 2014-080554 04/09/2014
JAPAN 2013-202721 09/27/2013

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
01/10/2017

Foreign Priority claimed ☑ Yes ☐ No 35 USC 119(a-d) conditions met ☑ Yes ☐ No Verified and Acknowledged /MASUD AHMED/ Examiner's Signature	☐ Met after Allowance MA Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		JAPAN	15	29	4

ADDRESS
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FILING FEE RECEIVED		
2740	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	11	(("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/11/12 19:46
L2	6	(("20110319170") or ("20100160039") or ("20100130285") or ("20100227682") or ("20120295702")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	OR	OFF	2017/11/12 19:46
L3	33	"1574238"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:27
L4	78	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/11/12 20:58
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L9	55	L8 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
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L11	55	L10 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS;	AND	OFF	2017/11/12 20:58

			EPO; JPO; DERWENT; IBM_TDB			
L12	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L13	838	L12 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L14	634	L13 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L15	4405	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/11/12 20:58
L16	3794	L15 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L17	121453	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L18	5969	L17 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L19	4457	L18 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L20	15155	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58

L21	838	L20 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L22	634	L21 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L23	55	L8 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
L24	55	L8 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/11/12 20:58
S1	0	((Taiki) near2 (Eda)).INV.	US-PGPUB; USPAT	OR	OFF	2016/03/18 20:48
S2	4292	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2016/03/18 20:48
S3	3792	S2 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 20:50
S4	128	S3 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 20:53
S5	124	S4 and game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 20:53
S6	949921	game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:08

S7	12304	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
S8	646	S7 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
S9	575	S8 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:17
S10	8	S9 and (build near (city or building))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:18
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S13	35	S12 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 22:23
S14	2	("6454653").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:23
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S16	35	S15 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:28
S17	105171	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:28
S18	4940	S17 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:28
S19	4250	S18 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:31
S20	28	S19 and (building with template)	US-PGPUB; USPAT; USOCR;	AND	OFF	2016/08/05 19:39

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S21	105171	video near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S22	4940	S21 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S23	4250	S19 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S24	528	S23 and select with template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:42
S25	1	bra with somen	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:48
S26	1158	bra with women	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:48
S27	44	S26 and (adjustable with fit)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:48
S28	0	S27 and malik	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:51
S29	27266	malik	US-PGPUB;	AND	OFF	2016/08/05

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			19:51
S30	19	S29 and underwear	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:51
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S33	8	(US-20150005051-$ or US-20130217489-$ or US-20120090021-$ or US-20130288757-$).did. or (US-8845423-$ or US-8764534-$ or US-8821260-$ or US-9022869-$).did.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S34	2081	A63F13/00.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S35	6469	A63F13/12.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S36	727	A63F13/69.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S37	1110	A63F2300/556.CPC.	US-PGPUB;	AND	OFF	2016/08/05

			USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB			19:55
S38	956	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:55
S39	50	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/03 16:28
S40	44	S39 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S41	112452	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S42	5367	S41 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S43	4354	S42 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S44	4354	S43 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	OFF	2017/03/03 16:28

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S45	1172	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:28
S46	2	"14983984"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:37
S47	0	"9597594"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:38
S48	0	("9597594").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/03/03 16:38
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S51	114811	VIDEO NEAR GAME	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S52	5536	S51 and template	US-PGPUB; USPAT; USOCR; FPRS;	AND	OFF	2017/05/10 02:05

			EPO; JPO; DERWENT; IBM_TDB			
S53	4392	S52 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S54	4392	S53 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
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S58	4390	"463/31".CCLS.	US-PGPUB; USPAT	OR	OFF	2017/05/10 02:05
S59	3794	S58 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S60	4392	S52 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS;	AND	OFF	2017/05/10 02:05

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S62	14273	online near game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S63	776	S62 and (building with game)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
S64	616	S63 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
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S67	616	S63 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06

S68	50	S49 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:06

11/12/2017 8:59:12 PM
C:\Users\mahmed3\Documents\EAST\Workspaces\15393646-Eda.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	Art Unit
	MASUD AHMED	3717

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	29-42	11/12/2017	MA

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES		
Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	5/10/2017	MA
CONDUCTE NPL SEARCH ON GOOGLE FOR BUILDING GAMES	11/12/2017	MA
VERIFIED THE APPROVAL OF THE TD	11/12/2017	MA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	TEXT SEARCHED WITHIN ALL THE CLASSES AND THE SUBCLASSES INCLUDING FOREIGN DATABASES ON EAST	11/12/2017	MA

	/M.A./ Primary Examiner.Art Unit 3717

Supercell
Exhibit 1002
Page 752

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		INVENTOR(S) Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP 2011-142997	07-28-2011	Japan		X
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Office Action for corresponding JP application No. 2016-255511 mail date 4/25/2017, 15 pages (with English translation)
	AX	Office Action for corresponding JP application No. 2016-255512 mail date 4/25/2017, 12 pages (with English translation)
	AY	Taku YAMAZAKI et al., Super Family Computer Fire Emblem: Lineage of Crusades Walkthrough Guide Book, T2 Publishing Co., Ltd., July 20, 1996, 2nd impression, 5 pages.
	AZ	V Jump Books Game Series: Final Fantasy Tactics, Shueisha, Inc., January 18, 1998, 3rd impression, 5 pages

☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

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OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

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(71)出願人　506113602
株式会社コナミデジタルエンタテインメント
東京都港区赤坂九丁目７番２号
(74)代理人　100110135
弁理士　石井　裕一郎
(72)発明者　山▲崎▼　幸博
東京都港区赤坂九丁目７番２号　株式会社コナミデジタルエンタテインメント内
(72)発明者　飯田　周太郎
東京都港区赤坂九丁目７番２号　株式会社コナミデジタルエンタテインメント内

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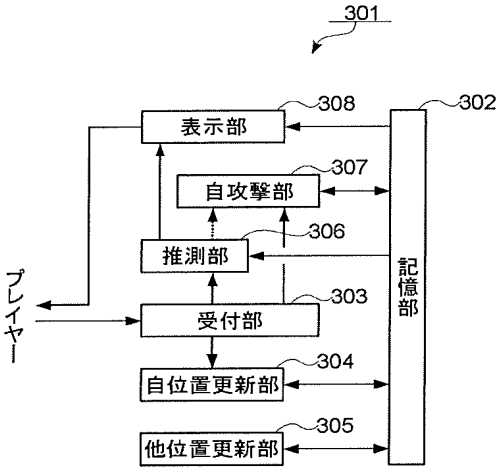
(54)【発明の名称】ゲーム装置、ゲーム制御方法、ならびに、プログラム

(57)【要約】

【課題】プレイヤーが操作するキャラクターが他のキャラクターを攻撃する際のゲーム画像に特殊効果を適切に施すゲーム装置等を提供する。
【解決手段】ゲーム装置３０１において、受付部３０３が攻撃選択指示入力を受け付けると、推測部３０６は、記憶部３０２に記憶されている各キャラクターの位置に基づいて攻撃の威力を推定し、表示部３０８は、攻撃が実行されている間推定結果に応じた特殊効果を施して画面表示を行う。自位置更新部３０４および他位置更新部３０５は、各キャラクターを移動させるため、記憶部３０２に記憶される位置を、攻撃がなされている間も更新するが、攻撃の威力を推定する際は、各キャラクターの位置は変化しないものと仮定して、計算を行う。
【選択図】図３



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【特許請求の範囲】
【請求項１】
仮想空間内に配置される複数のキャラクターの位置ならびに体力パラメータが記憶される記憶部、
プレイヤーからの指示入力を受け付ける受付部、
前記受け付けられた指示入力が、移動指示入力である場合、当該移動指示入力に基づいて、前記記憶部に記憶される前記プレイヤーに対応付けられるキャラクター（以下「自キャラクター」という。）の位置を更新する自位置更新部、
前記記憶部に記憶される前記自キャラクター以外のキャラクター（以下「他キャラクター」という。）の位置を、当該他キャラクターに割り当てられる移動アルゴリズムもしくは他のプレイヤーからの指示入力に基づいて更新する他位置更新部、
前記受け付けられた指示入力が攻撃選択指示入力である場合、前記記憶部に記憶される複数のキャラクターのそれぞれの位置が維持されるものと仮定し、当該複数のキャラクターの維持された位置ならびに所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算して、前記他キャラクターの体力パラメータの変化量を推測する推測部、
前記他キャラクターの体力パラメータの変化量が推測されると、前記自位置更新部および前記他位置更新部による前記複数のキャラクターのそれぞれの位置の更新を並行に行いながら、当該複数のキャラクターの変化する位置ならびに前記所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算し、当該計算された変化量に基づいて、前記記憶部に記憶される当該複数のキャラクターの体力パラメータを更新する自攻撃部、
前記記憶部に記憶される前記複数のキャラクターの位置ならびに体力パラメータが更新されると、当該仮想空間内に当該複数のキャラクターが配置される様子を表す画像を画面に表示する表示部
を備え、
前記表示部は、前記他キャラクターの体力パラメータの変化量が推測されると、当該他キャラクターの体力パラメータの変化量に対応付けられる特殊効果を取得し、当該仮想空間内に配置される様子を表す画像に、当該取得された特殊効果を施してから、前記画面に表示する
ことを特徴とするゲーム装置。
【請求項２】
請求項１に記載のゲーム装置であって、
前記他キャラクターの体力パラメータの変化量に対応付けられる特殊効果は、スローモーション効果であり、当該変化量が大きければ大きいほど、当該スローモーション効果の程度を大きくする
ことを特徴とするゲーム装置。
【請求項３】
請求項１または２に記載のゲーム装置であって、
前記受け付けられた指示入力が、最適攻撃指示入力である場合、前記推測部は、前記プレイヤーが選択可能な種類の攻撃のそれぞれについて、当該複数のキャラクターの維持された位置ならびに所定のルールに基づいて、当該複数のキャラクターの体力パラメータの変化量を計算して、前記他キャラクターの体力パラメータの変化量を推測し、当該変化量が最大の種類の攻撃を最適攻撃として選択し、
前記最適攻撃が選択されると、前記自攻撃部は、当該複数のキャラクターの変化する位置ならびに前記所定のルールに基づいて、当該最適攻撃による当該複数のキャラクターの体力パラメータの変化量を計算し、当該計算された変化量に基づいて、前記記憶部に記憶される当該複数のキャラクターの体力パラメータを更新する
ことを特徴とするゲーム装置。
【請求項４】

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請求項１から３のいずれか１項に記載のゲーム装置であって、
前記推測部は、前記記憶部に記憶される複数のキャラクターのそれぞれの位置のうち、前記自キャラクターの位置が、当該自キャラクターに割り当てられる移動アルゴリズムに基づいて変化するものと仮定することにより、前記他キャラクターの体力パラメータの変化量を推測する
ことを特徴とするゲーム装置。
【請求項５】
記憶部、受付部、自位置更新部、他位置更新部、推測部、自攻撃部、表示部を備えるゲーム装置が実行するゲーム制御方法であって、前記記憶部には、仮想空間内に配置される複数のキャラクターの位置ならびに体力パラメータが記憶され、
前記受付部が、プレイヤーからの指示入力を受け付ける受付工程、
前記受け付けられた指示入力が、移動指示入力である場合、前記自位置更新部が、当該移動指示入力に基づいて、前記記憶部に記憶される前記プレイヤーに対応付けられるキャラクター（以下「自キャラクター」という。）の位置を更新する自位置更新工程、
前記他位置更新部が、前記記憶部に記憶される前記自キャラクター以外のキャラクター（以下「他キャラクター」という。）の位置を、当該他キャラクターに割り当てられる移動アルゴリズムもしくは他のプレイヤーからの指示入力に基づいて更新する他位置更新工程、
前記受け付けられた指示入力が攻撃選択指示入力である場合、前記推測部が、前記記憶部に記憶される複数のキャラクターのそれぞれの位置が維持されるものと仮定し、当該複数のキャラクターの維持された位置ならびに所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算して、前記他キャラクターの体力パラメータの変化量を推測する推測工程、
前記他キャラクターの体力パラメータの変化量が推測されると、前記自攻撃部が、前記自位置更新部および前記他位置更新部による前記複数のキャラクターのそれぞれの位置の更新を並行に行いながら、当該複数のキャラクターの変化する位置ならびに前記所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算し、当該計算された変化量に基づいて、前記記憶部に記憶される当該複数のキャラクターの体力パラメータを更新する自攻撃工程、
前記記憶部に記憶される前記複数のキャラクターの位置ならびに体力パラメータが更新されると、前記表示部が、当該仮想空間内に当該複数のキャラクターが配置される様子を表す画像を画面に表示する表示工程
を備え、
前記表示工程では、前記他キャラクターの体力パラメータの変化量が推測されると、当該他キャラクターの体力パラメータの変化量に対応付けられる特殊効果を取得し、当該仮想空間内に配置される様子を表す画像に、当該取得された特殊効果を施してから、前記画面に表示する
ことを特徴とするゲーム制御方法。
【請求項６】
コンピュータを、
仮想空間内に配置される複数のキャラクターの位置ならびに体力パラメータが記憶される記憶部、
プレイヤーからの指示入力を受け付ける受付部、
前記受け付けられた指示入力が、移動指示入力である場合、当該移動指示入力に基づいて、前記記憶部に記憶される前記プレイヤーに対応付けられるキャラクター（以下「自キャラクター」という。）の位置を更新する自位置更新部、
前記記憶部に記憶される前記自キャラクター以外のキャラクター（以下「他キャラクター」という。）の位置を、当該他キャラクターに割り当てられる移動アルゴリズムもしくは他のプレイヤーからの指示入力に基づいて更新する他位置更新部、
前記受け付けられた指示入力が攻撃選択指示入力である場合、前記記憶部に記憶される

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複数のキャラクターのそれぞれの位置が維持されるものと仮定し、当該複数のキャラクターの維持された位置ならびに所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算して、前記他キャラクターの体力パラメータの変化量を推測する推測部、

前記他キャラクターの体力パラメータの変化量が推測されると、前記自位置更新部および前記他位置更新部による前記複数のキャラクターのそれぞれの位置の更新を並行に行いながら、当該複数のキャラクターの変化する位置ならびに前記所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算し、当該計算された変化量に基づいて、前記記憶部に記憶される当該複数のキャラクターの体力パラメータを更新する自攻撃部、

前記記憶部に記憶される前記複数のキャラクターの位置ならびに体力パラメータが更新されると、当該仮想空間内に当該複数のキャラクターが配置される様子を表す画像を画面に表示する表示部

として機能させ、

前記表示部は、前記他キャラクターの体力パラメータの変化量が推測されると、当該他キャラクターの体力パラメータの変化量に対応付けられる特殊効果を取得し、当該仮想空間内に配置される様子を表す画像に、当該取得された特殊効果を施してから、前記画面に表示する

ように機能させることを特徴とするプログラム。

【発明の詳細な説明】

【技術分野】

【０００１】

本発明は、ゲームにおいてプレイヤーが操作するキャラクターが他のキャラクターを攻撃する際の画像表示において、特殊効果を適切に施すのに好適なゲーム装置、ゲーム制御方法、ならびに、これらをコンピュータにて実現するプログラムに関する。

【背景技術】

【０００２】

従来から、プレイヤーが操作するキャラクター（以下「自キャラクター」という。）と、コンピュータが所定のアルゴリズムに基づいて制御したり他のプレイヤーが制御したりするキャラクター（以下「他キャラクター」という。）と、を対戦させるゲームが提案されている。

【０００３】

ここで、以下に掲げる特許文献１においては、自キャラクターの攻撃フェーズと他キャラクターの攻撃フェーズとを交互に設けるとともに、攻撃の効果を画面に表示するゲームの技術が提案されている。

【０００４】

このようなゲームにおいては、攻撃フェーズにおいて攻撃の効果を事前に正確に得ることができるため、攻撃の威力に合わせた画像表示を行うことは容易である。

【先行技術文献】

【特許文献】

【０００５】

【特許文献１】特許第３４８８２１７号公報

【発明の概要】

【発明が解決しようとする課題】

【０００６】

しかしながら、自キャラクターと他キャラクターがそれぞれ独立して並行しながら移動したり攻撃したりするゲームにおいては、攻撃フェーズの切り替えという手法は採用できない。このため、自キャラクターの攻撃の威力に合わせた特殊効果を画面表示に施すための、新たな技術が求められている。

【０００７】

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本発明は、上記のような課題を解決するもので、ゲームにおいてプレイヤーが操作するキャラクターが他のキャラクターを攻撃する際の画像表示において、特殊効果を適切に施すのに好適なゲーム装置、ゲーム制御方法、ならびに、これらをコンピュータにて実現するプログラムを提供することを目的とする。

【課題を解決するための手段】

【０００８】

以上の目的を達成するため、本発明の原理にしたがって、下記の発明を開示する。

【０００９】

本発明の第１の観点に係るゲーム装置は、記憶部、受付部、自位置更新部、他位置更新部、推測部、自攻撃部、表示部を備え、以下のように構成する。

【００１０】

すなわち、記憶部には、仮想空間内に配置される複数のキャラクターの位置ならびに体力パラメータが記憶される。

【００１１】

上記のように、複数のキャラクターには、自キャラクターと他キャラクターの２種類がある。体力パラメータは、いわゆるＨＰ（Hit Point）に相当するものであり、体力パラメータが正である間は、そのキャラクターは生存しており、体力パラメータが０になったり、攻撃を受けて負になったりした場合には、そのキャラクターは死んだことになる。

【００１２】

一方、受付部は、プレイヤーからの指示入力を受け付ける。

【００１３】

指示入力は、コントローラ等を介して受け付けられる。また、ここで受け付けられる指示入力には、自キャラクターの位置を移動する旨の移動指示入力や、自キャラクターに所望の種類の攻撃をさせる旨の攻撃選択指示入力などがある。

【００１４】

さらに、受け付けられた指示入力が、移動指示入力である場合、当該移動指示入力に基づいて、自位置更新部は、記憶部に記憶される自キャラクターの位置を更新する。

【００１５】

典型的には、自キャラクターの移動指示入力は、コントローラが有する矢印キーやジョイスティックを介して受け付けられ、自キャラクターの位置は、プレイヤーが指示した方向に移動する。移動指示入力がなされているか否かは、定期的、たとえば、垂直同期割込周期ごとにチェックされる。そして、そのチェック結果に基づいて、所定の変位量だけ、自キャラクターの位置が変化することになる。

【００１６】

そして、他位置更新部は、記憶部に記憶される他キャラクターの位置を、当該他キャラクターに割り当てられる移動アルゴリズムもしくは他のプレイヤーからの指示入力に基づいて更新する。

【００１７】

他キャラクターがいわゆるＮＰＣ（Non-Player Character）である場合には、他キャラクターに移動や攻撃を行わせるためのアルゴリズムがあらかじめ用意され、そのアルゴリズムに合わせて計算を行うことによって、他キャラクターの位置が更新される。また、他キャラクターが、いわゆるＰＣ（Player Character）である場合には、他のプレイヤーの指示入力に基づいて、自キャラクターの位置を更新するのと同様に、他キャラクターの位置が更新される。

【００１８】

他キャラクターがＰＣである場合、他のプレイヤーは、同じゲーム装置に接続された他のコントローラを介して指示入力を与えることとしても良いし、コンピュータ通信網を介して接続された他のゲーム装置に接続された他のコントローラを介して指示入力を与えることとしても良い。

【００１９】

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一方、受け付けられた指示入力が攻撃選択指示入力である場合、推測部は、記憶部に記憶される複数のキャラクターのそれぞれの位置が維持されるものと仮定し、当該複数のキャラクターの維持された位置ならびに所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算して、他キャラクターの体力パラメータの変化量を推測する。

【００２０】

本発明に係るゲームでは、プレイヤーが攻撃を指示すると、自キャラクターは攻撃を開始し、所定の条件が満たされるまでその攻撃を継続し、その後、攻撃を終了する。また、攻撃の効果、すなわち、他キャラクターの体力パラメータの減少量は、自キャラクターと他キャラクターの位置関係によって定められ、両者が近ければ近いほど攻撃の効果も大きいように設定される。

【００２１】

このようなゲームにおいては、攻撃開始から攻撃終了までに時間を要することになるが、上記のように、この間、他キャラクターは移動する。なお、自キャラクターによる攻撃を開始してから終了するまでの間に、プレイヤーの移動指示入力に基づいて、自キャラクターを移動可能としても良い。

【００２２】

このような態様では、攻撃の効果を事前に判定することは難しい。そこで本発明では、攻撃選択指示入力がなされた場合に、まず、自キャラクターも他キャラクターも移動しない、と仮定し、それ以外はそのまま通常のゲームのルールに基づいて、他キャラクターの体力パラメータの変化量を求めることとする。そして、他キャラクターの体力パラメータの変化の総量を、当該攻撃の威力の推定値とするのである。

【００２３】

さらに、自攻撃部は、他キャラクターの体力パラメータの変化量が推測されると、自位置更新部および他位置更新部による複数のキャラクターのそれぞれの位置の更新を並行に行いながら、当該複数のキャラクターの変化する位置ならびに所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算し、当該計算された変化量に基づいて、記憶部に記憶される当該複数のキャラクターの体力パラメータを更新する。

【００２４】

上記のように、攻撃選択指示入力がされた後は、まず推測部が動作して、その攻撃の威力を推定する。次に、自攻撃部が動作して、実際の攻撃処理が行われる。

【００２５】

なお、上記のように、攻撃の威力の推定の際には、キャラクターの位置が変化しないことを仮定するので、自攻撃部による実際の攻撃の威力と、推定された攻撃の威力とには、一般には違いがある。

【００２６】

一方、表示部は、記憶部に記憶される複数のキャラクターの位置ならびに体力パラメータが更新されると、当該仮想空間内に当該複数のキャラクターが配置される様子を表す画像を画面に表示する。ここで、表示部は、他キャラクターの体力パラメータの変化量が推測されると、当該他キャラクターの体力パラメータの変化量に対応付けられる特殊効果を取得し、当該仮想空間内に配置される様子を表す画像に、当該取得された特殊効果を施してから、画面に表示する。

【００２７】

上記のように、実際の攻撃の威力とその推定値とには差があるが、実際の攻撃の威力は、攻撃が終了するまで知得はできない。そこで、本発明においては、推定値を用いて、攻撃が開始されてから終了するまでの間の画像に対しても、特殊効果を施すのである。

【００２８】

本発明によれば、自キャラクターの攻撃の間に他キャラクターが移動し、自キャラクターと他キャラクターとの位置関係に基づいて攻撃の効果が定まるようなゲームであっても

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、攻撃の威力を適切に推定し、その威力に合わせて特殊効果を施すことができるようになる。

【００２９】

また、本発明のゲーム装置において、他キャラクターの体力パラメータの変化量に対応付けられる特殊効果は、スローモーション効果であり、当該変化量が大きければ大きいほど、当該スローモーション効果の程度を大きくするように構成することができる。

【００３０】

本発明は、上記発明の好適実施形態に係るものである。本発明においては、攻撃が開始されてから終了するまでの間、スローモーションによる特殊効果が施される。攻撃の威力が大きい場合には、攻撃を受ける他キャラクターの数が多いか、あるいは、他キャラクター単体が受ける攻撃の回数が多い場合が多い。

【００３１】

したがって、本発明によれば、スローモーション表示をすることによって、各攻撃の詳細をプレイヤーに見せることができるようになる。また、本発明によれば、スローモーション表示の程度によって、攻撃の威力をプレイヤーに知らせることができる。

【００３２】

また、本発明のゲーム装置は、以下のように構成することができる。

【００３３】

すなわち、受け付けられた指示入力が、最適攻撃指示入力である場合、推測部は、プレイヤーが選択可能な種類の攻撃のそれぞれについて、当該複数のキャラクターの維持された位置ならびに所定のルールに基づいて、当該複数のキャラクターの体力パラメータの変化量を計算して、他キャラクターの体力パラメータの変化量を推測し、当該変化量が最大の種類の攻撃を最適攻撃として選択する。

【００３４】

攻撃選択指示入力は、攻撃の種類をプレイヤーが選択するものであるが、最適攻撃指示入力は、複数の種類の攻撃から最適なものをゲーム装置に選択させるためのものである。

【００３５】

上記のように、推測部は、キャラクターの位置を変化させない前提で、攻撃の威力を推定する。本発明では、利用可能な複数の種類の攻撃のそれぞれについて、攻撃の威力が推定される。そして、威力の推定値が最も大きい攻撃が、最適攻撃に選ばれる。

【００３６】

さらに、最適攻撃が選択されると、自攻撃部は、当該複数のキャラクターの変化する位置ならびに所定のルールに基づいて、当該最適攻撃による当該複数のキャラクターの体力パラメータの変化量を計算し、当該計算された変化量に基づいて、記憶部に記憶される当該複数のキャラクターの体力パラメータを更新する。

【００３７】

すなわち、プレイヤーが最適攻撃指示入力を選択した場合には、プレイヤーが攻撃の種類を選択しなくとも、最も威力が強いと予想される攻撃が自動的に選択されて、他キャラクターに対する攻撃が行われる。

【００３８】

本発明によれば、プレイヤーは、攻撃の種類を検討しなくとも、適切と予想される攻撃を自動的に選ばせることが可能となる。

【００３９】

また、本発明のゲーム装置において、推測部は、記憶部に記憶される複数のキャラクターのそれぞれの位置のうち、自キャラクターの位置が、当該自キャラクターに割り当てられる移動アルゴリズムに基づいて変化するものと仮定することにより、他キャラクターの体力パラメータの変化量を推測するように構成することができる。

【００４０】

すなわち、上記の発明においては、推定の際には、全キャラクターが移動しないものと仮定していたが、本発明においては、自キャラクターのみが移動する、と仮定する。した

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がって、他キャラクターの位置は、推定の際には変化しない。

【００４１】

特に多数のキャラクターが登場する場合には、キャラクターの移動アルゴリズムを計算するための計算負荷が大きいことが多い。一方、本発明では、自キャラクターの位置のみを移動させることとしている。

【００４２】

したがって、本発明によれば、攻撃の威力の推定の際に、計算負荷は抑制しつつその推測の精度を高めることが可能となる。

【００４３】

本発明の他の観点に係るゲーム制御方法は、記憶部、受付部、自位置更新部、他位置更新部、推測部、自攻撃部、表示部を備えるゲーム装置が実行し、受付工程、自位置更新工程、他位置更新工程、推測工程、自攻撃工程、表示工程を備え、以下のように構成する。

【００４４】

すなわち、記憶部には、仮想空間内に配置される複数のキャラクターの位置ならびに体力パラメータが記憶される。

【００４５】

一方、受付工程では、受付部が、プレイヤーからの指示入力を受け付ける。

【００４６】

さらに、自位置更新工程では、受け付けられた指示入力が、移動指示入力である場合、自位置更新部が、当該移動指示入力に基づいて、記憶部に記憶される自キャラクターの位置を更新する。

【００４７】

そして、他位置更新工程では、他位置更新部が、記憶部に記憶される他キャラクターの位置を、当該他キャラクターに割り当てられる移動アルゴリズムもしくは他のプレイヤーからの指示入力に基づいて更新する。

【００４８】

一方、推測工程では、受け付けられた指示入力が攻撃選択指示入力である場合、推測部が、記憶部に記憶される複数のキャラクターのそれぞれの位置が維持されるものと仮定し、当該複数のキャラクターの維持された位置ならびに所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算して、他キャラクターの体力パラメータの変化量を推測する。

【００４９】

さらに、自攻撃工程では、他キャラクターの体力パラメータの変化量が推測されると、自攻撃部が、自位置更新部および他位置更新部による複数のキャラクターのそれぞれの位置の更新を並行に行いながら、当該複数のキャラクターの変化する位置ならびに所定のルールに基づいて、当該攻撃選択指示入力に指定される種類の攻撃による当該複数のキャラクターの体力パラメータの変化量を計算し、当該計算された変化量に基づいて、記憶部に記憶される当該複数のキャラクターの体力パラメータを更新する。

【００５０】

そして、表示工程では、記憶部に記憶される複数のキャラクターの位置ならびに体力パラメータが更新されると、表示部が、当該仮想空間内に当該複数のキャラクターが配置される様子を表す画像を画面に表示する。

【００５１】

また、表示工程では、他キャラクターの体力パラメータの変化量が推測されると、当該他キャラクターの体力パラメータの変化量に対応付けられる特殊効果を取得し、当該仮想空間内に配置される様子を表す画像に、当該取得された特殊効果を施してから、画面に表示する。

【００５２】

本発明のその他の観点に係るプログラムは、コンピュータを上記のゲーム装置として機能させるように構成する。

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【００５３】
また、本発明のプログラムは、コンパクトディスク、フレキシブルディスク、ハードディスク、光磁気ディスク、ディジタルビデオディスク、磁気テープ、半導体メモリ等のコンピュータ読取可能な情報記憶媒体に記録することができる。
【００５４】
上記プログラムは、プログラムが実行されるコンピュータとは独立して、コンピュータ通信網を介して配布・販売することができる。また、上記情報記憶媒体は、コンピュータとは独立して配布・販売することができる。
【発明の効果】
【００５５】
本発明によれば、ゲームにおいてプレイヤーが操作するキャラクターが他のキャラクターを攻撃する際の画像表示において、特殊効果を適切に施すのに好適なゲーム装置、ゲーム制御方法、ならびに、これらをコンピュータにて実現するプログラムを提供することができる。
【図面の簡単な説明】
【００５６】
【図１】典型的な情報処理装置の概要構成を示す模式図である。
【図２】本実施形態に係るコントローラの外観を示す模式図である。
【図３】本発明の実施形態に係るゲーム装置の概要構成を示す説明図である。
【図４】ゲーム装置にて実行される制御処理の流れを示すフローチャートである。
【図５】ゲーム装置にて実行される制御処理の流れを示すフローチャートである。
【図６】画像の例を示す説明図である。
【図７】威力推定処理の詳細を示すフローチャートである。
【図８】最適攻撃処理の制御の流れを示すフローチャートである。
【図９】攻撃の威力に応じた特殊効果を施した後の画像を示す説明図である。
【図１０】攻撃の威力に応じた特殊効果を施した後の画像を示す説明図である。
【発明を実施するための形態】
【００５７】
以下に本発明の実施形態を説明する。以下では、理解を容易にするため、ゲーム用の情報処理装置を利用して本発明が実現される実施形態を説明するが、以下に説明する実施形態は説明のためのものであり、本願発明の範囲を制限するものではない。
【００５８】
したがって、当業者であればこれらの各要素もしくは全要素をこれと均等なものに置換した実施形態を採用することが可能であるが、これらの実施形態も本発明の範囲に含まれる。
【実施例１】
【００５９】
図１は、プログラムを実行することにより、本実施形態のゲーム装置として機能しうる典型的な情報処理装置の概要構成を示す模式図である。以下、本図を参照して説明する。
【００６０】
本図に示す情報処理装置１００は、いわゆるコンシューマゲーム機に相当するもので、ＣＰＵ（Central Processing Unit）１０１、ＲＯＭ（Read Only Memory）１０２、ＲＡＭ（Random Access Memory）１０３、インターフェース１０４、コントローラ１０５、外部メモリ１０６、画像処理部１０７、ＤＶＤ－ＲＯＭ（Digital Versatile Disc ROM）ドライブ１０８、ＮＩＣ（Network Interface Card）１０９、音声処理部１１０、マイク１１１、ハードディスク（Hard Disk；ＨＤ）１２１を有する。各種の入出力装置は、適宜省略することができる。
【００６１】
情報処理装置１００を典型的なコンシューマゲーム機として機能させる場合には、ゲーム用プログラムおよびデータを記憶したＤＶＤ－ＲＯＭをＤＶＤ－ＲＯＭドライブ１０８

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に装着し、電源を投入する。すると、当該ゲームプログラムが実行され、ゲームをプレイすることができるようになる。

【００６２】

ただし、本実施形態においては、典型的には、ＤＶＤ－ＲＯＭドライブ１０８に装着されたＤＶＤ－ＲＯＭから、アプリケーションをＨＤ　１２１にインストールする。そして、当該ＨＤ　１２１に記憶されたプログラムを実行することによって、ゲームを含む各種のアプリケーションを実行することとする。

【００６３】

なお、携帯型のゲーム装置においては、携帯可能とするために、ＤＶＤ－ＲＯＭドライブ１０８を利用するのではなく、ＲＯＭカセット用スロットにＥＥＰＲＯＭ（Electrically Erasable Programmable ROM）カセットを装着して、ＨＤ　１２１を省略したりすることも可能である。この場合、アプリケーション用プログラムをＥＥＰＲＯＭカセットに書き込んだ上で、当該プログラムを実行することとなる。このほか、外部メモリ１０６にアプリケーション用プログラムをインストールすることも可能である。

【００６４】

さて、ＣＰＵ　１０１は、情報処理装置１００全体の動作を制御し、各構成要素と接続され制御信号やデータをやりとりする。また、ＣＰＵ　１０１は、レジスタ（図示せず）という高速アクセスが可能な記憶域に対してＡＬＵ（Arithmetic Logic Unit）（図示せず）を用いて加減乗除等の算術演算や、論理和、論理積、論理否定等の論理演算、ビット和、ビット積、ビット反転、ビットシフト、ビット回転等のビット演算などを行うことができる。さらに、マルチメディア処理対応のための加減乗除等の飽和演算や、三角関数等、ベクトル演算などを高速に行えるように、ＣＰＵ　１０１自身が構成されているものや、コプロセッサを備えて実現するものがある。

【００６５】

ＲＯＭ　１０２には、電源投入直後に実行されるＩＰＬ（Initial Program Loader）が記録され、これが実行されることにより、ＤＶＤ－ＲＯＭに記録されたプログラムをＲＡＭ　１０３に読み出してＣＰＵ　１０１による実行が開始される。また、ＲＯＭ　１０２には、情報処理装置１００全体の動作制御に必要なオペレーティングシステムのプログラムや各種のデータが記録される。

【００６６】

ＲＡＭ　１０３は、データやプログラムを一時的に記憶するためのもので、ＨＤ　１２１やＤＶＤ－ＲＯＭ等から読み出したプログラムやデータ、その他通信対戦ゲームの進行やチャット通信に必要なデータが保持される。また、ＣＰＵ　１０１は、ＲＡＭ　１０３に変数領域を設け、当該変数に格納された値に対して直接ＡＬＵを作用させて演算を行ったり、ＲＡＭ　１０３に格納された値を一旦レジスタに格納してからレジスタに対して演算を行い、演算結果をメモリに書き戻す、などの処理を行う。

【００６７】

インターフェース１０４を介して接続されたコントローラ１０５は、ユーザがゲーム実行の際に行う操作入力を受け付ける。

【００６８】

なお、コントローラ１０５は、必ずしも情報処理装置１００に対して外付けにされている必要はなく、一体に形成されていても良い。携帯可能なゲーム装置のコントローラ１０５は、各種のボタンやスイッチから構成され、これらの押圧操作を操作入力として扱う。このほか、タッチスクリーンを利用した情報処理装置１００では、ユーザがペンや指を利用してタッチスクリーンをなぞった軌跡を操作入力として扱う。

【００６９】

図２は、コントローラ１０５の外観を示す説明図である。以下、本図を参照して説明する。

【００７０】

コントローラ１０５の左方には、上下左右を示す操作入力を行うのに利用される↑ボタ

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ン２０１、↓ボタン２０２、←ボタン２０３、→ボタン２０４が配置されている。

【００７１】

右方には、決定操作入力を行うのに利用される○ボタン２０５、取消操作入力を行うのに利用される×ボタン２０６、メニュー表示等の指示入力を行うのに利用される△ボタン２０７、その他の指示入力を行うのに利用される□ボタン２０８が配置されている。

【００７２】

中央には、ＳＥＬＥＣＴボタン２０９、ＳＴＡＲＴボタン２１０のほか、アナログ入力の開始・停止を指示するためのＡＮＡＬＯＧボタン２１１、および、アナログ入力が有効か無効かを表示するためのインジケータ２１２が配置されている。

【００７３】

また中央下部には、上下左右に限らない方向に大きさを伴う指示入力を行うためのジョイスティック２１３、２１４が配置されている。

【００７４】

さらに、上方には、各種の指示入力に用いることができるＬ１ボタン２１５、Ｌ２ボタン２１６、Ｒ１ボタン２１７、Ｒ２ボタン２１８が配置されている。

【００７５】

コントローラ１０５の各ボタン２０１～２０８、２１５～２１８には、圧力センサが配備され、アナログ入力が有効となっている場合には、いずれのボタンが押圧操作されているかを検知することができるほか、ユーザの押圧操作の圧力の大きさを０～２５５の２５６段階で得ることができる。

【００７６】

コントローラ１０５のジョイスティック２１３、２１４には、ひずみゲージが配備され、これらがどの方向にどれだけ曲げられているか、を検知することができる。

【００７７】

図１に戻り、インターフェース１０４を介して着脱自在に接続された外部メモリ１０６には、ゲーム等のプレイ状況（過去の成績等）を示すデータ、ゲームの進行状態を示すデータ、ネットワーク対戦の場合のチャット通信のログ（記録）のデータなどが書き換え可能に記憶される。ユーザは、コントローラ１０５を介して指示入力を行うことにより、これらのデータを適宜外部メモリ１０６に記録することができる。

【００７８】

上述の通り、アプリケーションプログラムを外部メモリ１０６にインストールして実行するような形態を採用することもできる。これは、外部メモリ１０６が大容量である場合に好適である。

【００７９】

ＤＶＤ－ＲＯＭドライブ１０８に装着されるＤＶＤ－ＲＯＭには、ゲームを実現するためのプログラムとゲームに付随する画像データや音声データが記録される。ＣＰＵ　１０１の制御によって、ＤＶＤ－ＲＯＭドライブ１０８は、これに装着されたＤＶＤ－ＲＯＭに対する読み出し処理を行って、必要なプログラムやデータを読み出し、これらはＲＡＭ１０３等に一時的に記憶される。

【００８０】

画像処理部１０７は、ＤＶＤ－ＲＯＭから読み出されたデータをＣＰＵ　１０１や画像処理部１０７が備える画像演算プロセッサ（図示せず）によって加工処理した後、これを画像処理部１０７が備えるフレームメモリ（図示せず）に記録する。フレームメモリに記録された画像情報は、所定の同期タイミングでビデオ信号に変換され画像処理部１０７に接続されるモニタ（図示せず）へ出力される。これにより、各種の画像表示が可能となる。

【００８１】

携帯可能なゲーム装置のモニタとしては、小型の液晶ディスプレイを利用するのが典型的であり、コントローラ１０５としてタッチスクリーンを利用する場合には、当該タッチスクリーンの表示パネルがモニタとして機能する。自宅で遊ぶためのゲーム装置のモニタ

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としては、ＣＲＴ（Cathode Ray Tube）やプラズマディスプレイ、大型の液晶ディスプレイなどの表示装置を利用することも可能である。

【００８２】

画像演算プロセッサは、２次元の画像の重ね合わせ演算やαブレンディング等の透過演算、各種の飽和演算を高速に実行できる。

【００８３】

また、仮想３次元空間に配置され、各種のテクスチャ情報が付加されたポリゴン情報を、Ｚバッファ法によりレンダリングして、所定の視点位置から仮想３次元空間に配置されたポリゴンを所定の視線の方向へ俯瞰したレンダリング画像を得る演算の高速実行も可能である。

【００８４】

さらに、ＣＰＵ　１０１と画像演算プロセッサが協調動作することにより、文字の形状を定義するフォント情報にしたがって、文字列を２次元画像としてフレームメモリへ描画したり、各ポリゴン表面へ描画することが可能である。

【００８５】

ＮＩＣ　１０９は、情報処理装置１００をインターネット等のコンピュータ通信網（図示せず）に接続するためのものであり、ＬＡＮを構成する際に用いられる１０ＢＡＳＥ－Ｔ／１００ＢＡＳＥ－Ｔ規格にしたがうものや、電話回線を用いてインターネットに接続するためのアナログモデム、ＩＳＤＮ（Integrated Services Digital Network）モデム、ＡＤＳＬ（Asymmetric Digital Subscriber Line）モデム、ケーブルテレビジョン回線を用いてインターネットに接続するためのケーブルモデム等と、これらとＣＰＵ　１０１との仲立ちを行うインターフェース（図示せず）により構成される。

【００８６】

また、ＮＩＣ　１０９経由でコンピュータ通信網から入手した情報を元に、ＨＤ　１２１等にアプリケーションプログラムをインストールすることも可能である。

【００８７】

音声処理部１１０は、ＨＤ　１２１やＤＶＤ－ＲＯＭから読み出した音声データをアナログ音声信号に変換し、これに接続されたスピーカ（図示せず）から出力させる。また、ＣＰＵ　１０１の制御の下、ゲームの進行の中で発生させるべき効果音や楽曲データを生成し、これに対応した音声をスピーカや、ヘッドホン（図示せず）、イヤフォン（図示せず）から出力させる。

【００８８】

音声処理部１１０では、ＨＤ　１２１やＤＶＤ－ＲＯＭに記録された音声データがＭＩＤＩデータである場合には、これが有する音源データを参照して、ＭＩＤＩデータをＰＣＭデータに変換する。また、ADPCM形式やOgg Vorbis形式等の圧縮済音声データである場合には、これを展開してＰＣＭデータに変換する。ＰＣＭデータは、そのサンプリング周波数に応じたタイミングでＤ／Ａ（Digital/Analog）変換を行って、スピーカに出力することにより、音声出力が可能となる。

【００８９】

さらに、情報処理装置１００には、インターフェース１０４を介してマイク１１１を接続することができる。この場合、マイク１１１からのアナログ信号に対しては、適当なサンプリング周波数でＡ／Ｄ変換を行い、ＰＣＭ形式のディジタル信号として、音声処理部１１０でのミキシング等の処理ができるようにする。

【００９０】

本実施形態で利用する情報処理装置１００は、上述のように、ＨＤ　１２１等の大容量外部記憶装置を用いるのが典型的である。ＨＤ　１２１は、ＲＯＭ　１０２、ＲＡＭ　１０３、外部メモリ１０６、ＤＶＤ－ＲＯＭドライブ１０８に装着されるＤＶＤ－ＲＯＭ等と同じ機能を果たすこともできる。

【００９１】

このほか、ユーザからの文字列の編集入力を受け付けるためのキーボードや、各種の位

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置の指定および選択入力を受け付けるためのマウスなどを接続する形態も採用することができる。また、本実施形態の情報処理装置１００にかえて、汎用のパーソナルコンピュータやサーバ用コンピュータ等を利用することもできる。

【００９２】

さらに、本実施形態では、リアルタイムクロック（図示せず）もしくはＮＩＣ　１０９を介してＮＴＰ（Network Time Protocol）サーバに対して時刻を問い合わせる機能を採用して、情報処理装置１００を利用している日時の情報を利用することとしている。

【００９３】

以上で説明した情報処理装置１００は、コンシューマ向けゲーム装置に相当するものであるが、各種の入出力処理が可能な電子機器であれば、本発明のゲーム装置やサーバ装置を実現することができる。したがって、携帯電話、携帯ゲーム機器、カラオケ装置、一般的なビジネス用コンピュータなど、種々の計算機上で本発明のゲーム装置やサーバ装置を実現することが可能である。

【００９４】

たとえば、ビジネス用コンピュータは、上記情報処理装置１００と同様に、ＣＰＵ、ＲＡＭ、ＲＯＭ、ＤＶＤ－ＲＯＭドライブ、および、ＮＩＣ、ＨＤを構成要素として有するほか、情報処理装置１００よりも簡易な機能を備えた画像処理部を備え、外部記憶装置としてフレキシブルディスク、光磁気ディスク、磁気テープ等が利用できるようになっており、コントローラ１０５ではなく、キーボードやマウスなどを入力装置として利用するのが典型的である。

【００９５】

（ゲーム装置）

図３は、本発明の実施形態に係るゲーム装置の概要構成を示す説明図である。以下、本図を参照して説明する。

【００９６】

ゲーム装置３０１は、記憶部３０２、受付部３０３、自位置更新部３０４、他位置更新部３０５、推測部３０６、自攻撃部３０７、表示部３０８を備える。

【００９７】

以下、まず、各部の機能の概要ならびに情報処理装置１００との関係について説明する。

【００９８】

本実施形態では、ゲーム装置３０１は、情報処理装置１００において、ＤＶＤ－ＲＯＭドライブ１０８に装着されたＤＶＤ－ＲＯＭから読み出したプログラムや、ＨＤ　１２１に記録されたプログラムをＣＰＵ　１０１が実行することによって実現される。

【００９９】

ここで、記憶部３０２は、各種情報の一時的な保存領域として機能するＲＡＭ　１０３により実現される。記憶部３０２には、ゲームに登場するキャラクターの仮想空間内における位置や体力パラメータ等が記憶される。

【０１００】

一方、受付部３０３は、コントローラ１０５や、コントローラ１０５と画像処理部１０７を制御するＣＰＵ　１０１とモニタとにより構成されるＧＵＩ（Graphical User Interface）により実現され、プレイヤーからの指示入力を受け付ける。

【０１０１】

さらに、自位置更新部３０４は、ＣＰＵ　１０１がコントローラ１０５やＲＡＭ　１０３等を参照することにより実現され、プレイヤーからの移動指示入力に基づいて記憶部３０２に記憶される自キャラクターの位置を更新する。

【０１０２】

そして、他位置更新部３０５は、ＣＰＵ　１０１がコントローラ１０５やＲＡＭ　１０３等を参照することにより実現され、所定のアルゴリズムや他のプレイヤーからの指示入力に基づいて、記憶部３０２に記憶される他キャラクターの位置を更新する。

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【０１０３】
一方、推測部３０６は、プレイヤーから攻撃に係る指示入力が与えられると、他キャラクターの位置を固定したまま、当該攻撃のシミュレーションを試みる。そして、当該攻撃によって他キャラクターの体力パラメータがどれだけ減少するかを推定し、その総量を求める。推測部３０６は、ＣＰＵ　１０１がＲＡＭ　１０３等を参照することにより実現される。
【０１０４】
さらに、自攻撃部３０７は、ＣＰＵ　１０１がＲＡＭ　１０３等を参照することにより実現され、推測部３０６による推定がなされると、実際の攻撃をゲームのルールに基づいて実行し、記憶部３０２に記憶されるキャラクターの体力パラメータを更新する。
【０１０５】
そして、表示部３０８は、記憶部３０２に記憶される情報が更新されると、その情報に基づいて仮想世界の様子を表す画像を生成して、画面に表示する。典型的には、表示部３０８は、ＣＰＵ　１０１の制御の下、画像処理部１０７が機能することにより実現され、画像を生成してから垂直同期割込が生じるのを待機し、その後に画像をモニタに転送する。
【０１０６】
ここで、自攻撃部３０７による攻撃がなされている間、表示部３０８は、推測部３０６により推定された総量に基づいて定められる特殊効果、たとえばスローモーション効果を画像に施してから画面に表示する。
【０１０７】
（ゲームの制御処理）
以下では、ゲーム装置３０１にて実行される処理の詳細を説明する。図４、図５は、ゲーム装置３０１にて実行される制御処理の流れを示すフローチャートである。以下、本図を参照して説明する。
【０１０８】
上記のように、ＤＶＤ－ＲＯＭドライブ１０８に装着されたＤＶＤ－ＲＯＭやＨＤ　１２１に記録されたプログラムをＲＡＭ　１０３に読み出して、ＣＰＵ　１０１が実行することを契機に、本制御処理が開始される。
【０１０９】
処理が開始されると、ＣＰＵ　１０１は、記憶部３０２を構成するＲＡＭ　１０３の初期化を行う（ステップＳ４０１）。初期化される情報には、以下のようなものがある。
（ａ）仮想空間内における各キャラクターの位置。
（ｂ）各キャラクターの体力パラメータ。
（ｃ）ゲーム内時刻および時間の刻み幅。
（ｄ）画像に施す特殊効果の種類。
【０１１０】
上記のように、複数のキャラクターには、自キャラクターと他キャラクターの２種類がある。
【０１１１】
体力パラメータは、いわゆるＨＰ（Hit Point）に相当するものであり、体力パラメータが正である間は、そのキャラクターは生存しており、体力パラメータが０になったり、攻撃を受けて負になったりした場合には、そのキャラクターは死んだことになる。
【０１１２】
また、体力パラメータとして、当該キャラクターが生存しているときには１、死んでいるときには０となるようなフラグ情報を採用することも可能である。
【０１１３】
このほか、各キャラクターには自キャラクターか他キャラクターかの区別がある。さらに、他キャラクターには、ＮＰＣかＰＣかの区別がある。
【０１１４】

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他キャラクターがＮＰＣの場合には、キャラクターの属性に応じて、移動や攻撃のアルゴリズムが決定されるため、これらの属性情報も記憶される。

【０１１５】

また、ゲーム内時刻は、仮想空間における時間経過を表す。

【０１１６】

後述するように、本実施形態では、垂直同期割込周期に合わせてゲームの状態の更新が繰り返し行われる。時間の刻み幅は、この繰り返しの一単位において、ゲーム内時刻がどれだけ進行するか、を表す情報である。

【０１１７】

たとえば、垂直同期割込周期が１／６０秒である場合に、時間刻み幅を１／６０秒よりも短く設定すれば、ゲーム内世界は現実世界に比べてスローモーションで時間進行することになる。

【０１１８】

ステップＳ４０１においては、時間刻み幅を１／６０秒、すなわち、繰り返しの周期の値に設定する。このように設定すると、ゲーム内時間は、現実の時間と同じ速度で進むことになる。

【０１１９】

さらに、現在実行されている攻撃の種類、ならびに、画像に施す特殊効果は、「なし」に初期設定される。

【０１２０】

ついで、ＣＰＵ　１０１は、画像処理部１０７を駆動して、ＲＡＭ　１０３に記憶される情報に基づいて、仮想空間内の様子を表す画像をＲＡＭ　１０３内に生成する（ステップＳ４０２）。

【０１２１】

図６は、ステップＳ４０２にて生成される画像の例を示す説明図である。以下、本図を参照して説明する。なお、本図では、理解を容易にするため、適宜符号を省略している。

【０１２２】

本図に示すように、画像４０１では、斜線が引かれた人型の自キャラクター４０２が、ほぼ中央に配置されている。また、白色の人型の他キャラクター４０３は、自キャラクター４０２のその周囲に配置されている。

【０１２３】

本実施形態において、自キャラクター４０２が画像４０１の中央に配置されるのは、自キャラクター４０２が仮想空間内を移動すると、仮想空間において画像４０１内に描画される領域も連動して移動する態様を採用しているからである。なお、仮想空間において画像４０１内に描画される領域を、プレイヤーの指示に基づいて、適宜変更するような態様を採用しても良い。

【０１２４】

このような画像を生成するにあたっては、ＲＡＭ　１０３に記憶される各キャラクターの位置の情報が使用される。

【０１２５】

本図では、特段の特殊効果を施してはおらず、ゲーム内時刻における仮想空間の様子がそのまま描画されている。ただし、特殊効果を施す旨がＲＡＭ　１０３内に記憶されていれば、これに対応する特殊効果を、画像生成の際に付加することも可能である。特殊効果の例については、後述する。

【０１２６】

ＲＡＭ　１０３内に生成された画像４０１は、ＣＰＵ　１０１が垂直同期割込を待機した（ステップＳ４０３）後、画像処理部１０７を制御してＲＡＭ　１０３からモニタに情報を転送させることによって、画面に表示される（ステップＳ４０４）。このように、画像の転送を垂直同期割込周期に同期させることによって、画面表示の際の表示のちらつきを防止することができる。

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【０１２７】
ついで、ＣＰＵ　１０１は、コントローラ１０５の状態を調べ、指示入力の有無ならびにその種類を判定する（ステップＳ４０５）。したがって、本実施形態では、垂直同期割込が生じるたびに、指示入力のチェックを行うことになる。
【０１２８】
本実施形態では、指示入力として、以下のようなものを想定している。
（ａ）自キャラクターの位置を移動する旨の移動指示入力。本実施形態では、プレイヤーがコントローラ１０５の↑ボタン２０１、↓ボタン２０２、←ボタン２０３、→ボタン２０４やジョイスティック２１３を操作すると、その操作方向に自キャラクターを移動させようとする移動指示入力がなされたと見なされる。
（ｂ）自キャラクターに所望の種類の攻撃をさせる旨の攻撃選択指示入力。本実施形態では、自キャラクターは４種類の攻撃が可能であることを想定している。各攻撃の種類は、コントローラ１０５のＬ１ボタン２１５、Ｌ２ボタン２１６、Ｒ１ボタン２１７、Ｒ２ボタン２１８に対応付けられている。
（ｃ）最適な攻撃を自動的に選択させて、自キャラクターにその攻撃をさせる旨の最適攻撃指示入力。本実施形態では、コントローラ１０５の○ボタン２０５の押圧操作が、最適攻撃指示入力に相当する。
【０１２９】
なお、上記のようなコントローラ１０５による操作のみならず、これらとＧＵＩの組み合わせ（たとえば、△ボタン２０７を押圧操作して階層的に構成されたメニュー表示を行い、↑ボタン２０１、↓ボタン２０２、←ボタン２０３、→ボタン２０４を用いてメニュー内を移動して、所望の指示入力を選択する等。）を採用することとしても良い。
【０１３０】
さて、移動指示入力がなされていることが判明した場合（ステップＳ４０５；移動）、ＣＰＵ　１０１は、コントローラ１０５の操作状態から、移動方向を特定する。そして、ＲＡＭ　１０３内に記憶される自キャラクターの位置を、特定された移動方向に、所定の移動量だけ変化させる。この処理によって、自位置更新部３０４による自キャラクターの位置の更新が行われるのである（ステップＳ４０６）。
【０１３１】
ここで、移動量、すなわち、キャラクターの位置の変位は、垂直同期割込周期の時間の間に自キャラクターが仮想空間内を移動できる距離に相当するものである。
【０１３２】
ついで、ＣＰＵ　１０１は、ＲＡＭ　１０３内に記憶される他キャラクターの位置を、所定の移動アルゴリズムに基づいて更新してから（ステップＳ４０７）、ステップＳ４５２に進む。
【０１３３】
本実施形態では、プレイヤー１人がゲームを行う状況を想定しているため、他キャラクターはすべてＮＰＣである。したがって、あらかじめ定めた移動アルゴリズムに基づいて、他キャラクターが移動する。
【０１３４】
このような移動アルゴリズムとしては、たとえば以下のようなものが考えられる。
（ａ）キャラクターに対する基準位置が定められており、その周辺をランダムウォークする態様。
（ｂ）上記（ａ）において、自キャラクターに近付く確率が高くなるように、ランダムウォークする態様。
（ｃ）自キャラクターを追尾するように移動する態様。
（ｄ）自キャラクターとの間では引力が働き、自身以外の他キャラクターとの間では斥力が働くような物理シミュレーションによって、キャラクターを移動させる態様。
（ｅ）上記（ｄ）において、自身以外の他キャラクターのうち、体力パラメータが最も低い他キャラクターとの間では、斥力ではなく引力が働くような態様。

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（ｆ）特定の他キャラクターを追尾するように移動する態様。

【０１３５】

これらは、単独で利用することとしても良いし、他キャラクターの属性ごとに異なるアルゴリズムを採用しても良いし、

【０１３６】

また、複数のプレイヤーが対戦するような状況では、他のプレイヤーからの指示入力に基づいて他キャラクターを移動させることになる。情報処理装置１００に複数のコントローラ１０５が装着されている場合には、他のプレイヤーからの操作入力は、各コントローラ１０５から入力されることになる。また、ネットワーク対戦の場合には、ＮＩＣ　１０９を介して接続された他の情報処理装置１００から、他のプレイヤーからの指示入力が与えられる。

【０１３７】

ステップＳ４０７の処理は、他キャラクターのそれぞれについて行う必要があるため、計算量の負担が大きい。そこで、本実施形態では、攻撃の威力の推定に際して、ステップＳ４０７に相当する処理を省略することによって、推定の間、他キャラクターの位置をそのまま維持する点に特徴の一つがある。

【０１３８】

攻撃選択指示入力がされている場合（ステップＳ４０５；攻撃）、攻撃選択指示入力に指定される攻撃の種類を威力推定処理に与えて実行し、その攻撃の威力を推定する（ステップＳ４０８）。

【０１３９】

ここで、攻撃の威力とは、その攻撃によって、他キャラクターが受けるダメージ、すなわち、他キャラクターの体力パラメータがどれだけ減少するか、の変化量の総量に相当すると考えられる。本実施形態では、攻撃の威力を、実際に攻撃を行う場合と類似する手法で推定する。そこで、攻撃の威力の推定の詳細については、後述するものとし、まず、実際に攻撃を行う場合の手法について説明する。

【０１４０】

攻撃の威力が推定されたら、当該威力の大きさに対応付けられる時間長を時間刻み幅とするように、ＲＡＭ　１０３を更新する（ステップＳ４０９）。

【０１４１】

攻撃の威力が小さい場合には、ここで設定される時間長は垂直同期割込周期に近い値であり、攻撃の威力が大きくなると、時間長が短くなるように設定すると、画像に施す特殊効果として、スローモーション効果を選択したことになる。

【０１４２】

なお、スローモーション効果以外の特殊効果を採用する場合には、ステップＳ４０９において、その特殊効果の種類を、ＲＡＭ　１０３内に記憶する。

【０１４３】

また、スローモーション効果を採用しない場合には、時間刻み幅は定数とすることになるので、更新は不要である。

【０１４４】

そして、以下の処理を、攻撃が完了するまで繰り返す（ステップＳ４１０）。上記のように、本実施形態では、攻撃が開始されてから終了するまでである程度の時間を要することを想定している。また、繰り返しの時間単位は、垂直同期割込周期である。

【０１４５】

まず、自キャラクターが他キャラクターのうち、いずれを攻撃の対象とするかを選択する（ステップＳ４１１）。なお、体力パラメータが０または負のキャラクターは、すでに「死んでいる」ことになるので、選択の対象からは除去される。

【０１４６】

具体的な選択の手法としては、以下のような態様がありうる。

（ａ）自キャラクターに最も近い他キャラクター。両者の距離は、ユークリッド距離や

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マンハッタン距離等により計算される。
（ｂ）実行中の攻撃の種類の射程範囲内で、自キャラクターに最も近い他キャラクター。攻撃に指向性がある場合の態様である。
（ｃ）上記（ａ）（ｂ）において、前回の繰り返し単位において攻撃の対象となった他キャラクターが最も近い場合には、次に近い他キャラクターを攻撃対象とする態様。同じ他キャラクターのみに攻撃をするのではなく、広く分散して攻撃の対象とする態様である。
（ｄ）ランダムに他キャラクターを選択する態様。すべての他キャラクターについて同じ確率で選択されることとしても良いし、自キャラクターとの距離が近ければ近いほど高い確率で選択されるような態様を採用しても良い。
（ｅ）上記（ａ）～（ｄ）において、複数の他キャラクターを選択する態様。近さの順に上位のキャラクターを複数選択したり、ランダム選択を複数回繰り返すことによって攻撃対象を選択するものである。
【０１４７】
なお、以下では、理解を容易にするため、他キャラクターは１人だけ選択されるものとする。
【０１４８】
次に、選択された他キャラクターに対して、当該攻撃が与える体力パラメータの変化量を計算する（ステップＳ４１２）。ここでいう「変化量」は、体力パラメータがどれだけ減少するか、を表す量であるが、体力パラメータが、他キャラクターの生死を表すフラグ情報である場合には、他キャラクターが死ぬのであれば「１」、そのまま生存し続けるのであれば「０」が採用される。
【０１４９】
一般には、体力パラメータの変化量は、自キャラクターと他キャラクターの距離が近ければ近いほど大きい。また、適宜乱数を利用して変化量を定める場合には、キャラクター同士の距離が小さければ小さいほど、その乱数の平均値が大きくなるように設定するのが典型的である。
【０１５０】
このほか、攻撃の種類や、自キャラクターと他キャラクターの体力パラメータの差や比などに応じて、変化量を定めることとしても良い。たとえば、自キャラクターが他キャラクターに比べて体力パラメータが大きければ大きいほど、変化量も大きくなる、等である。
【０１５１】
そして、ＲＡＭ　１０３に記憶される体力パラメータのうち、当該選択されたキャラクターの体力パラメータから、ステップＳ４１２にて計算された変化量を減算する（ステップＳ４１３）。
【０１５２】
このようにして、ある他キャラクターに対する一回の攻撃が行われる。ただし、ステップＳ４１１において、攻撃の対象を「なし」と選択することもできるような態様も考えられる。
【０１５３】
たとえば、前回の攻撃がされたゲーム内時刻から所定のゲーム内時間が経過しないと、次の攻撃ができない等とする態様や、乱数を用いて攻撃の可否を定める態様、ならびにこれらの組み合わせ等である。これは、後述する他キャラクターから自キャラクターへの攻撃についても、同様である。これらの態様では、適宜ＲＡＭ　１０３内のゲーム内時刻が参照される。
【０１５４】
ついで、現在生存中の他キャラクターのそれぞれについて、以下の処理を繰り返す（ステップＳ４１４～）。
【０１５５】

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まず、当該他キャラクターが自キャラクターを攻撃するか否かを判定する（ステップＳ４１５）。攻撃するか否かは、他キャラクターと自キャラクターの距離や攻撃の射程範囲、乱数などにより決定されるのが典型的である。いずれの他キャラクターを自キャラクターの攻撃の対象とするかの判定基準と同様の判定基準を採用しても良い。

【０１５６】

当該他キャラクターが自キャラクターを攻撃しない場合（ステップＳ４１５；Ｎｏ）、ステップＳ４１８に進む。一方、攻撃する場合（ステップＳ４１５；Ｙｅｓ）、自キャラクターがその攻撃によって受ける体力パラメータの変化量を計算する（ステップＳ４１６）。ここでの計算は、ステップＳ４１２と同様に、ゲームのルールに基づいて行われる。

【０１５７】

そして、ＲＡＭ　１０３に記憶される体力パラメータのうち、自キャラクターの体力パラメータから、ステップＳ４１６にて計算された変化量を減算する（ステップＳ４１７）。

【０１５８】

このようにして、他キャラクターの攻撃を繰り返し行った後（～ステップＳ４１８）、ステップＳ４０２～ステップＳ４０４と同様に、画像の生成、垂直同期の待機、画像の表示を行うための処理Ａを実行する（ステップＳ４１９）。なお、本フローチャートでは、このような処理のまとまりを点線で囲み、英字による名前を付けている。

【０１５９】

なお、画像の生成の際には、上記のように、ＲＡＭ　１０３に記憶される特殊効果の種類に基づいて、画像に対して特殊効果を施すこととしても良い。

【０１６０】

さらに、ゲームを終了させるべきか否かを判定する（ステップＳ４２０）。ここでの判定基準は、ゲームのルールに基づくが、たとえば、自キャラクターの体力が０または負になった場合や、生存している他キャラクターが一人もいなくなった場合には、ゲーム終了とするのが典型的である。

【０１６１】

ゲームを終了させる場合（ステップＳ４２０；Ｙｅｓ）、ゲーム終了にかかる種々の処理を実行して（ステップＳ４２１）、本処理を終了する。

【０１６２】

ゲームを継続する場合（ステップＳ４２０；Ｎｏ）、ＣＰＵ　１０１は、ゲーム内時刻を、時間刻み幅だけ増加させるよう、ＲＡＭ　１０３を更新する（ステップＳ４２３）。

【０１６３】

なお、時間刻み幅として、垂直同期割込周期よりも短い値がＲＡＭ　１０３内に記憶されている場合には、ゲーム内時間の進行は、現実の時間の進行よりも遅くなる。このため、画像表示はスローモーション表示となる。

【０１６４】

ついで、ＣＰＵ　１０１は、自キャラクターによる攻撃が完了したか否かを判定する（ステップＳ４２４）。攻撃完了か否かは、たとえば、次のような判定基準で判定することができる。

（ａ）攻撃を開始した時点のゲーム内時刻と、現在のゲーム内時刻と、の差が、所定の時間長を超えた場合。ここでいう所定の時間長とは、ゲーム世界において、どれだけの時間攻撃が継続するかを定めるものであり、現実世界においてその攻撃がモニターの画面に表示される継続時間とは必ずしも一致しない。

（ｂ）攻撃対象となった敵キャラクターの数が所定の上限を超えた場合。攻撃対象の敵キャラクターをランダムに選択する場合や、前回とは異なる敵キャラクターを選択する場合等に好適である。

（ｃ）敵キャラクターに与えた攻撃の威力が、所定の上限を超えた場合、すなわち、敵キャラクターの体力パラメータの変化量が、所定の上限を超えた場合。

【０１６５】

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攻撃が完了していない場合（ステップＳ４２４；Ｎｏ）、ＣＰＵ　１０１は、移動指示入力がなされているかをステップＳ４０５と同様に調べ（ステップＳ４２５）、なされていれば（ステップＳ４２５；Ｙｅｓ）、ＣＰＵ　１０１は、ステップＳ４０６と同様に、自キャラクターの位置を更新し（ステップＳ４２６）、ステップＳ４２７に進む。

【０１６６】

移動指示入力がなされていなければ（ステップＳ４２５；Ｎｏ）、ＣＰＵ　１０１は、ステップＳ４０７と同様に、他キャラクターの位置を更新して（ステップＳ４２７）、ステップＳ４１０以降の処理を繰り返す（ステップＳ４２８）。

【０１６７】

一方、攻撃を完了すべき場合（ステップＳ４２４；Ｙｅｓ）、ＲＡＭ　１０３に記憶される特殊効果を「なし」に設定し（ステップＳ４２９）、時間刻み幅を既定値である垂直同期割込周期に戻してから（ステップＳ４３０）、ステップＳ４０２に戻る。

【０１６８】

なお、ステップＳ４０５において、指示入力がなされていないと判定された場合（ステップＳ４０５；なし）、ＣＰＵ　１０１は、ステップＳ４０７に進む。そして、ステップＳ４０７の実行の後、ステップＳ４１４～ステップＳ４１８（処理Ｂ）と同様に、他キャラクターによる攻撃を実行して（ステップＳ４５２）、ステップＳ４０２に戻る。

【０１６９】

ここまでに説明した各ステップは、攻撃の威力の推定（ステップＳ４０８）以外は、通常のゲームと同様と考えることができる。また、指示入力をチェックするタイミングで、上記以外の指示入力がなされている場合に、適宜対応する処理を実行することとしても良い。

【０１７０】

（攻撃の威力の推定処理）

さて、以下では、攻撃の威力の推定（ステップＳ４０８）において行われる処理の詳細について説明する。

【０１７１】

図７は、攻撃の威力を推定する威力推定処理の詳細を示すフローチャートである。以下、本図を参照して説明する。

【０１７２】

推定対象となる攻撃の種類が与えられることによって、威力推定処理が開始される。威力推定処理が開始されると、まず、記憶部３０２に記憶される情報のうち、各キャラクターの位置、体力パラメータ、ゲーム内時刻、時間刻み幅等の情報を、ＲＡＭ　１０３内の一時領域にコピーして、一時的にセーブする（ステップＳ５０１）。威力推定処理において、体力パラメータ等が更新されることがあるからである。

【０１７３】

次に、ＲＡＭ　１０３内に攻撃の威力を記憶する領域を確保し、その値として０を記憶する（ステップＳ５０２）。

【０１７４】

さらに、攻撃対象とする他キャラクターの選択（ステップＳ４１１）、他キャラクターの体力パラメータの変化量の計算（ステップＳ４１２）、他キャラクターの体力パラメータの更新（ステップＳ４１３）と同様の処理Ｃを実行する（ステップＳ５０３）。これは、自キャラクターによる攻撃のシミュレーションに相当するものである。

【０１７５】

ついで、得られた変化量を、ＲＡＭ　１０３内の攻撃の威力に加算する（ステップＳ５０４）。

【０１７６】

この後、生存しているキャラクターについて、順に（ステップＳ４１４）、攻撃の可否を決め（ステップＳ４１５）、攻撃による自キャラクターの変化量を計算し（ステップＳ４１６）、自キャラクターの体力パラメータを更新する（ステップＳ４１７）処理を繰り

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返す（ステップＳ４１８）のと同様の処理Ｂを実行する（ステップＳ５０５）。これは、他キャラクターによる攻撃のシミュレーションに相当するものである。

【０１７７】

ついで、ゲーム内時刻を時間刻み幅だけ増加させる更新を行う（ステップＳ５０６）が、ここで、ゲーム内時刻の更新は、ステップＳ４２３とは異なる。ステップＳ４２３では、威力の推定結果に応じて時間刻み幅が変更されているが、ステップＳ５０６では、時間刻み幅は既定値のままだからである。

【０１７８】

そして、ステップＳ４２４と同様に、自キャラクターの攻撃が完了したか否かを判定し（ステップＳ５０７）、まだ完了していなければ（ステップＳ５０７；Ｎｏ）、ステップＳ５０３に戻る。

【０１７９】

攻撃が完了していれば（ステップＳ５０７；Ｙｅｓ）、ステップＳ５０１においてＲＡＭ　１０３内に一時的にセーブした情報を書き戻すことにより、過去に保存したゲームの状態をロードする（ステップＳ５０８）。

【０１８０】

そして、推定結果として、ＲＡＭ　１０３内に記憶される攻撃の威力の値を、推定結果として（ステップＳ５０９）、本処理の呼び出し元に返る。

【０１８１】

なお、ステップＳ５０５における処理Ｂは、すべて省略しても良い。このほか、生存している他キャラクターのうち、自キャラクターから近い順に、所定の数だけ他キャラクターを選び、当該他キャラクターについてのみ、攻撃ステップＳ４１５～ステップＳ４１７に相当する処理を実行することとしても良い。このようにすると、他キャラクターに係る処理の計算負荷を抑制することができる。

【０１８２】

また、ステップＳ５０６の後に、自キャラクターの移動のみを以下のような簡単な手法によって実行することとしても良い。

（ａ）自キャラクターを、最後にプレイヤーが指示した方向に移動させ続ける態様。

（ｂ）自キャラクターを、ランダムに移動させる態様。

（ｃ）自キャラクターを、他キャラクターのうち、最も近い者に近付くように移動させる態様。

（ｄ）その他、他キャラクターの移動アルゴリズムと同様の物理シミュレーションを採用する態様。

【０１８３】

これらの手法によって自キャラクターを移動させた場合であっても、その計算負荷は、キャラクターすべてを移動させる場合に比べて格段に低い。

【０１８４】

このため、攻撃の威力の推定値を求める計算は、短時間で済む。

【０１８５】

なお、攻撃の推定値を求める処理に、時間の上限を定める、という手法もある。すなわち、威力推定処理が開始されてからの時間経過をステップＳ５０７で求め、この時間が、所定の閾時間を超えていれば、攻撃完了とみなすものである。

【０１８６】

ここでの閾時間は、垂直同期割込周期よりも半分未満とするのが典型的である。これは、１つの垂直同期割込周期内において、攻撃の威力の推定と、実際の攻撃と、画像の生成と、の処理を実行する必要があるからであり、攻撃の威力の推定よりも実際の攻撃の方が時間がかかるからである。

【０１８７】

もっとも、１フレーム分から数フレーム分の画像を描画するのに要する時間を推定に費しても良いような態様では、次の垂直同期割込周期が生じるまで、あるいは、所定回数の

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垂直同期割込周期が生じるまで推定を続け、垂直同期割込が生じたら推定を完了する、という手法もありうる。

【０１８８】

このように、威力推定処理では、全キャラクターが位置を変化させない、もしくは、移動するとしても一部のキャラクターのみ、と仮定することによって、計算負荷を低減している。

【０１８９】

さらに、他キャラクターのすべてについて、自キャラクターを攻撃しない、もしくは、攻撃するとしても一部の他キャラクターのみ、と仮定することによって、計算負荷を低減している。

【０１９０】

（最適な攻撃の推定処理）

以下では、ステップＳ４０５において、最適攻撃指示入力がなされていることが判明した場合（ステップＳ４０５；最適）に開始される処理（ステップＳ４６１）について説明する。

【０１９１】

これは、最適な攻撃を自動的に推定して、この攻撃があたかもプレイヤーによって選択されたかのように振舞うための処理であり、本実施形態では、□ボタン２０８の押圧操作に対応付けられている。

【０１９２】

図８は、最適な攻撃を推定してその攻撃を開始するための最適攻撃処理の制御の流れを示すフローチャートである。以下、本図を参照して説明する。

【０１９３】

最適攻撃処理が開始されると、ＣＰＵ　１０１は、自キャラクターが実行可能なすべての攻撃の種類のそれぞれについて、以下の処理を繰り返す（ステップＳ６０１）。

【０１９４】

すなわち、当該攻撃の種類を与えて威力推定処理を呼び出し（ステップＳ６０２）、当該攻撃の種類と得られた攻撃の威力とを対応付けて、ＲＡＭ　１０３内に記憶する（ステップＳ６０３）。

【０１９５】

全攻撃についてこれを繰り返した（ステップＳ６０４）後、ＲＡＭ　１０３を走査して、威力の推定値が最大の攻撃を選択してから（ステップＳ６０５）、戻る。

【０１９６】

これによって、選択された攻撃がプレイヤーによって指定されたと同じ扱いになり、当該攻撃についての威力の推定値を採用して、ステップＳ４０９に進む。

【０１９７】

本態様によれば、プレイヤーが自分で攻撃を選択しなくとも、自動的に最適と予想された攻撃が実行されるので、プレイヤーが初心者である場合等に好適である。

【０１９８】

（特殊効果）

上記の実施形態では、他キャラクターの体力パラメータの変化量に対応付けられる特殊効果は、スローモーション効果としており、当該変化量が大きければ大きいほど、当該スローモーション効果の程度を大きくすることとしていた。

【０１９９】

すなわち、上記実施形態では、攻撃が開始されてから終了するまでの間、スローモーションによる特殊効果が施される。

【０２００】

一般に、攻撃の威力が大きい場合には、攻撃を受ける他キャラクターの数が多いか、あるいは、他キャラクター単体が受ける攻撃の回数が多い場合が多い。そこで、スローモーション表示をすることによって、各攻撃の詳細をプレイヤーに見せ、スローモーション表

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示の程度によって、攻撃の威力をプレイヤーに知らせることとしていた。

【０２０１】

以下では、その他の特殊効果について説明する。

【０２０２】

一般的な攻撃の特殊効果では、画面の明度を変化させたり、オーラ、炎、火花、竜巻などの特殊な動画像を表示する態様が採用されている。これらの動画像は、ゲーム内時間に基づいてその形状を変化させる。

【０２０３】

そこで、本実施形態では、これらの特殊効果用の動画像の個数を、攻撃の威力に応じて変化させることとする。

【０２０４】

図９、図１０は、図６に示す画像に対して、攻撃の威力に応じた特殊効果を施した後の画像を示す説明図である。以下、本図を参照して説明する。

【０２０５】

図９、図１０においては、特殊効果用の画像として、星型光６０１が表示されている。

【０２０６】

この星型光６０１は、ゲーム内時間の経過にともなって、大きさが変化するような動画像として構成されている。このため、図９、図１０においても、星型光６０１は、各種の大きさが表示されている。

【０２０７】

本実施形態では、星型光６０１が発生する頻度を、攻撃の威力に応じて変化させている。図９の表示例は、図１０の表示例に比べて、攻撃の威力が小さい場合を示しており、星型光６０１の数も図９の方が図１０より少ない。

【０２０８】

また、星型光６０１の位置は、自キャラクター４０２に近い位置ほど確率が高いようにランダムに決定したり、攻撃対象となった他キャラクター４０３の周辺に配置するなど、種々の態様を採用することができる。

【産業上の利用可能性】

【０２０９】

以上説明したように、本発明によれば、ゲームにおいてプレイヤーが操作するキャラクターが他のキャラクターを攻撃する際の画像表示において、特殊効果を適切に施すのに好適なゲーム装置、ゲーム制御方法、ならびに、これらをコンピュータにて実現するプログラムを提供することができる。

【符号の説明】

【０２１０】

１００　情報処理装置
１０１　ＣＰＵ
１０２　ＲＯＭ
１０３　ＲＡＭ
１０４　インターフェース
１０５　コントローラ
１０６　外部メモリ
１０７　画像処理部
１０８　ＤＶＤ－ＲＯＭドライブ
１０９　ＮＩＣ
１１０　音声処理部
１１１　マイク
１２１　ＨＤ
２０１　↑ボタン
２０２　↓ボタン

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２０３　←ボタン
２０４　→ボタン
２０５　○ボタン
２０６　×ボタン
２０７　△ボタン
２０８　□ボタン
２０９　ＳＥＬＥＣＴボタン
２１０　ＳＴＡＲＴボタン
２１１　ＡＮＡＬＯＧボタン
２１２　インジケータ
２１３　ジョイスティック
２１４　ジョイスティック
２１５　Ｌ１ボタン
２１６　Ｌ２ボタン
２１７　Ｒ１ボタン
２１８　Ｒ２ボタン
３０１　ゲーム装置
３０２　記憶部
３０３　受付部
３０４　自位置更新部
３０５　他位置更新部
３０６　推測部
３０７　自攻撃部
３０８　表示部
４０１　画像
４０２　自キャラクター
４０３　他キャラクター
６０１　星型光

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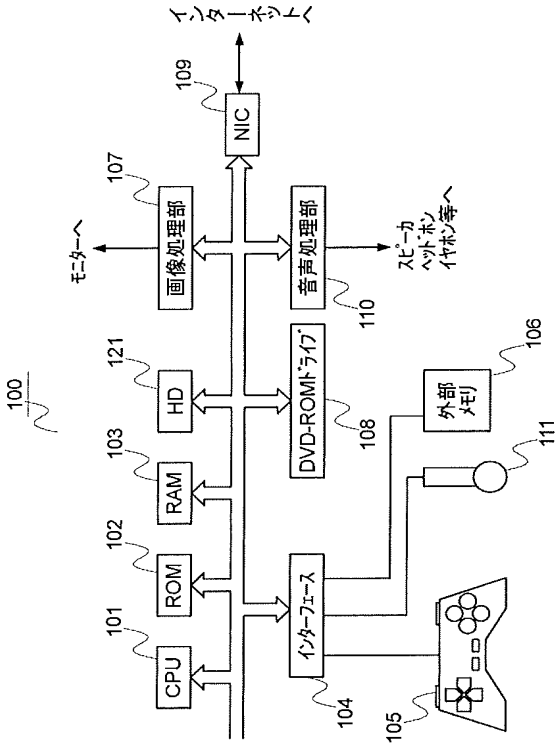
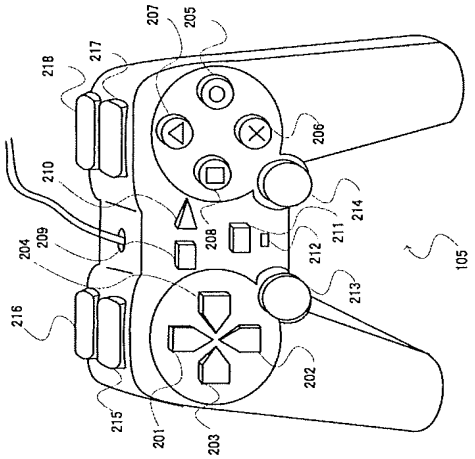
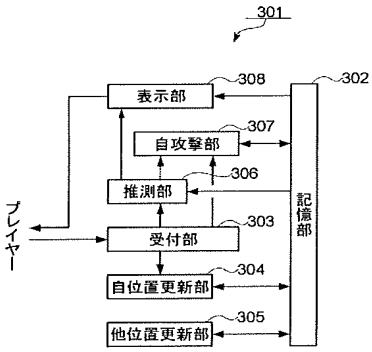
【図１】


インターネットへ
NIC
109
107
画像処理部
モニターへ
音声処理部
スピーカ
ヘッドホン
イヤホン等へ
110
100
121
HD
DVD-ROMドライブ
106
外部メモリ
108
111
103
RAM
102
ROM
101
CPU
インターフェース
104
105

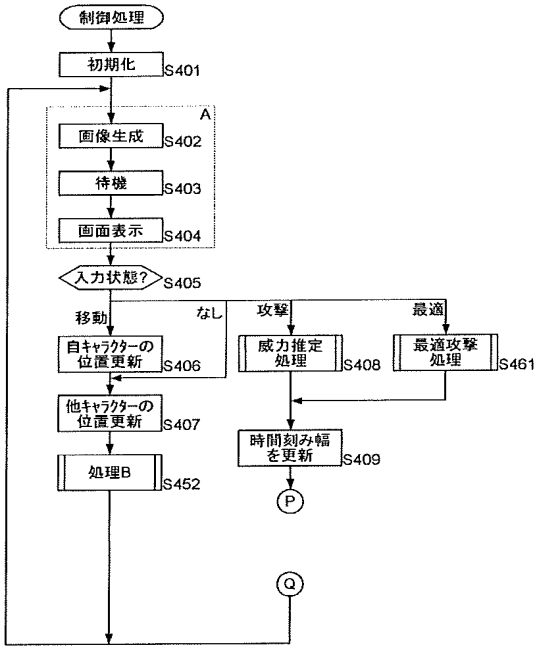
【図２】


207
205
218
217
206
210
214
211
208
209
204
212
105
213
216
202
215
201
203

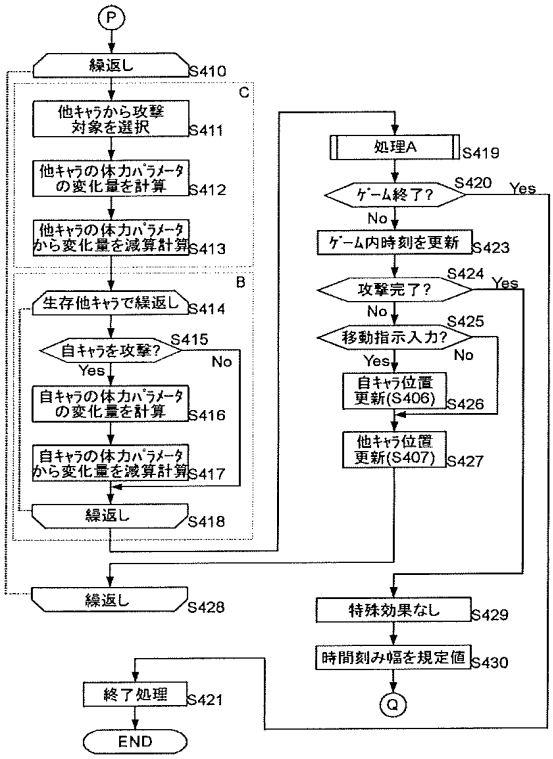
【図３】


301
表示部
308
302
自攻撃部
307
推測部
306
プレイヤー
受付部
303
記憶部
自位置更新部
304
他位置更新部
305

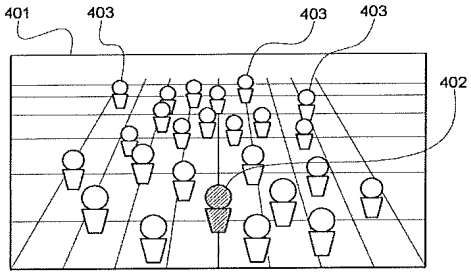
【図４】


制御処理
初期化
S401
A
画像生成
S402
待機
S403
画面表示
S404
入力状態?
S405
移動
なし
攻撃
最適
自キャラクターの位置更新
S406
威力推定処理
S408
最適攻撃処理
S461
他キャラクターの位置更新
S407
時間刻み幅を更新
S409
処理B
S452
P
Q

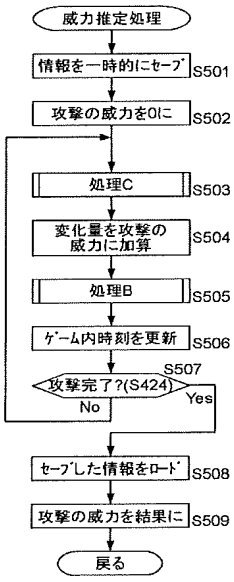
【図５】


P
繰返し S410
C
他ｷｬﾗから攻撃対象を選択 S411
他ｷｬﾗの体力ﾊﾟﾗﾒｰﾀの変化量を計算 S412
他ｷｬﾗの体力ﾊﾟﾗﾒｰﾀから変化量を減算計算 S413
B
生存他ｷｬﾗで繰返し S414
自ｷｬﾗを攻撃? S415
Yes
No
自ｷｬﾗの体力ﾊﾟﾗﾒｰﾀの変化量を計算 S416
自ｷｬﾗの体力ﾊﾟﾗﾒｰﾀから変化量を減算計算 S417
繰返し S418
繰返し S428
終了処理 S421
END
処理A S419
ｹﾞｰﾑ終了? S420
Yes
No
ｹﾞｰﾑ内時刻を更新 S423
攻撃完了? S424
Yes
No
移動指示入力? S425
No
Yes
自ｷｬﾗ位置更新(S406) S426
他ｷｬﾗ位置更新(S407) S427
特殊効果なし S429
時間刻み幅を規定値 S430
Q

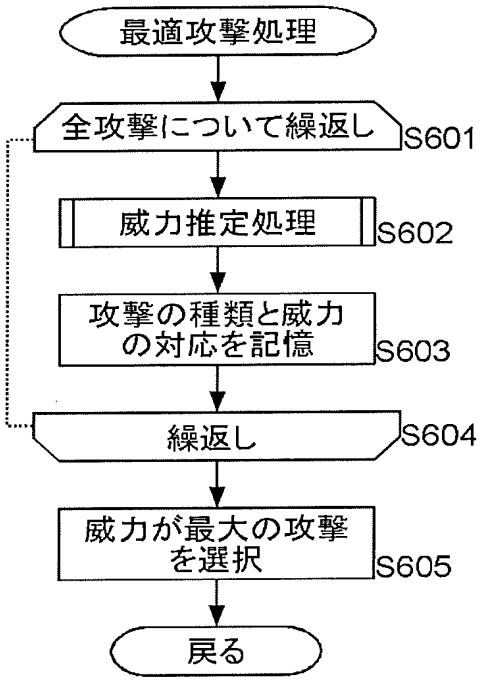
【図６】


401
403
403
403
402

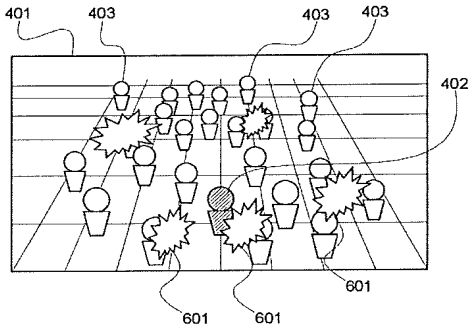
【図７】


威力推定処理
情報を一時的にｾｰﾌﾞ S501
攻撃の威力を0に S502
処理C S503
変化量を攻撃の威力に加算 S504
処理B S505
ｹﾞｰﾑ内時刻を更新 S506
S507
攻撃完了?(S424)
Yes
No
ｾｰﾌﾞした情報をﾛｰﾄﾞ S508
攻撃の威力を結果に S509
戻る

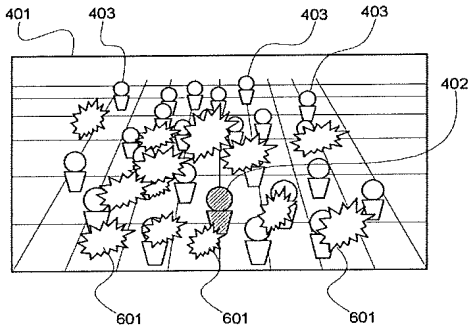
【図８】


最適攻撃処理
全攻撃について繰返し S601
威力推定処理 S602
攻撃の種類と威力の対応を記憶 S603
繰返し S604
威力が最大の攻撃を選択 S605
戻る

【図９】



【図１０】



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First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
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Time Stamp:	14:34:39
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	1460909 0775e9800ded044e831611f408eead2ea57b6b5b	yes	2

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	Document Description	**Start**	**End**		
	Information Disclosure Statement (IDS) Form (SB08)	2	2		
	Transmittal Letter	1	1		
Warnings:					
Information:					
2	Other Reference-Patent/App/Search documents	481331US_JPOA2016255511.PDF	826390 7b571fef5847e357405a3d0c513ecde72fc0ecfc	no	15
Warnings:					
Information:					
3	Other Reference-Patent/App/Search documents	481331US_JPOA2016255512.PDF	490477 c15ab06c71f3e178350afc928265afde86c9cabc	no	12
Warnings:					
Information:					
4	Foreign Reference	JP2011142997.PDF	1777133 b16192d47eb53aa06aabae467e3fd3ae73627589	no	27
Warnings:					
Information:					
5	Non Patent Literature	481331US_NPL3.PDF	878815 820cdd1bb9c289d81e1909e72d0d5990b19d9af8	no	5
Warnings:					
Information:					
6	Non Patent Literature	481331US_NPL4.PDF	827121 b0e4bec08eceb60a307c8005f6f4f537c5f43158	no	6
Warnings:					
Information:					
		Total Files Size (in bytes):	6260845		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	US 2011/0319170 A1	12/29/2011	Shimura et al.			
	AB	US 2010/0160039 A1	06/24/2010	Nathan et al.			
	AC	US 2010/0130285 A1	05-27-2010	Luciano, Jr. et al.			
	AD	US 2010/0227682 A1	09-09-2010	Reville et al.			
	AE	US 2012/0295702 A1	11-22-2012	Otero et al.			
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	European Search Report dated July 28, 2017 issued in corresponding European Patent Application No. 14848832.3 (16 pages)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

/MASUD AHMED/ 09/10/2017

OBLON

September 11, 2017

ATTORNEYS AT LAW

KATHLEEN A. PROCUNIER
CONTROLLER
(703) 412-6494
KPROCUNIER@OBLON.COM

RECEIPTS ACCOUNTING
USPTO
2017 SEP 11 PM 4:26

UNITED STATES PATENT AND TRADEMARK OFFICE
2051 Jamieson Avenue
Suite 300
Alexandria, VA

Attn: Refund Department

Re: Deposit Account Number 150030

Dear Sir or Madame:

Enclosed is a copy of a portion of our Deposit Account Statement of August 2017. Please review the highlighted charge on **Serial Number 15/393,646, in the amount of $180.00 on fee code number 1806.**

This charge appears to be in error as out deposit account was charged twice for the August 24th IDS.

Please review this application and kindly refund $180.00 to deposit account number 150030. Copies of the appropriate paperwork are attached. If you have any questions, please contact Scott Lohr at (703) 412-6472. Thank you for your assistance.

Sincerely,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

Scott Lohr

Enclosure: Deposit Account Statement

PAGE 1/2 * RCVD AT 9/11/2017 2:55:12 PM [Eastern Daylight Time] * SVR:W-PTOFAX-002/14 * DNIS:2736500 * CSID:7034132220 * DURATION (mm-ss):00-37

Electronic Acknowledgement Receipt

EFS ID:	30172763
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	24-AUG-2017
Filing Date:	29-DEC-2016
Time Stamp:	13:18:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$180
RAM confirmation Number	082417INTEFSW00012833150030
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

qAdjustment date: 09/13/2017 SSHMDARA

08/29/2017 KWHITE1 00000006 150030 15393646

01 FC:1806 180.00 CR

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

- ■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).
- ■ The amount required under 37 CFR §1.17(p) is being paid by deposit account number 15-0030.

CERTIFICATION

- ■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this information disclosure statement. 37 C.F.R. 1.704(d) And, each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1)
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	US 2011/0319170 A1	12/29/2011	Shimura et al.			
	AB	US 2010/0160039 A1	06/24/2010	Nathan et al.			
	AC	US 2010/0130285 A1	05-27-2010	Luciano, Jr. et al.			
	AD	US 2010/0227682 A1	09-09-2010	Reville et al.			
	AE	US 2012/0295702 A1	11-22-2012	Otero et al.			
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	European Search Report dated July 28, 2017 issued in corresponding European Patent Application No. 14848832.3 (16 pages)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Bradley Davis Lytle/Sandra Miles
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
RCE- 1st Request	1801	1	1200	1200
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1340**

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Decision Date : August 24, 2017

In re Application of :

Taiki EDA

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

Application No : 15393646

Filed : 29-Dec-2016

Attorney Docket No : 481331US

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed August 24, 2017 , to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED.**

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 3717 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt

EFS ID:	30172663
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	24-AUG-2017
Filing Date:	29-DEC-2016
Time Stamp:	13:17:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1340
RAM confirmation Number	082417INTEFSW00012815150030
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition automatically granted by EFS	petition-request.pdf	31460 74826a64a2308062e9ab0c7d5af28e8111c5471a	no	2
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	481331US_RCEX_Form.pdf	697595 255b26bb549895d6fcc2aa5b4242958b42beb772	no	3
Warnings:					
Information:					
3	Quick Path Information Disclosure Statement	481331US_QPIDS_STATEMENT.pdf	73455 dc231ca3ee914e27ea774732a04dcc2f291371c7	no	2
Warnings:					
Information:					
4		481331US_IDS.pdf	5238120 ec099b887b4a9c06ffced8e21c7f808d2abc2f5f	yes	18

Multipart Description/PDF files in .zip description

Document Description	Start	End
Quick Path Information Disclosure Statement	1	1
Information Disclosure Statement (IDS) Form (SB08)	2	2
Other Reference-Patent/App/Search documents	3	18

Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	31995 fe0ee19a97158c9b2c884d89e5d96d85bfae10b5	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	6072625

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web	PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)**
Application Number	15393646
Filing Date	29-Dec-2016
First Named Inventor	Taiki EDA
Art Unit	3717
Examiner Name	MASUD AHMED
Attorney Docket Number	481331US
Title	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary.

APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c).

A grantable petition requires the following items:
(1) Petition fee; and
(2) One of the following reasons:
(a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable;
(b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or
(c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).

Petition Fee

○	Small Entity
○	Micro Entity
◉	Regular Undiscounted

Reason for withdrawal from issue

◯ One or more claims are unpatentable ◉ Consideration of a request for continued examination (RCE) (List of Required Documents and Fees) ◯ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).
RCE request,submission, and fee. ☐ I certify, in accordance with 37 CFR 1.4(d)(4) that : The RCE request ,submission, and fee have already been filed in the above-identified application on ☒ Are attached.
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ◉ An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application. ◯ An attorney or agent registered to practice before the Patent and Trademark Office, acting in a representative capacity. ◯ A sole inventor ◯ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ◯ A joint inventor; all of whom are signing this e-petition

Signature	/Andrew T. Harry/
Name	Andrew T. Harry
Registration Number	56959

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Bradley Davis Lytle/Sandra Miles
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	30172763
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	24-AUG-2017
Filing Date:	29-DEC-2016
Time Stamp:	13:18:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$180
RAM confirmation Number	082417INTEFSW00012833150030
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30651 2d39ebfd41b5c833170518e281254f67675307a2	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	30651		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	15/393,646	Filing Date	2016-12-29	Docket Number (if applicable)	481331US	Art Unit	3717
First Named Inventor	Taiki Eda			Examiner Name	Masud Ahmed		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☐ Amendment/Reply
- ☒ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 150030

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Andrew T. Harry/	Date (YYYY-MM-DD)	2017-08-24
Name	Andrew T. Harry	Registration Number	56959

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	09/05/2017	9751014	481331US	3602

22850 7590 08/16/2017

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1940 DUKE STREET
ALEXANDRIA, VA 22314

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

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APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Taiki EDA, Tokyo, JAPAN;
Gree, Inc., Minato-ku, JAPAN;

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	08/17/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3717	463-031000

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1 Oblon, McClelland,
2 Maier & Neustadt, L.L.P.
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Exhibit 1002
Page 807

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Bradley Davis Lytle/Vesna Bojanic
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**960**

Electronic Acknowledgement Receipt

EFS ID:	29959818
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Vesna Bojanic
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	02-AUG-2017
Filing Date:	29-DEC-2016
Time Stamp:	13:09:34
Application Type:	Utility under 35 USC 111(a)

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 07/27/2017

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

NOTIFICATION DATE	DELIVERY MODE
07/27/2017	ELECTRONIC

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
15/393,646	29 December, 2016	EDA, TAIKI	481331US

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

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3717	20170723

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Examiner has considered the IDS filed on 7/5/17.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

PTO-90C (Rev.04-03)

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	EP 2 444 134 A1	04/25/2012	Europe		
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Singapore Office Action in Application No. 11201602230Q dated June 15, 2017, 11 pages
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	07/23/2017

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LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

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	AO	EP 2 444 134 A1	04/25/2012	Europe		
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	AQ					
	AR					
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	AW	Singapore Office Action in Application No. 11201602230Q dated June 15, 2017, 11 pages
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	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

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A63F 13/12 *(2006.01)*

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(71) Applicant: **Travian Games GmbH**
80807 München (DE)

(72) Inventor: **Feige, Oliver**
80807 München (DE)

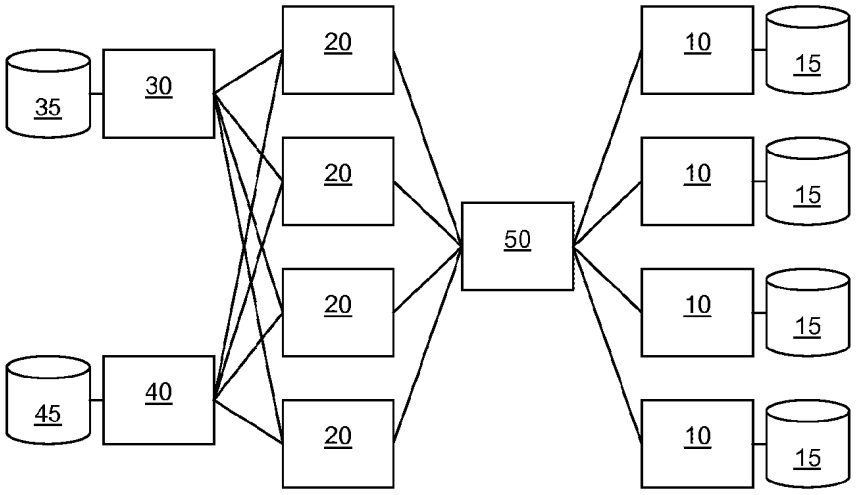
(74) Representative: **Wegner, Hans**
Bardehle Pagenberg
Prinzregentenplatz 7
81675 München (DE)

(54) Methods, server system and browser clients for providing a game map of a browser-based online multi-player game

(57) The present invention concerns a method for displaying a game map (100) of a browser-based online multi-player game, wherein each browser client (10) displays only a selectable portion of the game map (100) and wherein the game map (100) is modified by actions of a plurality of players of the game, the method comprising the following steps:

a. performing at least one game action by a first browser client (10) of a first player that leads to a modification on the game map (100); and
b. upon changing a selection of the game map (100) to be displayed by a second browser client (10) of a second player, updating at least the selected portion of the game map (100) to reflect the modification for display at the second browser client (10).

Fig. 2



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Description

1. Technical Field

[0001] The present invention refers to methods, a server system and browser clients for providing a game map of a browser-based online multi-player game.

2. The Prior Art

[0002] In the field of computer games, browser-based online multi-player games are known, wherein a plurality of players (e.g. more than 10,000) each use a web browser (e.g. Microsoft Internet Explorer, Mozilla Firefox, Google Chrome or Apple Safari) on a client computer to simultaneously participate in a computer game that is hosted on one or more server computers. The servers and clients are typically distributed over a wide geographic area (e.g. spanning different continents) and communicate over networks such as the internet. Importantly, in browser-based online multi-player games, the front-end for the player is formed only by a standard web browser present on the client computer. Contrary to other types of games, browser-games do not require the player to use any dedicated software or hardware, as is the case e.g. in console games for special gaming consoles such as playstation or Xbox and common computer games.

[0003] In certain types of games, e.g. combative strategy games, a portion of a shared game map is displayed within the web browsers of the respective client computers. In order to participate in the game, the players may move characters, armies, or the like on the map and may also manipulate the map itself (e.g. by building houses, lumbering forests, or the like). Such types of games are typically played simultaneously by tens of thousands of players, wherein actions by distinct players are considered simultaneous (in the context of transaction-less protocols that are typically used in internet communication), if the players have sent a request to the server within a short time interval. In this context, it is important to ensure that when a certain player performs an action leading to a change on the game map, all other players see the most up-to-date version of the map on their respective browser clients. However, this issue is especially difficult in multi-player online games due to the vast amount of actions performed by the players and the resulting updates to the game map. Further, the game map typically comprises a plurality of graphics representing the individual elements on the map. Due to the size of such graphics, an efficient provision of the map data to the vast amount of clients is necessary in order to keep the required network bandwidth to a minimum.

[0004] Known browser-based computer games typically support displaying a cut-out of the entire game map in each player's browser displaying a detailed view of a portion of the playing field, as well as an overview map, wherein the overview map is a greatly simplified representation of the playing field (e.g. by displaying only rectangles of different colour). Typically, the game map is divided into a number of playing fields and each field is overlaid with a graphic that represents one particular element, e.g. a village, a forest, etc.. Due to this 1-to-1 relationship between map elements and fields, only very simple game maps can be displayed. In particular, such known game maps do not support an efficient zooming functionality, since such zooming would lead to inacceptable performance. For example, an exemplary portion of a common game map of 20 x 15 fields would require 300 graphics. If one would zoom out of such a 20 x 15 portion, e.g. in order to display 40 x 30 fields, this would quadruple the amount of graphics to be rendered to 1,200. If further, each field was to be rendered by three graphics layered on top of each other, this would result in 3,600 graphics to be rendered. However, in a variety of standard browsers conventionally employed by computer game players, rendering such vast amounts of graphics would lead to inacceptable performance or is even impossible without additional plugins installed in the browser. This is particularly an issue in browser-based online multi-player games using a game map as shared playing field, where it is crucial that each player has up-to-date information about how the other players operate on the game map. An efficient updating of the map for all players, however, is hardly possible due to the above-described large amount of graphics involved.

[0005] In the prior art, it is known to display static maps (i.e. maps that cannot be edited by the user) within web browsers, e.g. in products such as Google Maps (http://maps.google.com/). Further, there are products that build upon Google Maps and enrich the provided static map with dynamic information on the client. One example is Traintimes (http://traintimes.org.uk/map/tube/), which provides a live view of all London underground railways on top of a map provided by Google Maps using a respective application programming interface (API). However, the user has no possibility of manipulating the map material itself, or of adding his own information to the map.

[0006] It is therefore the technical problem underlying the present invention to more efficiently provide a game map of a browser-based online multi-player game, thereby at least partly overcoming the above explained disadvantages of the prior art.

3. Summary of the Invention

[0007] This problem is according to one aspect of the invention solved by a method for displaying a game map of a browser-based online multi-player game, wherein each browser client displays only a selectable portion of the game map and wherein the game map is modified by actions of a plurality of players of the game. In the embodiment of claim 1, the method comprises the steps of:

a. performing at least one game action by a first

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browser client of a first player that leads to a modification on the game map; and

b. upon changing a selection of the game map to be displayed by a second browser client of a second player, updating at least the selected portion of the game map to reflect the modification for display at the second browser client.

[0008] Accordingly, each time one of a vast plurality of game players (possibly one of tens of thousands) performs a game action that leads to a modification on the shared game map, all other players receive the update at their respective browser clients and can thus display the most up-to-date game map information. The updating comprises updating at least the selected portion of the game map displayed at the respective browser client, which may comprise updating only the displayed selected portion, updating the displayed selected portion plus a "pre-load area" around the selected portion (e.g. one or more rows of map tiles surrounding the selected portion), or the entire game map. Thus, the method ensures real-time in a browser-based online multi-player game, in that it is guaranteed that all browser clients see the most current map information at all times.

[0009] However, applicant has found that updating a game map automatically each time one of the possibly thousands of players triggers a modification thereon would lead to inacceptable performance due to the vast amount of activity in modern multi-player browser games. Therefore, the browser clients are in the above embodiments only provided with the updated map information upon specific request, i.e. when a selection of the game map to be displayed by the respective browser client is detected. Since the updating is thus triggered by the individual browser clients ("client pull"), the updating requires less processing resources as e.g. compared to a conventional updating of all browser clients that is triggered by the server ("server push").

[0010] Further, the embodiment of claim 2 concerns a method for providing a game map of a browser-based online multi-player game, wherein each browser client displays only a selectable portion of the game map and wherein the game map is modified by actions of a plurality of players of the game, the method comprising the following steps:

a. detecting at least one game action performed at a first browser client (10) of a first player that leads to a modification on the game map (100); and

b. upon detecting a change of a selection of the game map (100) to be displayed by a second browser client (10) of a second player, providing an update of at least the selected portion of the game map (100) to reflect the modification for display at the second browser client (10).

[0011] Accordingly, this embodiment concerns the server-side method steps, while the embodiment of claim 1 is directed to the client-side method steps.

[0012] In both embodiments, the step of updating (or providing an update of, respectively) at least the selected portion of the game map may be performed in response to the second player scrolling the portion of the game map displayed on the second browser client. Additionally or alternatively, the step of updating (or providing an update of, respectively) at least the selected portion of the game map may be performed in response to the second player zooming in or out of the portion of the game map displayed on the second browser client. Accordingly, the update is performed at the time when the player anyway wants to change the visible portion of the game map. In a preferred embodiment of the present invention, scrolling is possible in a continuous manner, i.e. on a pixel basis, and zooming is possible in an array of predetermined zoom levels. However, also continuous zooming may be provided.

[0013] Further, the at least one game action that leads to a modification on the game map may comprise creating a common marking on the game map and wherein the common marking is hidden on the updated game map of the second browser client, if the second player does not belong to a predetermined group. A common marking is a marking that is intended to be visible by all players of the game belonging to the same group. A common marking may be created by one of the players on a respective browser client and / or by the at least one server (e.g. an "adventure" marking that represents a server-generated quest to be solved by the players of the game).

[0014] In yet another aspect, the above client-side methods may comprise the steps of scrolling the selected portion of the game map by the second browser client; and if the selected portion approaches a border of the game map, the second browser client shifting a part of the game map that is no longer visible to the opposite side of the game map, so that it is visible beyond the border of the game map. Accordingly, when a portion of the map within the area visible inside the client's browser is not visible anymore because the player has scrolled the game map, the now invisible map portion is moved to the opposite border of the game map. Thus, the player has the impression of an "endless" game map, although the actual amount of stored map portions is finite.

[0015] In a further aspect of the present invention, the above server-side methods may comprise the following steps: receiving by at least one web server a request from the second browser client for updating at least the selected portion of the game map; generating by the at least one web server static map data for at least the selected portion of the game map, wherein the static map data is not affected by any game action; generating by the at least one web server dynamic map data for the game map, wherein the dynamic map data is affected by the game action; sending the static and the dynamic map data from the at least one web server to the second

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browser client for assembly at the second browser client to generate the updated selected portion of the game map. Accordingly, the aspect defines a particularly efficient approach for delivering map information to a plurality of browser clients of a browser-based online multiplayer game. The map information to be provided to the clients is split into at least two parts, depending on the nature of the game map. More specifically, static map data that is the same for all clients (and preferably determined by the web server, e.g. topologic elements such as forests, lakes, mountains, villages, etc.) are generated at the web server independently of dynamic map data, which is specific to the requesting client (and preferably determined by the respective client, e.g. markings, flags, etc.). Static map data may be map data which is completely static, i.e. it never changes during the course of a game, or map data which changes only very rarely (e.g. when building a new village, which is a game action that occurs only infrequently), whereas dynamic map data changes more frequently. Due to the splitting of static and dynamic map data, the static and dynamic map data can be generated at the web server and delivered to the browser client independently, i.e. in any order, or even in parallel, leading to a particularly efficient provision of the browser client(s) with the map data. Further, the splitting between static and dynamic map data allows for a particularly efficient caching of the map data, as will be apparent from the following description.

[0016] Further, the method may comprise the further step of storing the generated static map data in a cache that is accessible to the at least one web server. Accordingly, the web server may reuse the cached static map data for future requests for the same portion of the game map, thereby avoiding the need for generating the static map data each time anew and thus saving processing resources at the web server.

[0017] Preferably, the generated dynamic map data is not stored in the cache accessible to the at least one web server. Applicant has found that dynamic map data typically changes very frequently and thus caching such dynamic map data would be very expensive, since the cache would be outdated quite fast. As a result, caching the static map data (which changes only rarely), but not caching the dynamic map data provides a particularly advantageous trade-off between saving network bandwidth and needed processing resources of the web server.

[0018] The cache may be a shared cache accessible to a plurality of web servers. Accordingly, the cache may be shared across many web servers, so that if one particular web server has already generated static map data, this static map data can be reused by all other web servers. Thus, the processing load on the web servers is further minimized.

[0019] In one aspect of the above server-side methods, the method may comprise the steps of: detecting a change of a zoom level of the selected portion of the game map by the second browser client; generating by the at least one web server at least one graphic representing a part of the game map at the new zoom level; and transmitting the at least one graphic from the at least one web server to the requesting browser client. Preferably, the at least one graphic is generated with more or less detail displayed therein, depending on the zoom level. For example, when a high zoom level is selected (i.e. a large portion of the overall game map is to be displayed), the at least one graphic may comprise only static map data, whereas at a low zoom level (i.e. when a detailed view of a portion of the game map is desired), the at least one graphic may comprise both static and dynamic map data. At a "middle" zoom level, the at least one graphic may comprise only a portion of the static and / or dynamic map data. It is further noted that a given graphic generated by the at least one web server encompasses preferably a considerable portion of the game map (e.g. the entire selectable portion; see above, or multiple individual map fields; see below). As a result, the at least one browser client is provided with less graphics than if each individual map field of the game map would be rendered as an individual graphic (as is conventional in the prior art; see above), thereby increasing the efficiency of rendering the overall map to a great extent. In a preferred embodiment, the "resolution" of the map blocks, i.e. the amount of map blocks needed to render the game map is selected so that the map blocks can be rendered at the browser client without any additional browser plugins (such as Macromedia Flash), but only using the browser's standard HTML and / or JavaScript capabilities.

[0020] In one aspect of the above client-side methods, the step of updating at least the selected portion of the game map may comprise the steps of: receiving at the second browser client static and dynamic map data from at least one web server; and assembling the static and dynamic map data at the second browser client to generate the updated selected portion of the game map. Additionally or alternatively, the method may further comprise the step of storing the static map data and / or the dynamic map data received by the at least one browser client in a browser cache of the respective browser client. Accordingly, a client-side caching is provided, alternatively to or in addition to a server-side caching explained above. If a static / dynamic map data is already stored in the browser cache, there is no need anymore to request the data from the web server, so that the network bandwidth usage is minimized to a great extent.

[0021] The present invention is further directed to a server system for providing a game map of a browser-based online multi-player game to a plurality of browser clients, the server system being adapted to perform any of the above server-side methods. Further, a plurality of browser clients is provided for displaying a game map of a browser-based online multi-player game, the browser clients being adapted to perform any of the above client-side methods. It will be appreciated that both the server system and the plurality of browser clients may be pro-

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vided in hardware, software, computer programs, or any combination thereof.

4. Short Description of the Drawings

[0022] In the following detailed description, presently preferred embodiments of the invention are further described with reference to the following figures:

Fig. 1a: A schematic view of a game map according to an embodiment of the invention;

Fig. 1b: A schematic view of different zoom levels according to an embodiment of the invention;

Fig. 1c: An exemplary map with landscape elements according to an embodiment of the invention;

Fig. 2: An exemplary system according to an embodiment of the invention;

Fig. 3: A diagram illustrating the operation of a system according to an embodiment of the invention with no caching;

Fig. 4: A diagram illustrating the operation of a system according to an embodiment of the invention with server-side caching;

Fig. 5: A diagram illustrating the operation of a system according to an embodiment of the invention with client-side caching;

Fig. 6: An example of a layered map block according to an embodiment of the invention;

Fig. 7: An example of block shifting at the browser client according to an embodiment of the invention;

Fig. 8: An example of a layered block comprising static map data according to an embodiment of the invention;

Fig. 9: An example of mapping a requested area (the selectable portion of the game map displayed at the browser client) onto the inner area of a game map according to an embodiment of the invention;

Fig. 10: An exemplary code listing for requesting a map block picture according to an embodiment of the invention;

Fig. 11: An example of a picture comprising dynamic map data according to an embodiment of the invention;

Fig. 12: An exemplary code listing "getBlocksContaining" according to an embodiment of the invention;

Fig. 13: An exemplary code listing "TGLockedMapBlockRenderer" according to an embodiment of the invention;

Fig. 14: An exemplary code listing "getBlockId" according to an embodiment of the invention;

Fig. 15: An exemplary code listing "splitRectIntoInnerRects" according to an embodiment of the invention; and

Fig. 16: An exemplary sequence of steps performed by an embodiment of the invention when updating map data.

5. Detailed Description

Map layout

[0023] In the following, a presently preferred embodiment of the invention is described with respect to a game map 100 as schematically shown in Fig. 1a. As can be seen, the map 100 comprises a plurality of map tiles 105, which are arranged as a grid. The exemplary game map 100 in Fig. 1a comprises 9x9 map tiles 105 with coordinates -4, ..., 0, ..., +4 in x- and y-direction. As indicated by the dashed arrows, the game map is repeated at its borders in horizontal and vertical direction, i.e. the map tile coordinate (5/-5) corresponds to (-4/4). Thus, although the game map 100 actually only has a finite number of map tiles 105, the player conceives the game map 100 as "infinite". It should be appreciated that the exemplary game map 100 in Fig. 1a is extremely simplified and that much larger game maps 100 are possible, including edge lengths of thousands of map tiles 105. In a preferred embodiment, the game map 100 comprises 801 x 801 map tiles 105. In the following, the entirety of map tiles of a game map is referred to as the "inner area" of the game map, whereas a map tile with coordinates extending beyond the inner area (see above) belongs to the so-called "outer area" of the game map.

[0024] The individual map tiles 105 may be grouped into map blocks 110 of different sizes, as indicated by the bold rectangles in Fig. 1a. Preferably, a map block 110 is comprised of complete map tiles 105, i.e. a map block rectangle extends around the outer borders of the map tiles it encompasses. The map blocks 110 may extend over the border of the game map 100.

[0025] Depending on the zoom level, a map block 110 may comprise a different amount of map tiles 105, as exemplarily shown by the three map blocks 110 in Fig. 1a. When displayed (rendered) within a client computer's browser, each map block 110 preferably has the same size in pixels and the size of the contained map tiles 105

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is scaled to fit the map block size (cf. Fig. 1b), so that the required amount of HTML elements stays constant at the client. In the example of Fig. 1b, a map block 110 encompasses 1 map tile 105 at zoom level o, 3 x 3 map tiles 105 at zoom level 1 and 6 x 6 map tiles 105 at zoom level 2. In a preferred embodiment, each map block 110 is rendered as one picture (preferably comprising a number of layers for the static and dynamic map data, as well as for displaying further additional information), which is far more efficient than rendering each individual map tile 105 as an individual picture (see further below). In a preferred embodiment, the graphics are generated by the web server in a format that allows displaying them at the browser client(s) without any additional browser plugins (such as Macromedia Flash), but only with standard HTML- and JavaScript capabilities.

[0026] Fig. 1c shows a portion of an exemplary game map 100 with a variety of displayed map data 35 that represent the topology of the playing field. As can be seen, the map data 35 may comprise landscape elements, such as trees, forests, mountains, lakes, villages, oases, and the like. These are examples of static map data, which is player-independent and may be subject to server-side and / or client-side caching (see further below). As already explained further above, static map data changes only very rarely.

[0027] The game map 100 may further comprise dynamic map data that is player-dependent and preferably only subject to client-side caching. Examples of dynamic map data are player markings, coloured borders around villages, flags created by a player, or adventure icons that are created by the web server and editable by the players (not shown in Fig. 1c). The dynamic data thus changes more frequently than the static map data.

Hardware / software infrastructure

[0028] Fig. 2 shows a system according to an embodiment of the present invention. One or more browser clients 10 each hosting a web browser (not shown in Fig. 2) serve as endpoints for the players wanting to participate in the game. Generally, any device capable of providing web browser functionality may serve as a client 10, such as a desktop computer, laptop, PDA, mobile phone, or the like.

[0029] One or more web servers 20 take requests from the client(s) 10 and generate graphics (hereinafter also referred to as "images" or "pictures"), which are then assembled to a game map 100 at the client(s) 10. The web servers 20 are independent of each other and web servers may be added or removed during runtime. In the following, the client(s) 10 and web server(s) 20 will be referred to in the singular form for the sake of simplicity. However, it will be appreciated that the present invention may be used with any amount of clients and servers.

[0030] The web server 20 and client 10 may communicate with each other via an optional load balancer 50, which distributes client requests among the web servers 20 (e.g. equally in a round robin fashion, or depending on the current workload of the individual web servers 20).

[0031] Each web server 20 receives the map data 35 needed for generating the map 100 from one or more database server(s) 30. Currently preferred is an embodiment with one central database server 30 (as shown in Fig. 2), e.g. a MySQL server, which hosts the complete map data 35. Further, each web server 20 may have access to a cache 45, e.g. via a cache server 40 (such as a memcache; cf. Fig. 2). Additionally or alternatively, at least some of the web servers 20 may comprise a storage means (such as a hard drive; not shown in Fig. 2) serving as a local cache 45.

Operation of exemplary embodiments

[0032] In the following, the operation of exemplary embodiments of the present invention in various scenarios will be described in more detail.

[0033] Fig. 3 shows a scenario wherein the client 10 requests a map block 110 of the game map 100 that is neither cached at the client 10 nor at the web server 20. As can be seen, in step s1, the client 10 requests the map block 110 from the web server 20. In step s2, the web server 20 obtains a list of markings within the visible area (i.e. the "selectable portion" displayed at the requesting browser client 10) from the database server 30. The list of markings may comprise dynamic map information that is provided to the at least one browser client 10 separately from the static and dynamic map data (see below). The web server 20 generates a container / placeholder for the requested map block 110 (preferably HTML/JavaScript code). The container, which does not comprise any map blocks 110 yet) is then returned to the client 10. In step s3, the client 10 (preferably via the received container, e.g. the JavaScript code) requests static map block(s) 110 from the web server 20 in order to fill the empty container. In step s4, the web server 20 obtains the global map block version number from the database server 30 (which is initially created by the database server 30). In step s5, the web server 20 obtains the local map block version number from the cache 45 (either via the separate cache server 40 or from a local cache 40, e.g. a hard drive of the web server 20). The local map block version number is preferably created by the at least one web server 20 and corresponds to the global map block version number. In step s6, the web server 20 calls a function for generating a graphic comprising the static map data 35 (cf. Fig. 8). In step s7, the necessary static map data 35 is obtained from the database server 30. The web server 20 then generates the picture comprising the static map data 35. In step s8, the web server 20 stores the generated graphic and the corresponding map block version number in the cache 45 (e.g. the web server's local cache or the cache accessible via the cache server 40). The web server 20 then delivers the graphic to the client 10, which places it into the container received beforehand. In step s9, the client 10 (e.g.

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via the JavaScript code) requests the dynamic map data 35 from the web server 20. In step s10, the web server 20 calls a function for generating a dynamic map block. In step s11, the web server 20 obtains the dynamic map data from the database server 30. The web server 20 generates a picture comprising the dynamic map data and delivers it to the client 10, which places it into the container, on top of the static graphic received beforehand. In step s12, the client 10 (e.g. via the JavaScript code) requests additional information (e.g. tooltips, flags, etc.) from the web server 20. The web server 20 obtains the requested information from the database server 30 and returns it to the client 10, preferably coded in JavaScript Object Notation (JSON). It will be appreciated that the above sequence of steps is only one of a wide variety and that the static and dynamic map data as well as the additional information may be requested by the browser client and delivered by the web server in any order, or even in parallel.

[0034] Fig. 4 shows a scenario wherein the client 10 requests a map block 110 of the game map 100, wherein the graphic representing the map block 110 is already cached at the web server 20. As can be seen, steps s1 to s5 correspond to the steps explained above in connection with Fig. 3. After having obtained both the global and the local map block version number, the web server 20 determines that both versions match and thus delivers the picture that is already cached at the web server 20 to the client 10. The database server 30 is not accessed in this case ad steps s6 to s8 shown in Fig. 3 are omitted. The subsequent steps s9 to s13 correspond to those shown in Fig. 3.

[0035] Fig. 5 shows a scenario wherein the client 10 requests a map block 110 of the game map 100, wherein the graphic representing the map block 110 is already cached at the client 10. As can be seen, steps s1 to s4 correspond to the steps explained above in connection with Fig. 3. Then, the web server 20 determines that the ETag provided by the client 10 matches the global map block version number. Thus the web server 20 instructs the client 10 to use the graphic that is already cached at the client 10. The subsequent steps s9 to s13 correspond to those shown in Fig. 3.

Client(s) 10 / web browser(s)

[0036] Map Layout: The game map 100 is preferably generated (rendered) at the client 10 based on the map data 35 provided by the web server 20, preferably with a constant amount of map blocks 110. As shown in Fig. 6, each map block 110 (and thus also each map tile 105) is preferably assembled in a layered fashion, with a layer 105a comprising static map data that changes only rarely, e.g. villages (see above), a layer 105b comprising dynamic map data that changes frequently, e.g. player markings (see above) and a layer 105c comprising one or more icons that change frequently. Zooming may be achieved by changing (e.g. replacing or scaling) the pictures within a map block 110, so that the client performance is independent of the zoom level.

[0037] Scrolling: Typically, a player can see only a selectable portion of the entire game map 100 during a game, i.e. only a subset of the entirety of map blocks 110 comprised in the game map 100. In Fig. 7, the area of the game map 100 that is visible to the player ("visible area" / "selectable portion") is illustrated by the bolded rectangle. When the player scrolls the game map 100, i.e. the game map 100 moves in horizontal and / or vertical direction beneath the visible area, some map blocks 110 that were within the visible area before the scrolling might escape the visible area (note the shaded map block 110a in the top picture of Fig. 4 that escaped the visible area in the middle picture). Map blocks 110 that are no longer within the player's visible area may then be shifted to the opposite side of the game map 100 (cf. the bottom part of Fig. 4, wherein the map block 110b was shifted to the left of the game map 100), thereby leading to the impression of an "infinite map". Shifted map blocks are preferably emptied and an update mechanism requests the corresponding map 35 data from the web server 20 in order to display it on the respective map blocks after they were shifted. Preferably, map blocks 110 that are closer to the visible area are updated first, so that the player does not notice the shifting. The map blocks 110 that are shifted and already loaded with new map data 35 before they enter the visible area are referred to as the "pre-load area" (cf. the bolded blocks in the bottom part of Fig. 4). The needed amount of map blocks 110 at the client 10 depends on the size of the visible area and the size of the pre-load area.

[0038] Zooming: When the player changes the zoom level, preferably all map blocks 110 are emptied, the zoom level is adjusted as desired, and all map blocks 110 are loaded with the corresponding new map data 35 at the new zoom level. This may involve generating new graphics for the respective map blocks 110 at the desired zoom level and / or scaling the graphics to fit the browser client's display settings.

[0039] Field coordinates / mouse picking: In order to display correct tooltips (i.e. detail information displayed e.g. when a player "hovers" over an element such as a village on the game map), the client has to determine on which pixel on the display means which map tile 105 is located. The client knows the pixel and field dimensions of the individual map blocks 110 and can by means of the relative pixel position within a map block 110 or multiple map blocks 110 calculate the corresponding map tile position (coordinate system change).

Web server(s) 20

[0040] The web server 20 generates the picture(s) of the game map 100 for the client 10 (i.e. the images/pictures for the static and dynamic map data 35). Further, the web server 20 may provide the client 10 with additional map data, such as icons and tooltips. Preferably,

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the web server 20 generates, per map block 110, one picture comprising the corresponding static map data and one picture comprising the corresponding dynamic map data, while the additional map data is delivered to the client separately from the picture(s) representing the static and dynamic map data.

Rendering map blocks 110

[0041] Input data: Rendering a map block 110 depends on the area to be displayed on the map (preferably in the form of "AABB" in map tiles 105, e.g. 0/1 to 60/40) and the size of the visible area (the selectable portion to be displayed at the client's browser) in pixels (e.g. 100 x 100). The zoom level is determined from these inputs. The larger the visible area at a constant area to be displayed, the lower the zoom level.

[0042] Rendering: The individual map layers are preferably generated from top to bottom and drawn into an initially empty graphic (alpha blending). Fig. 8 is an exemplary embodiment for a static map block 105, wherein the empty graphic in layer 0 is first overlaid with simple ground fields in layer 1 (e.g. grass, desert, etc.). Layer 2 adds field-spanning graphics, e.g. for displaying lakes that span multiple map tiles 105 (cf. Fig. 1c). Layer 3 adds further connected graphics (e.g. map elements that extent over multiple map tiles, such as mountains or rivers), and layer 4 finally adds the top-most elements to the game map 100, e.g. villages. The individual layers taken together then form the completely rendered graphic representing the static map data for a map block 110, as shown on the top of Fig. 8. The individual layers are preferably assembled from single colours and / or single images/pictures, respectively. The images are preferably scaled to fit the map block size, or a zoom level specific image is chosen. Also a combination of both is possible, i.e. choosing the image that fits best and scaling it to the desired size.

[0043] When a map block 110 is requested that extends beyond the border of the "inner area" of the game map (see above), the content of the requested map block is assembled from four portions of the "outer area" of the game map, wherein the "outer area" of the game map is the area that is obtained by shifting map blocks from the respective opposite side. Fig. 9 shows an example, wherein the requested area (depicted by the rectangular box in Fig. 9) is assembled from four portions of the "inner area" of the game map. Fig. 10 shows an exemplary implementation of the above-explained functionality.

[0044] Dynamic map blocks are rendered similarly as explained above, but different layers with different images and data sources may be used. In a preferred embodiment, a graphic with only one layer is generated to represent the dynamic map data of a particular map block.

[0045] Delivering static map blocks: Static map blocks (i.e. map blocks with data that is player-independent) are preferably generated by the web server 20 only when they are requested by the client 20 and temporally stored on the web server 20. Further, on the client 10, a browser cache 15 may be used for temporally storing (caching) the received map graphics, preferably by means of ETags (a special header field in HTTP 1.1). The cached graphics are preferably reused on the client 10 and / or server 20 as long as the map data does not change in the respective area. To this end, each map block 110 is assigned a unique identifier (block ID); see further below. Each block ID corresponds to a local version number (which is a snapshot of the information currently contained in the database) and a global version number (which is preferably a counter in the database that is increased each time the respective map block changes). Based on a difference between the local and global version, it can be determined whether the cached graphic is still up to date. The ETag is preferably generated from the block ID and the version of the block. Thus, the client cache functions correctly, irrespective of which web server 20 processes the request.

[0046] If the requested picture is not yet present (cached) at the web server 20 (i.e. if it is out-dated or was not yet generated), the picture is generated by the web server 20 and cached locally, together with the current version number. To this end, the web server 20 may use the locking algorithm explained further below, so that the web server 20 has to generate the pictures only once.

[0047] Since the outer blocks occur rarely within the game, the outer blocks are preferably cached only on the web server 20. However, it is also possible to cache such blocks at the client 10, e.g. by generating an ETag from the four ETags of the aligned blocks from which the picture is assembled.

[0048] Delivering dynamic map blocks: Dynamic map blocks depend on the player and / or the current map information. Thus, the respective pictures are generated at the web server 20 "on-the-fly", i.e. when needed, and are sent to the client 10, preferably without caching.

[0049] Dynamic blocks comprise information which would be too expensive to display as individual elements on the client-side, e.g. markings (such as coloured rectangles around villages; cf. Fig. 11) and which are supposed to be visible also at a zoomed-out level. Experience shows that densely populated maps comprise approximately one marking per map tile. In a visible area of 400 x 400 fields, this would result in 160,000 markings.

[0050] Rendering dynamic map blocks is similar to rendering static map blocks (see above). However, there is preferably only one layer with markings.

[0051] In one embodiment, dynamic pictures (i.e. pictures comprising dynamic map data) are not cached at the client 10. However, it is also possible to perform a client-side caching, e.g. by means of ETags, in that the ETag is generated from the global block version, the markings created by the player. It will be appreciated that ETags are only one of a wide variety of implementation alternatives and that any other technique may be used for implementing a kind of checksum for the data cached at the client.

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[0052] Invalidating generated map blocks: If a map tile 105 of the game map 100 changes so that the graphic of the corresponding map block 110 changes, the web server 20 marks the cached graphic as invalid. In this case, the global version number of all map blocks 110 that comprise the respective map tile 105 is increased. The determination of which map blocks 110 are affected is explained further below. Triggered by the change in the global version number, the web server 20 generates the graphic anew when it is requested the next time.

[0053] If multiple changes occur before a map block 110 is requested by the client 10, the map block 11ß is preferably only generated anew when the next request is received. An exemplary implementation of the respective database tables is explained further below.

Database server 30 / database 35

[0054] The database (e.g. a MySQL database) of the database server 30 (cf. Fig. 2) comprises in one embodiment the complete map data 35 and / or a table comprising the global block version numbers.

[0055] Global block version numbers: The table of global block version numbers comprises in one embodiment a field "blockId" for storing the ID of the map blocks 110 and / or a field "version" for storing the current version numbers of the map blocks 110.

[0056] Map data 35: The map data is distributed among various database tables. An efficient access is in one embodiment ensured by means of RTREEs.

Exemplary functions

[0057] Fig. 12 shows an exemplary pseudo-code listing of a function "getBlocksContaining", which serves for calculating all map blocks 110 in all zoom levels that comprise a particular map tile 105. Since the map blocks 110 are aligned and disjoint, each map tile 105 is located in exactly one map block 110 per zoom level. As can be seen in Fig. 12, the function "getBlocksContaining" takes as input two numbers x and y representing the x- and y-coordinate of the map tile 105. The function outputs a set of 4-tuples each defining one map block 110 that contains the input map tile 105. To this end, the function iterates over the available zoom levels and at each zoom level calls the helper function "getAlignedBlockContaining" (cf. Fig. 12). The latter returns a 4-tuple defining the searched map block at the specified zoom level.

[0058] Fig. 13 shows an exemplary implementation of a function "TGLockedMapBlockRenderer", which serves for attempting to acquire a lock onto the map block 110 to be generated. If the lock is obtained, the graphic for the map block 110 is generated and the lock is released thereafter. Otherwise, the process waits until the graphic is accessible, i.e. until another process that is currently generating the graphic releases it.

[0059] Fig. 14 shows an exemplary pseudo-code listing of a function "getBlockId", which takes the coordinates of the requested area as input and combines them into a 64-bit ID. 64 bit are sufficient in an embodiment of a game map 100 having 801 x 801 map tiles 105. The returned 64-bit integer is a (bijectively) unique identifier of the respective map block 110.

[0060] Fig. 15 shows an exemplary pseudo-code listing of a function "splitRectIntoInnerRects", which serves for splitting requested areas into a composition of suitable inner areas. To this end, the inner area is transformed 8 times, which results in 3 x 3 map areas (1 x inner area + 8 x outer areas). The intersections of the requested area with the different map areas and the corresponding transformations result in the composition of suitable inner areas (cf. also Fig. 9).

[0061] Fig. 16 shows an exemplary interaction scenario between the browser client(s) 10 and the web server (s) 20 when updating one or more elements on the game map 100. As can be seen in Fig. 16, in step 1000 the player acting at the browser client 10 creates a new village on the game map 100. As a result, a game logic of the browser game (e.g. located at the web server 20) increases in step 2000 the global map block version number(s) of the map block(s) 110 that are affected by this manipulation of the game map 100. It will be appreciated that creating a new village (step 1000) is only one of a variety of examples for an event that triggers a change on the game map 100. Further, the present invention is not limited to events that are triggered by the browser client 10, but also events generated by the web server 20 itself may lead to a manipulation of the game map 100 (in which case step 1000 in Fig. 16 would be omitted). As can be seen in step 3000 of Fig. 16, when the web server 20 receives the next request from a browser client 10 for updating at least the selected portion of the game map 100 displayed at the respective browser client 10, the web server 20 checks in step 4000 whether the cached version of the respective picture is still up-to-date. In the present example, it is not, since the game map 100 has changed due to the newly created village. Thus, the web server 20 generates one or more new picture(s) for the affected map blocks 110, stores the new picture(s) in the cache (step 5000) and delivers the picture(s) to the requesting browser client 10.

Claims

1. A method for displaying a game map (100) of a browser-based online multi-player game, wherein each browser client (10) displays only a selectable portion of the game map (100) and wherein the game map (100) is modified by actions of a plurality of players of the game, the method comprising the following steps:

    a. performing at least one game action by a first browser client (10) of a first player that leads to a modification on the game map (100); and

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b. upon changing a selection of the game map (100) to be displayed by a second browser client (10) of a second player, updating at least the selected portion of the game map (100) to reflect the modification for display at the second browser client (10).

2. A method for providing a game map (100) of a browser-based online multi-player game, wherein each browser client (10) displays only a selectable portion of the game map (100) and wherein the game map (100) is modified by actions of a plurality of players of the game, the method comprising the following steps:

a. detecting at least one game action performed at a first browser client (10) of a first player that leads to a modification on the game map (100); and

b. upon detecting a change of a selection of the game map (100) to be displayed by a second browser client (10) of a second player, providing an update of at least the selected portion of the game map (100) to reflect the modification for display at the second browser client (10).

3. The method of claim 1 or 2, wherein step b. is performed in response to the second player scrolling the portion of the game map (100) displayed on the second browser client (10).

4. The method of any of the preceding claims, wherein step b. is performed in response to the second player zooming in or out of the portion of the game map (100) displayed on the second browser client (10).

5. The method of any of the preceding claims, wherein the at least one game action in step a. comprises creating a common marking on the game map (100) and wherein the common marking is hidden in step b. on the updated game map (100) of the second browser client (10), if the second player does not belong to a predetermined group.

6. The method of claim 1, comprising the steps of:

- scrolling the selected portion of the game map (100) by the second browser client (10); and
- if the selected portion approaches a border of the game map (100), the second browser client (10) shifting a part of the game map (100) that is no longer visible to the opposite side of the game map (100), so that it is visible beyond the border of the game map (100).

7. The method of claim 2, wherein method step b. comprises the steps of:

- receiving by at least one web server (20) a request from the second browser client (10) for updating at least the selected portion of the game map (100);
- generating by the at least one web server (20) static map data for at least the selected portion of the game map (100), wherein the static map data is not affected by any game action;
- generating by the at least one web server (20) dynamic map data for the game map (100), wherein the dynamic map data is affected by the game action;
- sending the static and the dynamic map data from the at least one web server (20) to the second browser client (10) for assembly at the second browser client (10) to generate the updated selected portion of the game map (100).

8. The method of claim 7, comprising the further step of storing the generated static map data in a cache (45) that is accessible to the at least one web server (20).

9. The method of claim 8, wherein the generated dynamic map data is not stored in the cache (45).

10. The method of claim 8 or 9, wherein the cache (45) is a shared cache accessible to a plurality of web servers (20).

11. The method of claim 2, comprising the steps of

- detecting a change of a zoom level of the selected portion of the game map (100) by the second browser client (10);
- generating by the at least one web server (20) at least one graphic representing a part of the game map (100) at the new zoom level; and
- transmitting the at least one graphic from the at least one web server (20) to the requesting browser client (10).

12. The method of claim 1, wherein method step b. comprises the steps of:

- receiving at the second browser client (10) static and dynamic map data from at least one web server (20); and
- assembling the static and dynamic map data at the second browser client (10) to generate the updated selected portion of the game map (100).

13. The method of the preceding claim, comprising the step of storing the received static map data and / or the dynamic map data in a browser cache (15) of the second browser client (10).

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14. A server system (20) for providing a game map (100) of a browser-based online multi-player game to a plurality of browser clients (10), the server system being adapted to perform a method according to any of the preceding claims 2-5 or 7-11.

15. A plurality of browser clients (10) for displaying a game map (100) of a browser-based online multi-player game, the browser clients (10) being adapted to perform a method of any of the preceding claims 1,3 - 6,12 or 13.

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Fig. 1a

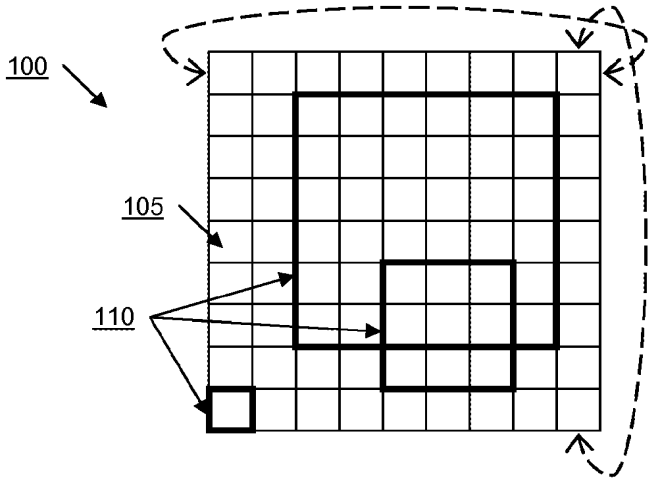

Fig. 1b

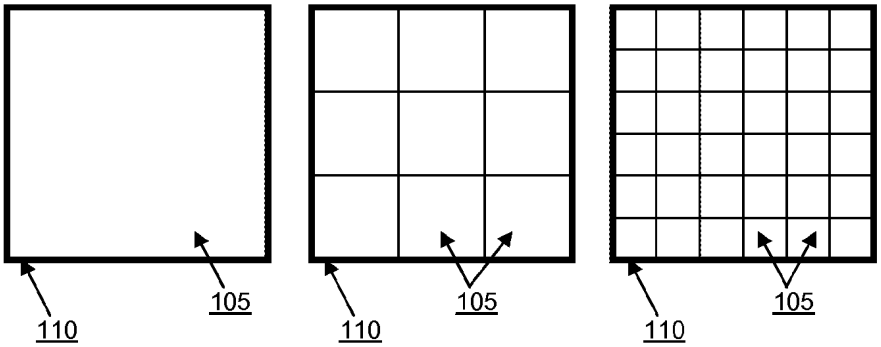

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Fig. 1c

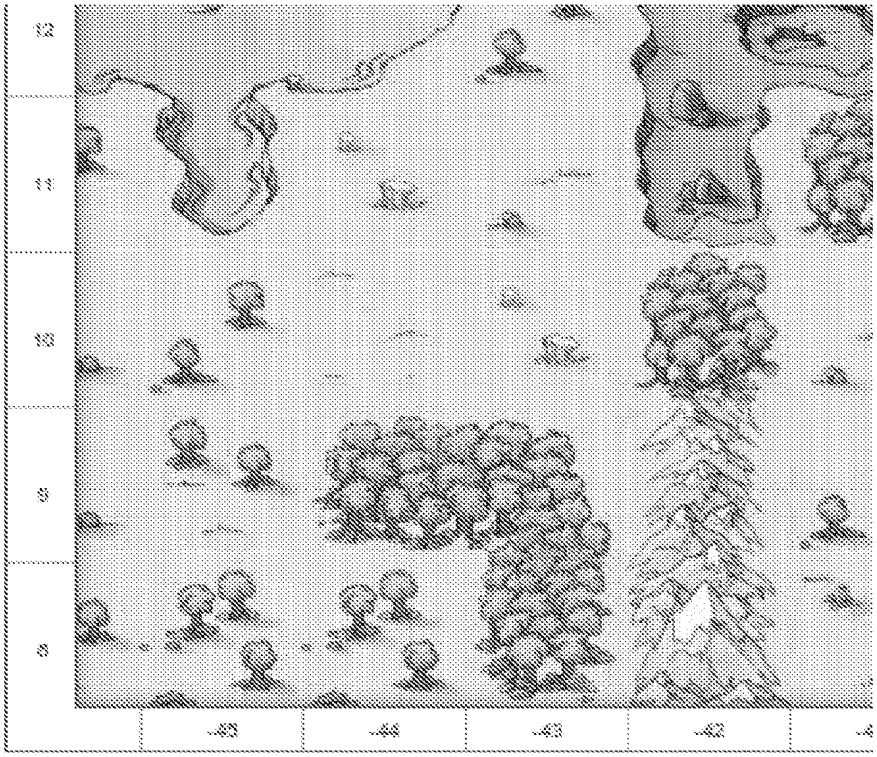

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Fig. 2

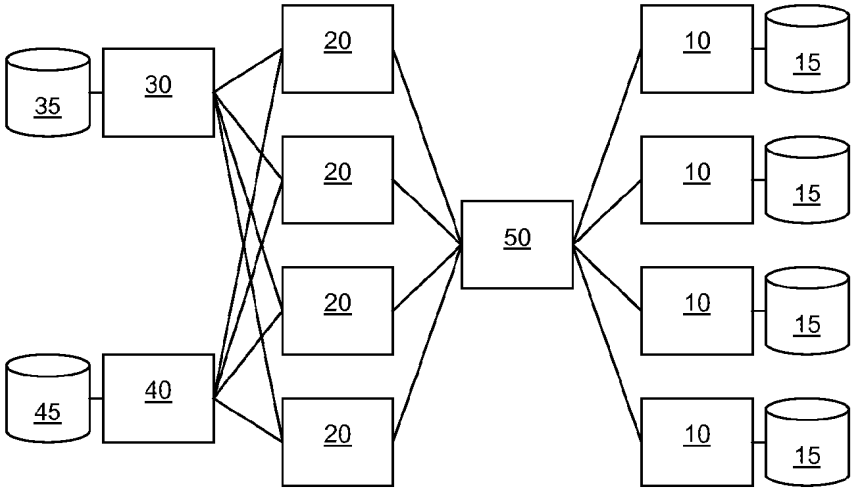

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Fig. 3

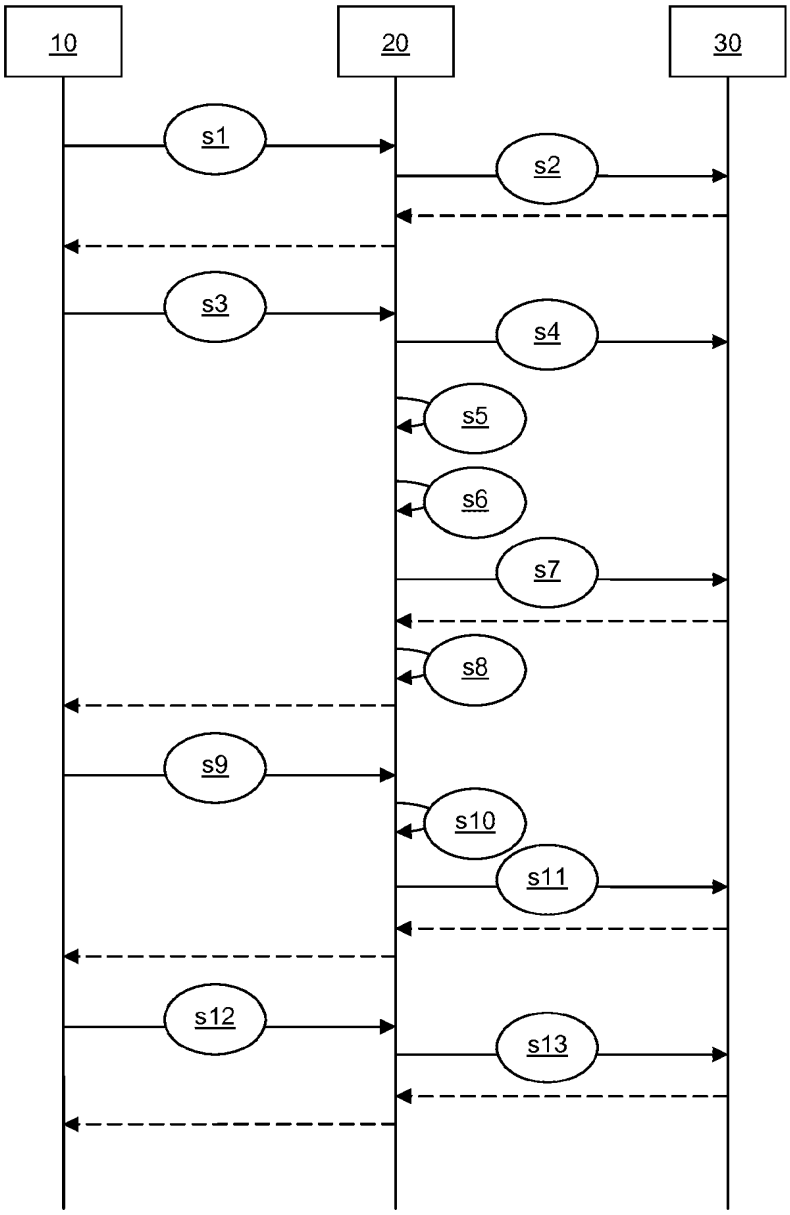

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Fig. 4

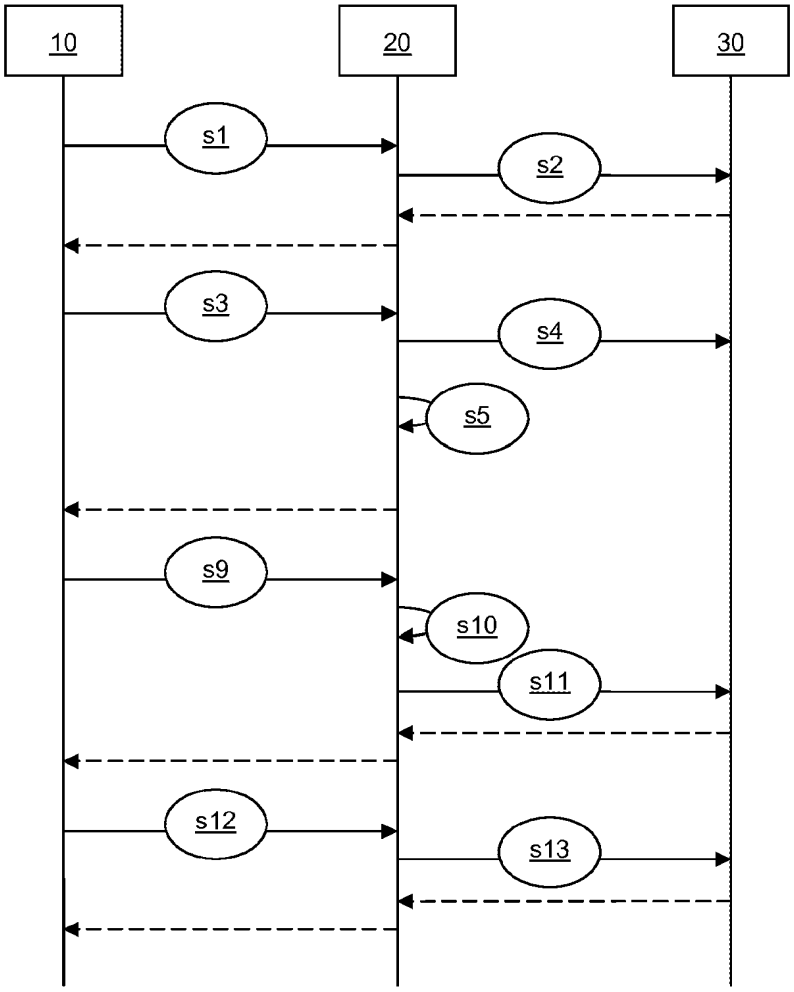

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Fig. 5

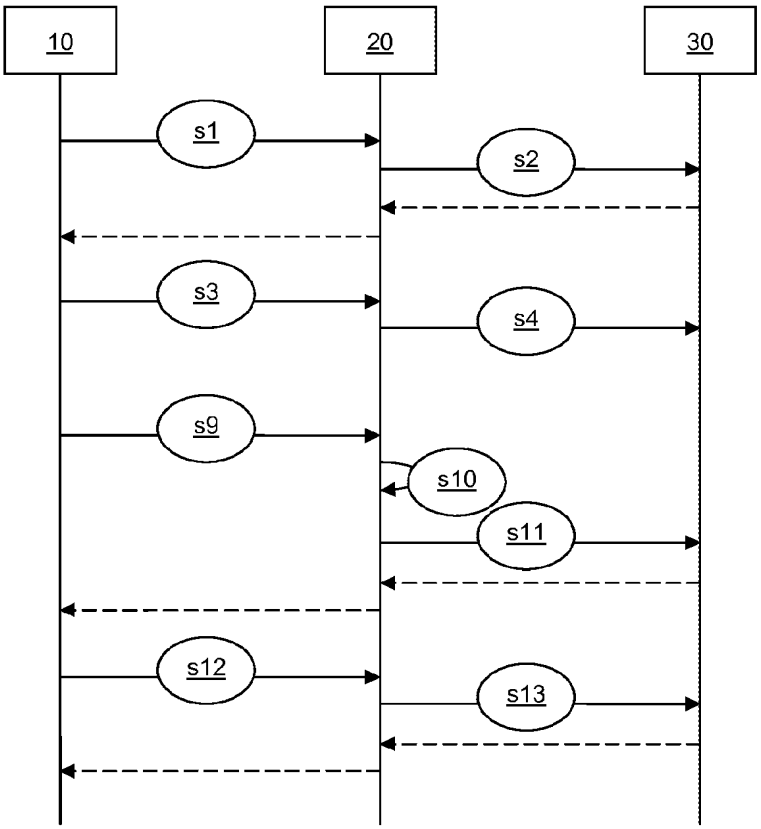

Fig. 6

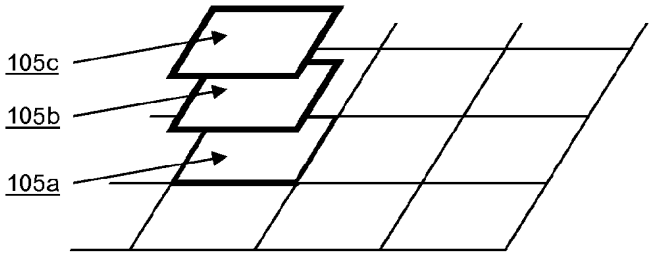

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Fig. 7

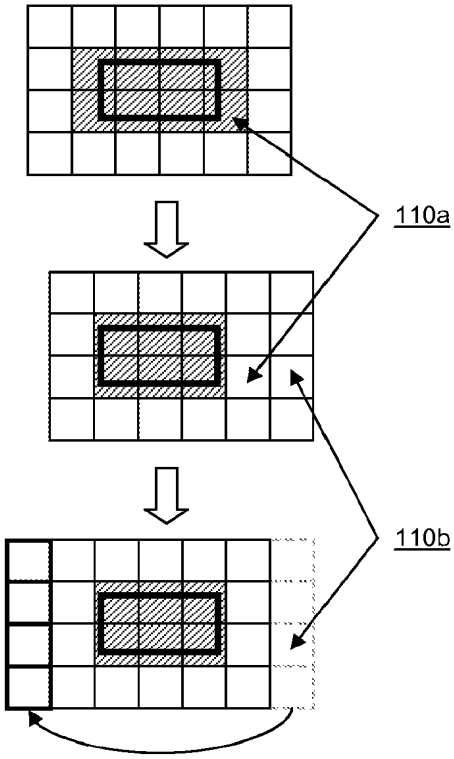

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Fig. 8

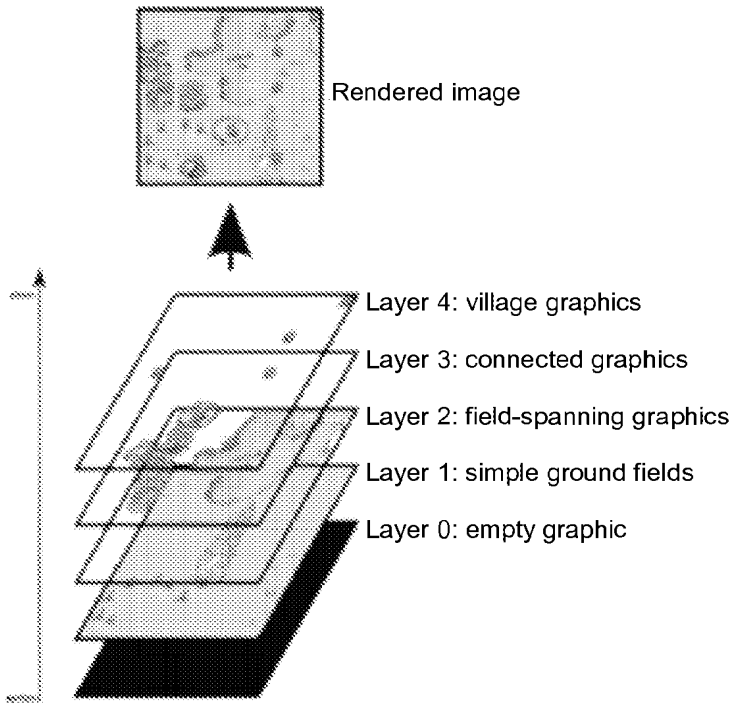

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Fig. 9

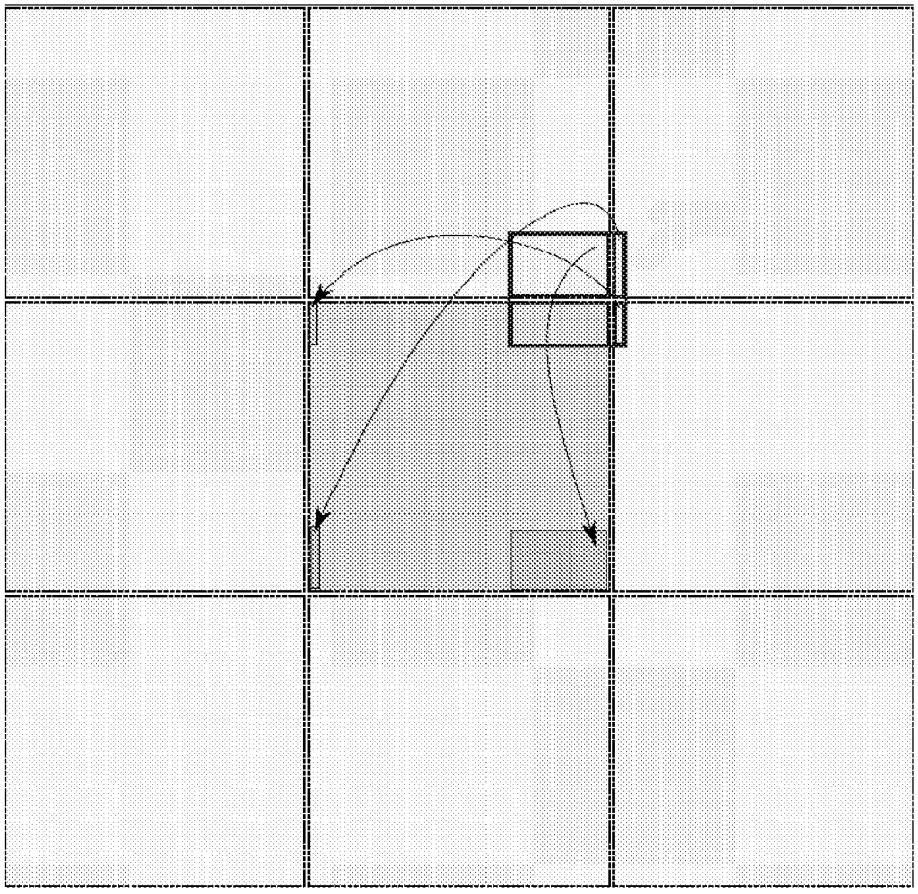

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Fig. 10

```
$area = new TGMapBlock($tx0, $ty0, $tx1, $ty1);
$cache = new TGMapBlockCacheFrontend(getMapFileCacheBackend(),
getMapBlockVersionHandling());
$generator = new TGCachedMapBlockGenerator($cache, $pathTemp);
$generator->deliverImage($area, $w, $h);
// ----------
/**
* liefert ein bild zurueck und versucht den cache maximal auszunutzen
* falls man ausserhalb des innenbereichs ist, wird der innencache in
stuecken
* wiederverwendet
*
* @param TGMapBlock $area anzuzeigender kartenbereich
* @param int $widthInPx breite in px
* @param int $heightInPx hoehe in px
*/
public function deliverImage(TGMapBlock $area, $widthInPx, $heightInPx)
{
if ($area->isAligned())
{
// aligned image
$this->deliverAlignedImage($area, $widthInPx, $heightInPx);
}
else
{
// constructed image
$image = $this->getImage($area, $widthInPx, $heightInPx);
$this->deliverGeneratedImage($image);
}
}
/**
* liefert ein am cache ausgerichtetes bild zurueck
* falls im cache vorhanden wird der cache verwendet
*
* @param TGMapBlock $area anzuzeigender kartenbereich
* @param int $widthInPx breite in px
* @param int $heightInPx hoehe in px
*/
private function deliverAlignedImage(TGMapBlock $area, $widthInPx,
$heightInPx)
{
if ($this->ignoreCache() || !$this->cacheFrontend->deliver($area))
{
$renderer = new TGLockedMapBlockRenderer($area, $widthInPx,
$heightInPx, $this->cacheFrontend, $this->tmpPath);
$image = $renderer->renderToImage();
$this->cacheFrontend->storeAndDeliverImage($area, $image);
}
}
/**
* liefert ein bild und versucht so optimal wie moeglich den cache zu
nutzen
*
* @param TGMapBlock $area anfragebereich auf der karte der dargestellt
werden soll
* @param int $widthInPx breite in px
```


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```
* @param int $heightInPx hoehe in px
* @return image
*/
private function getImage(TGMapBlock $area, $widthInPx, $heightInPx)
{
$area->normalise();
$overlapps = $area->getOverlappingAligned4Blocks();
$overlappsImage = imagecreatetruecolor($widthInPx * 2, $heightInPx *
2);
// links oben
$cacheAlignedImage = $this->generateCacheAlignedImage($overlapps[3],
$widthInPx, $heightInPx, $this->tmpPath);
imagecopy($overlappsImage, $cacheAlignedImage, $widthInPx * 0,
$heightInPx * 0, 0, 0, $widthInPx, $heightInPx);
// rechts oben
$cacheAlignedImage = $this->generateCacheAlignedImage($overlapps[2],
$widthInPx, $heightInPx, $this->tmpPath);
imagecopy($overlappsImage, $cacheAlignedImage, $widthInPx * 1,
$heightInPx * 0, 0, 0, $widthInPx, $heightInPx);
// rechts unten
$cacheAlignedImage = $this->generateCacheAlignedImage($overlapps[1],
$widthInPx, $heightInPx, $this->tmpPath);
imagecopy($overlappsImage, $cacheAlignedImage, $widthInPx * 1,
$heightInPx * 1, 0, 0, $widthInPx, $heightInPx);
// links unten
$cacheAlignedImage = $this->generateCacheAlignedImage($overlapps[0],
$widthInPx, $heightInPx, $this->tmpPath);
imagecopy($overlappsImage, $cacheAlignedImage, $widthInPx * 0,
$heightInPx * 1, 0, 0, $widthInPx, $heightInPx);
$image = imagecreatetruecolor($widthInPx, $heightInPx);
$tileW = $widthInPx / ($area->width() + 1);
$tileH = $heightInPx / ($area->height() + 1);
$h = $area->height() + 1;
// lokale koordinaten von links oben in tiles
$dx = $area->x0 - $overlapps[0]->x0;
$dy = (2 * $h) - $h - ($area->y0 - $overlapps[0]->y0);
// lokale pixelkoordinaten
$x = $tileW * $dx;
$y = $tileH * $dy;
imagecopy($image, $overlappsImage, 0, 0, $x, $y, $widthInPx,
$heightInPx);
imagedestroy($overlappsImage);
return $image;
}
```


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Fig. 11

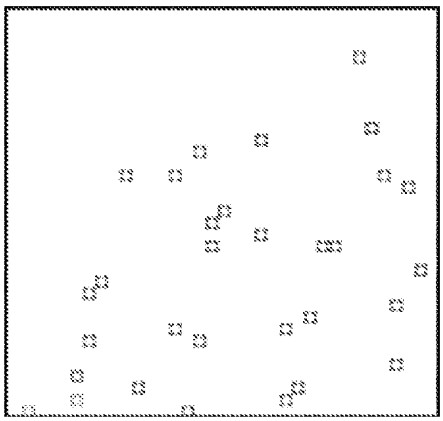

Fig. 12

```
FUNCTION: getBlocksContaining

INPUT:
  x : integer, x-coordinate of a map tile
  y : integer, y-coordinate of a map tile

OUTPUT:
  Set of [x0,y0,x1,y1] tuples, each defining one map block, wherein
x0/y0 refers to the map tile position in the top left corner and x1/y1
refers to the map tile position in the bottom right corner

BODY:
  l := {}
  FOR discreteZoomLevel FROM firstZoomLevel TO lastZoomLevel
    DO l := l UNION getAlignedBlockContaining(x, y, discreteZoomLevel)
  return l


FUNCTION: getAlignedBlockContaining

INPUT:
  x : integer, x-coordinate of a map tile
  y : integer, y-coordinate of a map tile
  discreteZoomLevel : [w,h] tuple, w=size of the map block along the x-
axis, w=size of the map block along the y-axis

OUTPUT:
  [x0,y0,x1,y1] tuple defining a map block, wherein x0/y0 refers to the
map tile position in the top left corner and x1/y1 refers to the map
tile position in the bottom right corner
```


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```
BODY:
  bx := FLOOR(x / discreteZoomLevel.w)
  by := FLOOR(y / discreteZoomLevel.h)
  bx0 := bx * discreteZoomLevel.w
  bx1 := bx0 + discreteZoomLevel.w - 1
  by0 := by * discreteZoomLevel.h
  by1 := by0 + discreteZoomLevel.h - 1
  return [bx0,by0,bx1,by1]
```

Fig. 13

```
/**
* rendert den aktuellen ausschnitt in ein image
* @return image
*/
public function renderToImage()
{
$maxTries = 10;
$maxSleepInSec = 10;
$tries = 0;
while (true)
{
$lock = $this->aquireFileLock();
if ($lock !== false)
{
// generate
$renderer = new TGMapBlockRenderer(
$this->area->x0,
$this->area->y0,
$this->area->x1,
$this->area->y1,
$this->widthInPx,
$this->heightInPx);
$image = $renderer->renderToImage();
$this->releaseFileLock($lock);
return $image;
}
else
{
// someone is generating the image so wait a bit
usleep($maxSleepInSec * 1000000 / $maxTries);
++$tries;
}
// ok, there is something wrong ... :( so deliver atlease an image
if ($tries > $maxTries)
{
// broken
return imagecreatefrompng(PATHGFX . 'broken.png');
}
// check if someone put the image into the cache
$cachedImage = $this->cacheFrontend->getImage($this->area);
if ($cachedImage !== null)
{
// waiting finished
```


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```
return $cachedImage;
}
}
}
/**
* sperre mit mutex auf dateibasis
*
* @see releaseFileLock
* @return mix false=lock fehlgeschlafen, handle=lock erfolgreich,
* muss spaeter wieder mit releaseFileLock freigegeben werden
*/
private function aquireFileLock()
{
$lockFile = $this->getLockFilename();
return aquireFileLock($lockFile);
}
/**
* sperre mit mutex auf dateibasis, entsperren
*
* @see aquireFileLock
* @param handle $handle auf ein erfolgreichen lock von aquireFileLock
*/
private function releaseFileLock($handle)
{
releaseFileLock($handle);
}
```

Fig. 14

```
FUNCTION: getBlockId

INPUT:
  block: [x0,y0,x1,y1] tuple defining a map block, wherein x0/y0 refers
to the map tile position in the top left corner and x1/y1 refers to the
map tile position in the bottom right corner
  both map axes must be of the same length in tiles

OUTPUT:
  64bit integer

BODY:
  min := smallest possible map coordinate in tiles
  bits := number of bits needed to address a tile on one axis
  p1 := (block.x0 - min) << (bits * 0)
  p2 := (block.y0 - min) << (bits * 1)
  p3 := (block.x1 - min) << (bits * 2)
  p4 := (block.y1 - min) << (bits * 3)
  return p1 + p2 + p3 + p4
```


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Fig. 15

```
FUNCTION: splitRectIntoInnerRects

NOTE:
  [x0,y0,x1,y1] intersects [x0',y0',x1',y1'] -> [x0'',y0'',x1'',y1'']
:= rectangular intersection of both input rectangles (both are axes
aligned)

  [][][] | [] = translated neighbour of the map [-400, -400, 400, 400]
  [](  )[] | () = complete/inner map [-400, -400, 400, 400]
  [][][] |

INPUT:
  rect: [x0,y0,x1,y1] tuple defining an axis-aligned rectangle (in map
tiles), wherein x0/y0 refers to the map tile position in the top left
corner and x1/y1 refers to the map tile position in the bottom right
corner
  both map axes must be of the same length in tiles

OUTPUT:
  Set of [x0,y0,x1,y1,dx,dy] tuples each defining a map block, wherein
x0/y0 refers to the map tile position in the top left corner, x1/y1
refers to the map tile position in the bottom right corner and dx/dy
refers to the corresponding shifting of map tiles to move the
respective outer block x0',y0',x1',y1' into the inner area

BODY:
  l := {}
  inner_map := [-400, -400, 400, 400]
  all_map_parts := translated neighbour UNION inner_map
  FOREACH all_map_parts AS neighbour : [n_x0, n_y0, n_x1, n_y1]
    DO i := neighbour intersects rect
       IF i IS NOT EMPTY
         DO dx := inner_map.x0 - n_x0
            dy := inner_map.y0 - n_y0
            l := l UNION [i.x0 + dx, i.y0 + dy, i.x1 + dx, i.y1 + dy,
dx, dy]
  return l
```


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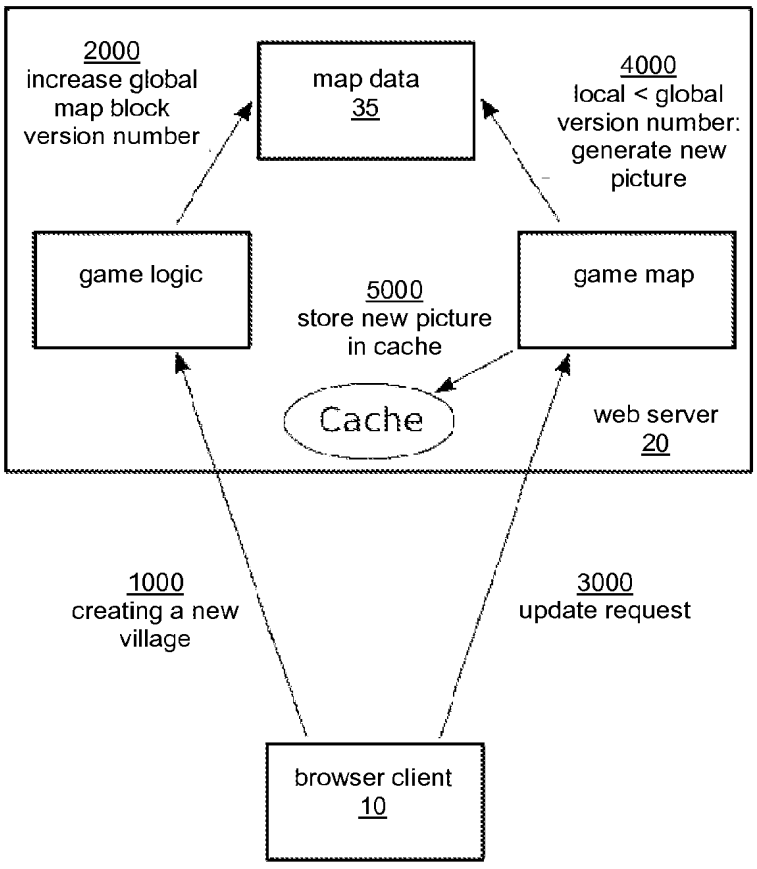
Fig. 16



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EUROPEAN SEARCH REPORT

Application Number
EP 10 18 8096

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	Anonymous: "MarkerManagerv3", Google code , May 2010 (2010-05), XP002621480, Retrieved from the Internet: URL:http://google-maps-utility-library-v3.googlecode.com/svn/tags/markermanager/1.0/docs/reference.html [retrieved on 2011-02-09] * the whole document * -----	1-15	INV. A63F13/12
Y	Anonymous: "Marker Manager Examples", Google code , May 2010 (2010-05), XP002621507, Retrieved from the Internet: URL:http://google-maps-utility-library-v3.googlecode.com/svn/tags/markermanager/1.0/docs/examples.html [retrieved on 2011-02-09] * the whole document * -----	1-15	
T	Björn Brala: "MarkerManager 1.0: Manage Your Markers In V3", Google Geo Developers Blog , May 2010 (2010-05), XP002621481, Retrieved from the Internet: URL:http://googlegeodevelopers.blogspot.com/2010/04/markermanager-10-manage-your-markers-in.html [retrieved on 2011-02-09] * the whole document * ----- -/--		TECHNICAL FIELDS SEARCHED (IPC) A63F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	20 September 2011	Ruf, Andreas

CATEGORY OF CITED DOCUMENTS

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Application Number
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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 2005/270311 A1 (RASMUSSEN JENS E [US] ET AL RASMUSSEN JENS EILSTRUP [US] ET AL) 8 December 2005 (2005-12-08) * paragraph [0108] - paragraph [0134]; figures 7-10,14-18 * * paragraphs [0101] - [0107] * -----	13	
Y	Tsai, Cheng, Chen, Fan: "Paraworld: A GPS-Enabled Augmented Reality Gaming System", UCLA Computer Science Departement , 2008, page 10 PP, XP002621482, Retrieved from the Internet: URL:http://www.seas.ucla.edu/~chienchi/reports/ParaWorldFinal_pp.pdf [retrieved on 2011-02-09] * section 2.5.1 * -----	6-13	
Y	Barry Levine: "Monopoly Streets Game Runs on Top of Google Maps", NewsFactor , 9 September 2009 (2009-09-09), XP002621483, Retrieved from the Internet: URL:http://www.newsfactor.com/story.xhtml?story_id=021002DT2EGF [retrieved on 2011-02-09] * the whole document * ----- -/--	1-5,7, 11-15	TECHNICAL FIELDS SEARCHED (IPC)

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
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Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
T	Anonymous: "Google Maps API family", Google code , 2010, XP002621484, Retrieved from the Internet: URL:http://code.google.com/apis/maps/index.html [retrieved on 2011-02-09] * the whole document *		
Y	Anonymous: "RPG Game for Google Maps", Google Maps Mania , 11 September 2009 (2009-09-11), XP002621485, Retrieved from the Internet: URL:http://googlemapsmania.blogspot.com/2009/09/rpg-game-for-google-maps.html [retrieved on 2011-02-09] * the whole document *	1-15	
T	Anonymous: "Articles and Reviews", Parallel Kingdom , 13 July 2010 (2010-07-13), XP002621508, Retrieved from the Internet: URL:http://www.parallelkingdom.com/Press.aspx [retrieved on 2011-02-09] * the whole document *		TECHNICAL FIELDS SEARCHED (IPC)
Y	US 4 972 319 A (DELORME DAVID M [US]) 20 November 1990 (1990-11-20) * column 24, line 14 - line 23 *	6	

-/--

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	20 September 2011	Ruf, Andreas

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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	Anonymous: "Google Maps JavaScript API V3", Google code , May 2010 (2010-05), pages 1-12, XP002659460, Retrieved from the Internet: URL:http://code.google.com/apis/maps/documentation/javascript/maptypes.html [retrieved on 2011-09-20] * p. 12, "//wrap tiles horizontally" *	6	
Y	Andy, et.al: "?Can you loop a terrain, to make it never ending?", Unity Answers , 24 March 2010 (2010-03-24), XP002659461, Retrieved from the Internet: URL:http://answers.unity3d.com/questions/13747/can-you-loop-a-terrain-to-make-it-never-ending.html [retrieved on 2011-09-20] * the whole document *	6	
Y	US 7 426 436 B1 (VAN WATERMULEN DOUGLAS M [US] ET AL) 16 September 2008 (2008-09-16) * column 2, line 61 - column 3, line 23 * * column 5, line 2 - line 8, * * column 5, line 42 - column 6, line 14 * * column 6, lines 26ff,55 - line 67 * * column 9, line 57 - line 65 * * column 10, line 25 - line 42 *	7-10	TECHNICAL FIELDS SEARCHED (IPC)
Y	US 2009/160873 A1 (KEW MATTHEW E [US] ET AL) 25 June 2009 (2009-06-25) * paragraphs [0095] - [0107]; figures 15,16 *	7-10	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	20 September 2011	Ruf, Andreas

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

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Europäisches Patentamt
European Patent Office
Office européen des brevets

Application Number
EP 10 18 8096

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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Exhibit 1002
Page 847

Europäisches Patentamt
European Patent Office
Office européen des brevets

LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 10 18 8096

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5, 7, 11-15

   Refresh of mash-up display comprising static and dynamic map data

   ---

2. claim: 6

   Wrapping of tiled maps

   ---

3. claims: 8-10

   Caching of map data

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Exhibit 1002
Page 848

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 18 8096

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-09-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005270311 A1	08-12-2005	US 2008291205 A1	27-11-2008
		US 2006206264 A1	14-09-2006
		US 2006139375 A1	29-06-2006
		US 2007096945 A1	03-05-2007
		US 2010201707 A1	12-08-2010
		US 2011137766 A1	09-06-2011
US 4972319 A	20-11-1990	EP 0436263 A1	10-07-1991
US 7426436 B1	16-09-2008	US 7010426 B1	07-03-2006
		US 6604046 B1	05-08-2003
US 2009160873 A1	25-06-2009	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

Supercell
Exhibit 1002
Page 849

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Bradley Davis Lytle/Sandra Miles
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	29687097
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	05-JUL-2017
Filing Date:	29-DEC-2016
Time Stamp:	12:54:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$180
RAM confirmation Number	070517INTEFSW12551000
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	5489098 11b29d00e38895807ad7ed855e48478125b20080	yes	47

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Non Patent Literature	3	13
	Foreign Reference	14	47

Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30652 c842cb4e3d95f7a7c19f4f1106124b4bca84303e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	5519750		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

- ■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).
- ■ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this information disclosure statement. 37 C.F.R. 1.704(d) And, each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1)
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 06/12/2017

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

NOTIFICATION DATE	DELIVERY MODE
06/12/2017	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
tfarrell@oblon.com

UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office
Address : COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
15/393,646	29 December, 2016	EDA, TAIKI	481331US

		EXAMINER	
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314		MASUD AHMED	
		ART UNIT	PAPER
		3717	20170607

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Examiner has considered the IDS submitted on 5/10/17.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

PTO-90C (Rev.04-03)

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	US 2011/0319170 A1	12/29/2011	Shimura et al.			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	EP 1 574 238 A1	09/14/2005	Europe	X	
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Partial Supplementary European Search Report Application No.14848832.3, dated April 19, 2017, 8 pages
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	06/07/2017

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22850 7590 05/17/2017

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

DATE MAILED: 05/17/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	08/17/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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Exhibit 1002
Page 859

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

22850 7590 05/17/2017
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

TITLE OF INVENTION: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	08/17/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
AHMED, MASUD	3717	463-031000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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Exhibit 1002
Page 860

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 05/17/2017

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
AHMED, MASUD	
ART UNIT	**PAPER NUMBER**
3717	

DATE MAILED: 05/17/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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Page 861

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/393,646	Applicant(s) EDA, TAIKI	
	Examiner MASUD AHMED	Art Unit 3717	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *3/23/17*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-29*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☒ All b) ☐ Some *c) ☐ None of the:
   1. ☒ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

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BIB DATA SHEET

CONFIRMATION NO. 3602

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/393,646	12/29/2016	463	3717	481331US

APPLICANTS
Gree, Inc., Minato-ku, JAPAN;

INVENTORS
Taiki EDA, Tokyo, JAPAN;

**** CONTINUING DATA ***************************
This application is a CON of 14/983,984 12/30/2015 PAT 9597594
which is a CON of PCT/JP2014/075673 09/26/2014

**** FOREIGN APPLICATIONS ***************************
JAPAN 2014-080554 04/09/2014
JAPAN 2013-202721 09/27/2013

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
01/10/2017

Foreign Priority claimed ☑ Yes ☐ No 35 USC 119(a-d) conditions met ☑ Yes ☐ No Verified and Acknowledged /MASUD AHMED/ Examiner's Signature	☐ Met after Allowance MA Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		JAPAN	15	29	4

ADDRESS
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FILING FEE RECEIVED		
2740	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

CPC						
Symbol					**Type**	**Version**
A63F		13	/	537	F	2014-09-02
A63F		13	/	31	I	2014-09-02
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CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
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			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	29	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	5/10/17	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION											
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED						
463	25	A	6	3	F	9 / 24 (2006.01.01)							

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	29	
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(Primary Examiner)	(Date)	1	3A-3D

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15393646	EDA, TAIKI
	Examiner	**Art Unit**
	MASUD AHMED	3717

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	29	
/MASUD AHMED/ Primary Examiner.Art Unit 3717	5/10/17	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3A-3D

Supercell
Exhibit 1002
Page 867

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L4	5536	L3 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/05/10 02:05
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S6	949921	game	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/03/18 21:08
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S18	4940	S17 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2016/08/05 19:28
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S35	6469	A63F13/12.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S36	727	A63F13/69.CPC.	US-PGPUB; USPAT	OR	OFF	2016/08/05 19:54
S37	1110	A63F2300/556.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:55
S38	956	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2016/08/05 19:55
S39	50	("20020154174" | "20030008696" | "20030126035" | "20040143852" | "20040193489" | "20070072676" | "20070191101" | "20070207844" | "20070218997" | "20080004116" | "20080207306" | "20080274805" | "20080293478" | "20090198664" | "20090299960" | "20100030660" | "20100121810" | "20100331084" | "20100333031" | "20110185057" | "20110263324" | "20120246701" | "20120329556" | "20130061157" | "5768519" | "6306033" | "8016680" | "8019797" | "8109818").PN. OR ("2013/0217489" | "2015/0005051" | "8764534" | "8821260" | "8845423" | "9022869").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/03 16:28
S40	44	S39 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S41	112452	VIDEO NEAR GAME	US-PGPUB; USPAT;	AND	OFF	2017/03/03 16:28

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S42	5367	S41 and template	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S43	4354	S42 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S44	4354	S43 @ad<="20140409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2017/03/03 16:28
S45	1172	A63F13/60.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:28
S46	2	"14983984"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:37
S47	0	"9597594"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; IBM_TDB	AND	OFF	2017/03/03 16:38
S48	0	("9597594").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/03/03 16:38

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	15393646	EDA, TAIKI
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CPC- SEARCHED		
Symbol	Date	Examiner

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US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
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SEARCH NOTES		
Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	5/10/2017	MA
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INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
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Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. 15/393,646
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE December 29, 2016	GROUP 3717

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	US 2011/0319170 A1	12/29/2011	Shimura et al.			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	EP 1 574 238 A1	09/14/2005	Europe	X	
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Partial Supplementary European Search Report Application No.14848832.3, dated April 19, 2017, 8 pages
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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(71) Applicant: **Navteq North America, LLC**
Chicago IL 60654 (US)

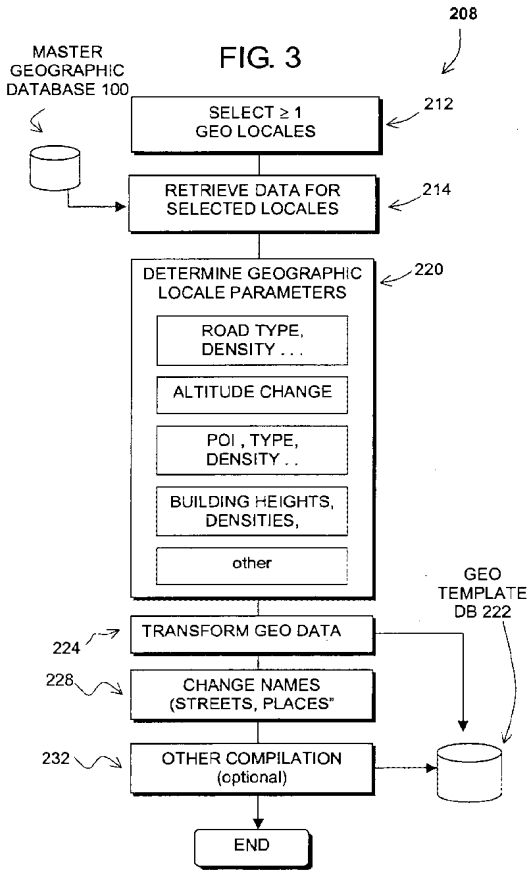
(72) Inventors:
- **Shuman, Michael V.**
Chicago, Illinois 60614 (US)
- **Dougherty, Christopher**
Highland, Illinois 60035 (US)
- **Uhlir, Kurt Brooks**
Chicago, Illinois 60614 (US)

(74) Representative: **Palmer, Jonathan R.**
Boult Wade Tennant,
Verulam Gardens,
70 Gray's Inn Road
London WC1X 8BT (GB)

(54) Geographic area templates for computer games

(57) A system and method are disclosed for facilitating development of computer games that depict or represent geographic areas as part of the play scenarios of the games. A source database contains data that represent geographic features in a region including roads in the region. The data in the source database includes attributes suitable for use for providing navigation-related functions. In addition to providing data from the source database for navigation-related functions, data from the source database are also used to form a template database, wherein the template database represents an imaginary locale. The template database is provided for computer game development.

FIG. 3



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Description

REFERENCE TO RELATED APPLICATIONS

[0001] The present application is related to copending patent applications entitled "METHOD AND SYSTEM FOR USING GEOGRAHIC DATA IN COMPUTER GAME DEVELOPMENT", Attorney Docket No. N0184US, "APPLICATION PROGRAMMING INTERFACE FOR GEOGRAPHIC DATA IN COMPUTER GAMES", Attorney Docket No. N0185US, and "COMPUTER GAME DEVELOPMENT FACTORY SYSTEM AND METHOD", Attorney Docket No. N0190US, the entire disclosures of which are incorporated by reference herein.

BACKGROUND OF THE INVENTION

[0002] The present invention relates to a system and method that facilitate development of computer games and more particularly, a system and method that facilitate development of computer games that include representations or depictions of simulated real world geographic areas.

[0003] Computer games have developed in sophistication and commercial importance. Improvements in computer hardware and software have enabled computer games to provide realistic graphics and sound. With these advances, computer game users have come to expect that games meet high standards for richness and attention to detail. For computer games that are intended to represent real world places, such as road race games, users expect the games to provide convincing depictions of the real world, with attention to accuracy and detail.

[0004] Computer game developers have recognized the need to provide realistic depictions of places in computer games. This has placed a burden on computer game developers to obtain the data needed to portray geographic places with realistic detail and accuracy. The collection of such detailed geographic data about real world roads, places, etc., is time-consuming and expensive. Further, the collection of detailed real world data diverts the resources of computer game developers away from other important aspects of computer game creation, such as characters, story lines, and strategies. Thus, there exists a need to facilitate the collection and use of geographic data by game developers.

[0005] Another consideration related to the development of computer games is that the computer game developer may not want to depict an actual geographic location. Instead, the computer game developer may want to depict a location that appears similar to an actual location. For example, instead of depicting the actual city of Los Angeles, the computer game developer may want to depict a southern California city that is like Los Angeles. The computer game developer may want to do this for a variety of reasons. One reason is that it relieves the computer game developer of the burden of collecting the large amount of data needed to depict the actual city. Another consideration is that it allows the computer game developer to avoid having game players find discrepancies between the geographic location depicted in the computer game and the actual geographic locations. Still another consideration is that it allows a computer game developer to include advertising and product placements.

[0006] Even if a computer game developer decides to depict a location that is similar to an actual location instead of the real location, the computer game developer is still faced with the problem of obtaining enough geographic data from which to create the location that is similar to an actual location. Thus, modeling a city similar to Los Angeles requires a significant amount of effort in order to make the simulation realistic.

[0007] Accordingly, it is an objective to create representations of places that are like real places.

[0008] It is another objective to facilitate development of computer games that represent or depict realistic appearing places that are similar to real places.

SUMMARY OF THE INVENTION

[0009] To address these and other objectives, the present invention includes a system and method for facilitating development of derived products such as computer games that depict or represent geographic areas as part of the play scenarios of the games. A source database contains data that represent geographic features in a region including roads in the region. The data in the source database includes attributes suitable for use for providing navigation-related functions. In addition to providing data from the source database for navigation-related functions, data from the source database are also used to form a template database, wherein the template database represents an imaginary locale. The template database is provided for computer game development.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

Figure 1 is a diagram that illustrates a relationship between a master version of a geographic database and a coverage area.

Figure 2 is a block diagram showing a first embodiment of a system for facilitating development of computer games using a template derived from the geographic database of Figure 1.

Figure 3 is a flowchart of steps in a process performed by the template compiler of Figure 2.

Figure 4 is a block diagram showing components of a system used by a computer game developer that uses the geographic template produced by the process of Figure 3.

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Figure 5 is a block diagram showing a second embodiment of a system for facilitating development of computer games using a template derived from the geographic database of Figure 1.

Figure 6 is a flowchart of steps in a process performed by the template compiler of Figure 5.

Figure 7 is a block diagram showing components of a system used by a computer game developer that uses the geographic template produced by the process of Figure 6.

Figure 8 is a block diagram showing another embodiment of a system for facilitating development of computer games using a template.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

I. SOURCE GEOGRAPHIC DATABASE.

[0011] Figure 1 shows a master or source version of a geographic database 100. The master version of the geographic database is owned and developed by a geographic database developer 101 (also referred to as a "map developer", a "map data developer" or the like). (Although only one source database and geographic database developer are shown, the embodiments disclosed herein are not limited to only a single source database or a single geographic database developer.)

[0012] The master version of the geographic database 100 contains data 102 (also referred to a "geographic data" or "spatial data") that represent geographic features in a coverage area 104. The coverage area 104 may correspond to an entire country, such as the United States. Alternatively, the coverage area 104 may correspond to several countries, such as the United States, Canada, and Mexico, or France, Germany, and Italy, and so on. According to another alternative, the coverage area 104 of the master version of the geographic database 100 may represent only a single region within a country, such as the West Coast or the Midwest of the U.S. Although the master version of the geographic database 100 includes data that represent geographic features in the entire coverage area 104, there may be parts of the coverage area 104 that contain geographic features that are not represented by data in the geographic database, or for which the representation of geographic features is sparse.

[0013] The master version of the geographic database 100 includes data about a road network 120 located in the coverage area 104. The data about the road network 120 include various kinds of information, such as the geographic coordinates of positions of the roads, street names of the roads, addresses ranges along the roads, turn restrictions at intersections of roads, and so on. The master version of the geographic database 100 also includes data about points of interest in the covered area 104. Points of interest may include hotels, restaurants, museums, stadiums, offices, automobile dealerships, auto repair shops, etc. The master version of the geographic database 100 may include data about the locations of these points of interests. The master version of the geographic database 100 may also include data about places, such as cities, towns, or other communities, and other geographic features, such as bodies of water, mountain ranges, etc. The master version of the geographic database 100 may include other kinds of information.

[0014] There are different ways used by the geographic database developer to collect data. These ways include obtaining data from other sources, such as municipalities. In addition, the geographic database developer may employ field personnel to travel by vehicle along roads throughout the geographic region to observe features and record information about them. The data collected by the geographic database developer are stored in the master version of the geographic database 100.

[0015] The geographic database developer 101 continues to collect data that represent the features in the geographic coverage area 104 on an ongoing basis. One reason that the geographic database developer continues to collect data is that the features in the coverage area 104 change over time. Accordingly, the geographic database developer collects data about the same features in order to update or confirm the previously collected data about the features. Another reason that the geographic database developer continues to collect data is to expand the coverage and/or detail of the master version of the geographic database 100. For example, at one point in time the master version of the geographic database 100 may include data that represents only a portion of the entire coverage area 104. After that point in time, the geographic database developer collects data about features in areas that were not previously represented in order to expand the coverage of the master version of the geographic database 100.

[0016] The master version of the geographic database 100 is maintained as the copy that has the most up-to-date data relating to the coverage area 104. Accordingly, the master version of the geographic database 100 is updated, expanded, and/or otherwise modified on a regular and continuing basis. To facilitate these operations, the master version of the geographic database 100 is stored in a format that facilitates updating, maintenance, and development. For example, the data in the master version 100 may be uncompressed. Examples of suitable formats include the VSAM format and the GDF format, although other kinds of formats, both proprietary and non-proprietary, may be suitable. In general, the format of the master database 100 is not suitable for use in navigation systems.

[0017] A copy of the master version of the geographic database 100 is physically located at a first location 114. In one embodiment, the master version of the geographic database 100 is stored on one or more hard drives, tapes or other media, and accessed with an appropriate

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computer 116. Any suitable computer may be used, such as a mainframe computer, a plurality of networked microcomputers, etc.

II. FIRST EMBODIMENT

[0018] Figure 2 shows an overview of a first embodiment of a system and method for facilitating the development of computer games using a template that includes representations of geographic features that are similar to actual geographic features. In Figure 2, the master version of the geographic database 100 is used to make compiled database products 110. The compiled database products 110 are made using a compiler 111. The compiler 111 is a software program run on an appropriate computer platform.

[0019] The compiled database products 110 may include only portions of all the data in the master version of the geographic database 100. For example, the compiled database products 110 may include data that relate to only one or more specific sub-areas within the coverage area 104 of the master version of the geographic database 100. Further, the compiled database products 110 may include fewer than all the data attributes that describe geographic features represented in the master version of the geographic database 100.

[0020] The compiled database products 110 are used on various kinds of computing platforms. For example, the compiled database products 110 are used in computing platforms 112 used for navigation. The computing platforms 112 used for navigation include in-vehicle navigation systems, hand-held portable navigation systems, personal computers (including desktop and notebook computers), and other kinds of devices, such as personal digital assistant (PDA) devices, pagers, telephones, etc. The compiled database products 110 are also used on networked computing platforms and environments, including systems connected to the Internet.

[0021] The compiled database products 110 that are used in computing platforms used for navigation are stored on suitable media. For example, the compiled database products may be stored on CD-ROM disks, hard drives, DVD disks, flash memory, or other types of media that are available now or that become available in the future.

[0022] On the computing platforms 112 used for navigation, the compiled database products 110 are used by various software applications. For example, the compiled database products 110 may be used by software applications that provide navigation-related functions, such as route calculation, route guidance, vehicle positioning, map display, and electronic yellow pages, as well as other kinds of functions.

[0023] As stated above, a computer game developer may not want to depict an actual geographic locale, but instead may want to depict a geographic locale which is similar to an actual locale. Therefore, in addition to producing compiled database products 110 for use on computing platforms used for navigation, the geographic database developer 101 produces one or more geographic template products 200 for use by a computer game developer 130. In a present embodiment, the geographic template products 200 are produced by the geographic database developer 101 using a template compiler program 204, which is described in more detail below. The geographic template products 200 used by the computer game developer 130 may be similar to compiled database products 110 used in the computing platforms 112 used for navigation, except that the geographic template products 200 do not represent actual real world places. The geographic template products 200 may be provided on a suitable media, such as one or more CD-ROM disks, DVD disks, or hard drives. Alternatively, the geographic template products 200 may be provided over a network connection.

[0024] Figure 3 shows steps in a process 208 performed by the template compiler program 204 for making a geographic template product 200 for use in a computer game that depicts or represents an imaginary geographic locale as part of the play scenario of the game. In this embodiment, the process 202 is performed by the geographic database developer 101.

[0025] The imaginary geographic locale represented by the geographic template product may be a locale that is similar to one or more actual locales. For example, the imaginary locale may be a southern California city. The imaginary geographic locale may also be a fantasy locale. The imaginary geographic locale may also be an actual locale but set at a different historical period (past or future) than the present.

[0026] In a first step of the process 208, one or more geographic locales are selected (Step 212). In this step, the locales may include metropolitan areas, such as a southern California metropolitan areas like the Los Angeles metropolitan area or the San Diego metropolitan area. Alternatively, the locales may include metropolitan areas, such as Midwestern metropolitan areas like the Chicago metropolitan area and the Detroit metropolitan area. These locales may be selected manually, e.g., by a human operator selecting the areas. Alternatively, the locales may be selected automatically using a computer program that automatically uses the data in the master geographic database 100 to select locales within a selected region that have similar geographic characteristics like road density. For example, if an operator selects a region, e.g., southern California, a program automatically identifies major urban areas in the region.

[0027] Once the geographic locales have been selected, data that represent the locales are obtained from the geographic database 100 (Step 214). In one embodiment, all the data in the master geographic database 100 that represent the selected locales are obtained. Alternatively, only some of the data in the master geographic database 100 that represent the selected locales are obtained. For example, only selected attributes that represent the locales may be obtained.

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[0028] After the data that represents the selected locales has been obtained, certain parameters of the geographic locales are determined (Step 220). These parameters characterize the locales. These parameters are obtained by comparison of the corresponding data from the different locales. (If only a single locale is selected in Step 212, the parameters are determined from data that represents only the single locale.)

[0029] Examples of the types of parameters that are determined include the following:

Overall size. For example, one parameter that is determined indicates the average overall size of the locales. This parameter may be determined by calculating the average of the overall areas of the locales for which data have been obtained.

Road density (by type). Another parameter is a road density distribution. Some geographic locales have large (in area) sections with densely-spaced streets.

Road shape. Another parameter is a road shape. Some geographic locales tend to have roads with lots of curves, whereas other locales tend to roads that are relatively straight.

Road widths. Another parameter indicates the different types of road widths and the percentage of each type.

Expressway density. Some geographic locales have a relatively large number of expressways.

Road orientation. Some locales tend to have roads all aligned in a north-south, east-west grid pattern.

Road alignment. Some locales tend to have a lot of roads that do not meet at right angles.

Altitude variety. Some locales tend to have many altitude changes, e.g., lots of hills.

Geographic features. These parameters indicate the types, sizes, shapes, number of geographic features, such as lakes, rivers, mountains, etc.

Open spaces. This parameter indicates the type, number, size, density, etc., of open spaces in a locale. These may include parks, golf courses, etc.

POIs. This parameter indicates the types, density, number, etc. of the points of interest in the locales. These points of interest include businesses, government buildings, monuments, stadiums, airports, etc.

Buildings. This parameter indicates the types, sizes, shapes, etc., of the buildings located in a locale.

Signage. This parameter indicates the types of signs, the text on different signs, sign shape, sign layout, the density and placement of signs, etc.

[0030] There may be other parameters that are determined in addition to these. A parameter can be determined for any type of data contained in the geographic database 100.

[0031] Once the parameters have been determined for the locales in the selected region, a template 222 is formed (Step 224). The template has a structure similar to a geographic database that represents an actual region. However, the template does not represent an actual locale. Instead, the template is based on the parameters so that its characteristics are similar to those of all the locales in the selected region. For example, if the selected region is southern California, and the selected locales include Los Angeles and San Diego, a parameter for expressway density would indicate relatively many expressways per square mile. A template formed for this region would have an expressway density that corresponds to this parameter.

[0032] One way to form the template database is to start with one of the actual databases and transform the data. For example, starting with a database that represents Los Angeles, each data entity representing a road segment (or groups of data entities representing groups of road segments) would be modified to alter the location of the represented road segment. Some techniques that may be employed to form the template database from the actual database include moving the locations of roads by varying distances, switching the relative vertical ordering of roads that cross each other at different elevations, forming mirror images of roads located in an area, performing horizontal or rotational transformations of the location of groups of roads, and so on. Quality assurance testing would be used to insure that the modification maintained database integrity, including connectivity of the modified road network.

[0033] A similar process would be used for data that represented other kinds of represented features, such as points of interest, geographic features, such as lakes, rivers, etc., buildings, and so on.

[0034] Once this information has been prepared and stored in the template geographic database, names are determined for the represented geographic features (Step 228). In determining street names, a thesaurus function may be used to obtain similar names that correspond to real world names. For example, if streets in the real world database are named "Oak" and "Pine", the template database may include corresponding streets named "Elm" and "Poplar."

[0035] After the name information is added to the template 222, other compilation steps may be performed on the template 222. These other compilation steps may be similar to the steps performed on the geographic database products 110 used for navigation purposes.

[0036] The template 222 is provided to the game developer 130. The template 222 is used by the computer game developer 130 in a similar manner as an actual geographic database would be used. The computer game developer 130 uses the template data 222, along with other data and components, to create one or more computer games 132.

[0037] In creating computer games 132, the computer game developer 130 may include some or all the data from the template 222. Alternatively, the computer games 132 may include data derived from or based on

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data from the template 222. The geographic data in the computer game 132 eventually produced by the computer game developer 130 may be in a different format than the data contained in the template 222.

[0038] Referring to Figure 4, the computer game developer 130 may use a geographic data API (application programming interface) 140 and geographic data tools 144 to access and use data contained in the template 222. In one embodiment, the API 140 and data tools 144 are similar or identical to the interface layer and related navigation applications described in U.S. Pat. Nos. 5,974,419, 5,953,722, 5,968,109 and 6,047,280, the entire disclosures of which are incorporated by reference herein. In general, the geographic data API 140 provides a library of functions that facilitate accessing the data contained in the template 222.

[0039] The geographic data API 140 and data tools 144 provide various ways that the data in the template 222 can be accessed. Some of the ways the geographic data API 140 and data tools 144 provide for accessing the geographic database 118 are described in the copending application entitled. "METHOD AND SYSTEM FOR USING GEOGRAHIC DATA IN COMPUTER GAME DEVELOPMENT", Attorney Docket No. N0184US, the entire disclosure of which is incorporated by reference herein.

[0040] Using the geographic data API 140 and data tools, the game developer combines the template 222 with road model data (which adds visual representations of various road-related things, such as lampposts, lane markers, pavement colors, and so on), 3D model data (which add buildings, trees, etc.) and other game related components (such as characters, game logic, vehicles, game rules, and so on). In the computer game product, the template may be integrated into the code base or may exist separately.

[0041] The computer games 132 created using the data from the template 222 provide for representing geographic features in play scenarios of the computer games. The geographic features depicted by the computer games do not represent actual, real world geographic features, but are similar to the kinds of actual features that a person would find in a typical locale in a given geographic region. These depicted features include a road network, which is similar to the kind of road network a person would find in a typical locale in the given geographic region. This simulated road network in the template can be provided with the same level of accuracy and detail as a real road network.

[0042] The computer games 132 produced using the geographic template 222 are installed on appropriate computer platforms 134. The computer platforms 134 on which the computer games132 are installed may include personal computers, game consoles, PDAs, handheld game devices, mobile phones, networked computers, and so on. Users access the computer games 132 on the computer platforms 134 to play the games.

III. SECOND EMBODIMENT

[0043] Figure 5 shows a second embodiment of a system for developing a computer game using a template that contains data that represents a simulation of real world geographic features of the current time or of past or future times. Figure 6 shows a flowchart of a process 308 performed by the system of Figure 5. The process 308 can be performed by the map developer 101 in Figure 5 using the template compiler 304 in Figure 2. The process 308 of Figure 6 is similar to the process 208 of Figure 3, and like steps are indicated by the same numerals.

[0044] The process of 308 in Figure 6 differs from the process 208 in Figure 3 in that after a basic geographic template is formed using data that represents actual geographic features in actual locales (Step 228 or 232), additional data is added to the basic template by the map developer 101. In this embodiment, the additional data that may be added to the template includes road model data obtained from a road model database 170 and 3D model data obtained from a 3D model database 174. (In the first embodiment described in connection with Figures 3 and 4, road model data and 3D model data are added to a geographic template by the game developer.)

[0045] The data in the road model database 170 are representations used for visual appearance and rendering of road-related things, such as road pavement, lane stripes, curbs, sidewalks, signs, lampposts, lane dividers, traffic signals, speed bumps, crosswalks, and so on. These road model representations are associated with data representation of the simulated road network formed in the first part of the process 308. As stated above, the data representation of the simulated road network formed in the first part of the process 308 is derived from representations of road networks used for navigation. As such, the data representation of the simulated road network formed in the first part of the process 308 may not indicate what roads, or things associated with a road, look like. For example, the data representation of the simulated road network formed in the first part of the process 308 may indicate the locations (e.g., geographic coordinates) of intersections, and possibly the locations of points along a road segment between intersections, the legal (and illegal) connections between roads, the names of roads, the addresses ranges along roads, the type of road surface, and so on. However, the data representation of the simulated road network formed in the first part of the process 308 may not contain information that indicates the actual visual shapes, colors, dimensions, etc., of these road-related things. For example, the data representation of the simulated road network formed in the first part of the process 308 may not indicate the colors of a road, curbs, sidewalks, what a sign looks like, and so on. The road model database 170 includes these types of information.

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[0046] An integration step (Step 364 in Figure 6) provides for associating data in the road model database 170 with data from the representation of the simulated road network formed in the first part of the process 308. The integration step 364 may associate road model data with specific locations along a road segment (as represented in the data representation of the simulated road network formed in the first part of the process 308) or with lengths along such a road segment. As an example, the integration step 364 may provide for showing curbs (using a model for what a curb looks like from the road model database 170) along all side streets (represented by data from the representation of the simulated road network formed in the first part of the process 308). In another example, the integration step 364 may provide for showing barriers along all the sides of expressways (using a model for barriers from the road model database 170) as represented by data from the template. The integration step 364 may also provide for associating data models for traffic signals at simulated intersections represented in the template formed in the first part of the process 308.

[0047] The data representations of road-related things in the road models database are also used for providing other properties of the represented things, such as the physical and audio properties. For example, causing a simulated vehicle to move over a simulated curb causes the simulated vehicle to "bump." Similarly, a simulated vehicle "hitting" a simulated lamppost causes a simulated crashing sound.

[0048] The road model database 170 may include a variety of different data models for some types of road-related things. For example, there may be a number of different types of traffic signal configurations. These different types of traffic signal configurations are used to provide variety and to make the representation of the road network appear more realistic, i.e., so that all the traffic signal configurations do not look the same.

[0049] The map database developer 101 uses the integration step 364 to combine data from the road model database 170 with the representation of the simulated road network formed in the first part of the process 308 to provide a realistic appearing road network. The road model database 170 is not intended to represent the actual road-related things, such as the exact locations of or text on signs, or the exact configuration of traffic signals, etc. Neither the basic template formed in the first part of the process 308 nor the road model database may contain information that represents the actual location of signs or the exact configuration of traffic signals. However, the road model database 170 provides data for visually representing these road-related things in a manner that would be typical for the geographic area. So, for a residential neighborhood, the road model database would include models for sidewalks, cross walks, stop signs, etc., which would be associated with appropriate locations along the representation of the simulated road network formed in the first part of the process 308. The integration step 364 and the road model database 170 provide for both the density (how many signs per mile or how many lampposts per block) and the style (shape, height, sign text wording) of these road related things.

[0050] As mentioned above, the integration step 364 associates data from the 3D model database 174 with the representation of the simulated road network formed in the first part of the process 308. The 3D model data in the 3D model database 174 includes representations used for visual appearance and rendering of cityscape- and landscape-related things, such as buildings fences, trees, shrubbery, lawns, fences, clouds, scenery, and so on. The 3D model database may also include information such as POI types, business/residential zones, socio-economic information, etc. Like the road models, these 3D model representations are associated with locations along the simulated road network data representation contained in the template formed in the first part of the process 308.

[0051] The data representations of cityscape and landscape-related things in the 3D models database are also used for providing the other properties (e.g., physical and audio) of the represented things. For example, causing a simulated vehicle to strike a simulated building causes the simulated vehicle to stop and make a crashing sound. As another example, a simulated vehicle can drive over a simulated shrub, but not a simulated tree.

[0052] After the geographic database developer 101 has integrated the data representation of the simulated road network formed in the first part of the process 308 with the data from the road model database 170 and 3D model database 174, as appropriate, an enhanced template data product 300 is produced. This enhanced template 300 is provided to the game developer 130.

[0053] Referring to Figure 7, the game developer 130 uses the enhanced template 300 to produce computer games. The game developer 130 combines the enhanced template 300 with other game-related components and inputs 190. Among the other game-related components and inputs 190 are data and programs that provide and/or represent characters, game logic, vehicles (both for the first person game player as well as others), and game rules. The other game-related components and inputs 190 also include programs for rendering and graphics. The other game-related components and inputs 190 may also include components (e.g., applications, programs, etc.) that make specific use of the geographic data, such as a route calculation application that determines a route that can be used as part of the play scenario of the game. The development of some computer games may include additional components and/or inputs whereas other computer games may require fewer. Creation and development of these game-related components and inputs are known to those of skill in the art. The game developer 130 combines the enhanced template 300 with the other game-

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related components and inputs 190 using a suitable linker and/or compiler 194. The computer game 134 produced by the computer game developer 130 is distributed (and/or sold or licensed) to end users using any suitable distribution channels.

IV. THIRD EMBODIMENT

[0054] Figure 8 shows another embodiment of a system for developing computer games using templates that contains data that represents simulations of real world geographic features of the current time or of past or future times. The system of Figure 8 is similar to the system of Figure 2 or the system of Figure 5, and like components are indicated by the same numerals. The system in Figure 8 differs from the other systems in that geographic templates are provided to the end users. The geographic templates that are provided to the end users may be the same as, or similar to, the geographic templates described above in the other embodiments. The geographic templates may be provided to the end users directly from the map developer or alternatively the geographic templates may be provided to the end users from the game developer. The end users use the geographic templates to help create their own geographic databases for use in their own computer games. According to this embodiment, end users could create their own data models of buildings, scenery, characters, vehicles, etc., based on real world or imaginary places, and combine these data models with templates of their own choosing. The end users may create their own data models or may insert other data from other sources, such as freeware, custom design studios, third parties, etc. The process by which end users combine their data models with geographic templates would be similar to those processes described above by which data models are combined with geographic templates by the map developer or the game developer. Suitable applications and programming tools would be made available to end users for this purpose. In one embodiment, an application programming interface (API) would be used in an end user's computer game to access a geographic template which had been provided to the end user. An application programming interface suitable for this purpose is described in the copending patent application entitled "APPLICATION PROGRAMMING INTERFACE FOR GEOGRAPHIC DATA IN COMPUTER GAMES", Attorney Docket No. N0185US, the entire disclosure of which is incorporated by reference herein. End users would be able to use the geographic templates, with their added data models, in their computer games, as described above.

V. ALTERNATIVES

[0055] In the embodiments disclosed above, it was described how template geographic databases could be developed so that the imaginary places represented by the template geographic databases resembled or possessed the style of types of actual, real world places, such as southern Californian city. In alternative embodiments, template geographic databases can be developed that represent other types of imaginary places, such as fantasy places or historical (past or future) actual places. For example, using an embodiment disclosed herein, a template geographic database can be developed that represents New York City in the 1930's.

[0056] The embodiments disclosed herein describe use of geographic data in computer games. The embodiments disclosed herein can be adapted for using geographic data for other non-navigation-related purposes. Among these other, non-navigation purposes are simulations and movie making. For example, the embodiments disclosed herein can be adapted for using geographic data for simulation systems. Simulation systems that can use geographic data include systems that simulate emergency operations (such as evacuation procedures or emergency vehicle deployment and routing), driver education systems, etc. When using any of the disclosed embodiments for movie making, a relatively high visual accuracy may be required and therefore attributes that provide for relatively high visual accuracy may be needed. However, fewer attributes of some types may be required.

[0057] The embodiments disclosed herein can also be used in movie making. Many movies use computer-generated images of real (or imaginary) locations, instead of actual images. The embodiments disclosed herein can be adapted for creating realistic-looking geographic locations, including features such as road networks, for use in movie making.

[0058] The embodiments disclosed herein can be used on various different types of computer platforms, including client-server platforms and peer-to-peer platforms. The embodiments disclosed herein can be used with streaming or other technologies.

[0059] The embodiments disclosed herein may also be used for games that use geographic data obtained from multiple sources, e.g., more than one source geographic database. In these embodiments, the data from the multiple source geographic databases may be combined by the game developer or by another party.

[0060] In the embodiments disclosed above, it was described how a template that represents an imaginary locale for use in computer games could be derived from data that represents actual geographic places and which is used for other non-game-related functions. In an alternative embodiment, a template for use in computer games may be derived from data collected specifically for the purpose of use in computer games. According to this embodiment, the template could represent an actual or an imaginary locale and would be sold or licensed to game developers for use in computer games.

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VI. ADVANTAGES

[0061] The disclosed embodiments solve a problem facing the computer game industry, namely the need to expend significant resources to gather geographic information for use in individual game titles.

[0062] As mentioned above, the templates provided by the disclosed embodiments may include more than road network data and may include such items as 3D building views, POI types, business/residential zones, socio-economic information, etc.

[0063] The template disclosed herein is a new product. The template may be used to provide what a typical European or Mid-West United States city looks like. The template would depict the typical POI placement in relation to other POIs and residential buildings, how its streets regulate traffic, and how newer cities tend to be designed differently than older cities, etc.

VII. EXAMPLES

[0064] The following are examples of different types of computer games and/or applications that can be developed using the disclosed embodiments. (Note that some of the games are new and some are updates and/or improvements of prior games.)

A. City development simulation game

[0065] Geographic data that represents actual, real-world locales can be used in a type of computer game in which players simulate growth of an urban (or other regional) environment. In this kind of game, players simulate building cities or other places (such as towns, countries, rural areas) by designing roads, utilities (e.g., electrical, sewage, water) and other infrastructure elements for a geographic area. Then, the computer game allows a virtual city to develop based on the designs. The virtual cities can be detailed including individual zoning requirements (e.g., residential, commercial, industrial, etc.), crime layers (i.e., that can be changed by implementing police stations), traffic, unemployment and other realistic features.

[0066] Geographic data that represents actual, real-world locales can be used in this type of game to provide a high level of realism thereby allowing game players to build cities based on real world city models. In this type of game, players may choose a specific city model (e.g., Paris), and attempt to improve or replicate it. The inclusion of real time traffic, weather, points of interest (periodically updated or real time) and other real world content would serve to increase the realism of such a virtual city. This improvement could add realism, player loyalty, recognition, and an alternative goal to this popular type of game.

B. Virtual person development simulation game

[0067] Geographic data that represents actual, real-world locales can be used in a type of computer game in which game players simulate development of a virtual person (e.g., a "sim"). In this kind of computer game, players build a virtual person by managing that virtual person's habits, tendencies, house, family, job and interactions with other virtual people. In prior simulation games of this type, the locales in which virtual people live were non-specific. In prior simulation games of this type, the locales were modeled from the view of the player's virtual house and may have included some features specific to the game manufacturer.

[0068] Data from a source of geographic data that represents actual, real-world locales can be used in this type of game to provide a high level of realism, thereby allowing players to build virtual characters in models of real cities, with models of actual real-world points of interest, streets, landmarks and neighborhoods. When starting this type of game, which has been enhanced by the addition of geographic data that represents actual, real-world locales, a player chooses a real world city. Once the city has been chosen, neighborhoods from the city become available for the player to select (e.g., Chicago's Gold Cost, Lincoln Park, Rogers Park, River North, or specific suburbs). Once the player selects a neighborhood, the player's virtual person would be able to simulate visits to virtual attractions based on real world local attractions, e.g., go to popular restaurants and bars, work in local businesses, and reflect how life is lived in that specific area almost as if he/she were living there.

C. "Bot-fighter" game

[0069] Geographic data that represents actual, real-world locales can be used as a backbone for a "bot-fighter"-type game. This enhances the bot-fighter-type game by incorporating detailed spatial data that represents real world locales. A "bot-fighter"-type game can be played on mobile phones. In this game, players build "warrior robots" on their mobile phones using credits (e.g., virtual money) from battles won against other players. All firing between warriors is done via SMS messaging over the mobile phones. With mobile phone technology, a player may be given rough coordinates to his or her player-enemies or be warned when a player-enemy has entered his/her area or turf via mobile phone positioning technology.

[0070] The addition of geographic data that represents actual, real-world locales can give this type of game greater appeal. Specific route data and location details or spotting could be provided instead of simple proximity alerts. The addition of geographic data that represents actual, real-world locales would enable this type of game to support more precise boundaries. Further, with the addition of geographic data that represents

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actual, real-world locales, a game player's weapons could be given more accurate range limitations, rather than rough limitations available with existing games.

[0071] In addition, game credits (e.g., virtual money) could be spent on routes, enemy interception (based on known movements or historical patterns) courses, or enemy spotting locations.

D. Traffic management game/application

[0072] In this computer game/application, data that represents the road network in the real world is used in combination with traffic feeds and models in order to simulate a real city with its existing traffic patterns. Once a model of an actual city with its road network and traffic patterns is created, predictive modeling and comparisons to other cities allow the user to tweak, re-model, or re-design traffic architecture to improve the road network with the objective to create the most efficient traffic system or to make the most improvements to an existing system.

[0073] This computer game/application can include a vehicle fleet management feature. According to this feature, the game player is given a virtual fleet of vehicles (e.g., starting with two trucks) in an initially chosen city and an overlay of existing traffic conditions. The goal of the game with the fleet management feature would be to provide service to a customer base (i.e., based on real world businesses represented in the real world geographic database and some zoning data). Time of day for delivery, fleet routing, fuel expenditures, pickup points and schedules etc., would all be managed by the game player.

[0074] Traffic flow, incidents, bottlenecks and other traffic data would be displayed. Wired or live devices would also have the ability to add live or updated data. Traffic would be made up from individual vehicles, following typical vehicle movement patterns (e.g., gapers, cars driving down the shoulder, etc.) or could be built from scratch.

E. Emergency services and law enforcement games

[0075] Geographic data that represents actual, real-world locales can be used in emergency services scenario-type games or law enforcement scenario-type games. These games include themes related to fire fighting, medical emergency services (e.g., ambulance, search and rescue), police chases, etc. Game developers who make these kinds of games can use the disclosed embodiments to provide realistic looking locales, possibly with the addition of location-based content (e.g., actual buildings, businesses etc.), traffic, weather, points of interest, etc., as part of the playing scenarios of these games.

F. Location quiz game

[0076] Geographic data that represents actual, real-world locales can be used in a location quiz-type of computer game. In this type of game, game players are provided with clues about a game character's secret location and attempt to determine the secret geographic location. Using geographic data that represents actual, real-world locales adds a measure of realism to this type of game and increases its educational value.

[0077] One feature of this game is the ability to personalize the game to a player's locale. Players would be able to search for the secret location in their own city or neighborhood. For example, parents could use the game to teach their children how to get around in their own neighborhoods. According to this example, parents could set up the game to include the route that their child takes to and from school. Also, if a family moves to a new neighborhood, the parents could obtain up-to-date digital map data that represents the new neighborhood in order to teach their children about the new neighborhood.

[0078] Adding digital map data to the game would also provide the capability to play it anywhere the player is located. For example, a child from Chicago who is on vacation in Paris could search for the game character in Paris and thereby learn about the city.

G. Children's atlas

[0079] Another computer game/application that can use geographic data that represents actual, real-world locales is a children's atlas game/application. This computer game/application can be used by families on long car trips. In one embodiment, this game/application could be used to answer children's questions such as "Are we there yet?" or "Where are we?" with distances and times to destinations.

[0080] One version of this game includes a communications feature that allows a child to communicate with other children who have games with the same feature. Another version of this game/application allows a game player to create a virtual travelogue that describes and records travels in real time.

[0081] In one embodiment, a children's atlas game/application would be developed as a travel companion game that obtains location information from an in-vehicle navigation system or remote server. As a car in which the child is a passenger drives through a specific locale (e.g., a town or attraction) or a more general area (e.g., a state), the children's atlas application would display images and use voice narration to provide facts about the area. The children's atlas game/application would also provide well-known stories or legends about an area (e.g., Johnny Appleseed as the child is traveling through the Appalachians).

[0082] In another alternative embodiment, the children's atlas includes a travel pal feature. This feature

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allows a child traveling through an area to connect online with other children who located in the area. In one version of this feature, children can communicate with other traveling children or with other children located in the area a child is passing through using instant messaging. A buddy list may be formed and used for this purpose. Children could access this service while traveling or at home. For example, children could exchange information about their travels or play games. Children passing through a particular place could instant message with children living in the area and ask questions about the area, e.g., what do the locals think about the best places to eat, what is the best radio station, etc.

[0083] According to another alternative embodiment, the children's atlas application includes a virtual travelogue feature. The virtual travelogue feature allows a child to collect, store, and send information about his or her travels as a trip is taking place. The child could take information provided by the atlas game/application, annotate it with personal experiences and observations, and send it to friends and relatives, or to a home website that eventually turns into a scrapbook of the entire trip (or perhaps a report on a school field trip), complete with maps, pictures and postcards from the area, voice narration, and any other data collected along the way.

[0084] The virtual travelogue feature could also catalogue and automatically store every place the child has traveled. The child could then display or print out a map that shows all the places he or she has been and how he or she got there.

H. Simulated tour

[0085] Another application that can use geographic data that represents actual, real-world locales is a simulated tour application. This simulated tour application uses geographic data, POI data, 3D modeling, and other data, such as weather, traffic, crime statistics, and restaurant guides, to build a realistic view of a city or other locale for virtual touring. The simulated tour application could be used by people considering moving to a new area, or could be hosted by realtors, or used by travelers, or simply used by individuals to learn more about different locations.

[0086] With this application, one can learn, understand, explore, or market a specific area. This application would portray an area visually, textually, and possibly even audibly. Smells (e.g., heavy fog, chocolate factory nearby — pervasive) could be provided using appropriate technology or described textually.

[0087] One use for this application is to provide a way for a person to become familiar with driving in an unfamiliar city. Some cities may have driving conventions that are unfamiliar to some people. For example, speed limits are painted on the road in California and Hawaii whereas they are located on little signs in Illinois. According to another example, traffic is particularly aggressive in Rome and lanes are viewed as guidelines, not rules etc.

I. Car rally challenge game

[0088] Another computer game that can be improved using geographic data that represents real world places is a car rally challenge-type game. This game can be played in single player or multi-player versions. In this type of game, teams of game players travel actual routes that are sent to them from a central server. The server would store a number of car rally routes and attribute scenarios (e.g., points of interest as checkpoints) for a specific area (e.g., state, city, neighborhood, etc.), and these virtual rally instructions would be sent to the participating drivers and navigators.

[0089] An organizer's kit could also be offered that would cater to amateur car rally organizations or clubs. The kit would allow an individual or organization to create a customized car rally specific to a city or area. The rally information could be created on the rally organizer's personal computer within a program, or via download from a website. It could then be printed out and handed to the racers or downloaded to a device such as a PDA.

[0090] The difference between the game and the kit is that the game would send out predetermined routes and rally features. The routes and features might change regularly but the players would not have a hand in planning or creating the rally scenarios. The kit would provide the basic tools and content to create a rally, thereby allowing the user to add local flavor, degrees of difficulty, or to even recreate a well-known rally course.

J. Location-based virtual monopoly game

[0091] Geographic data that represents real world places can be used in a computer game based on the Monopoly board game. In one version of this game scenario, a game player's positions and movements in the real world are tracked, using positioning equipment such as GPS, cell phone triangulation, etc. These movements would be used to define game routes for that player. Then, the routes would be used to identify properties (e.g., actual or fictional) along that route the game player could virtually purchase, rent, etc., as in the classic board game. Real world conditions, such as traffic restrictions, road construction, tolls, etc., would be factored into the game play scenario.

K. Promotional games and contests

[0092] Geographic data that represents real world places can be used for promotional concepts (e.g., contests, sales events, and so on). Businesses, such as retailers or restaurant franchises, frequently use special promotions or contests to attract business. Adding location-based data and services to these promotions would allow businesses to better target, reach, and track po-

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tential customers, and also add an extra dimension. Promotional tie-ins to location-based data could be developed using a variety of approaches.

L. Spatial simulator for exercise

[0093] Data that represents actual, real world places can be used with sports or exercise-related events or equipment. For example, geographic data can be used to enhance simulators (e.g., monitors) used on or with exercise equipment. Geographic data that represents real places can be used with a treadmill or exercise bicycle to simulate the experience of running or biking along a route. The route would be projected on a monitor or screen in front of the person on an exercise machine such as a treadmill or exercise bicycle.

[0094] Use of data that represents actual, real world places could allow users to feel as if they were running through the streets of a major city, e.g., along a marathon or 10K route, or biking the route of the Tour de France. The simulator could also be used to keep track of long-term training goals, such as running virtually across the entire United States.

[0095] A basic simulation would consist of a display of a basic overview map based on a route. For example, the user would ask for a route within a city and a basic map would be displayed showing the streets of the city with a mark on the map indicating the virtual position of the runner or bicyclist. The runner's progress along the route would be based on the runner's pace. The degree or category of simulation offered could vary depending on the level of realism desired. For example, details such as road elevation could be added to the simulation. This would allow the person exercising to experience the feeling of running or biking in the Rocky Mountains or through the plains of Nebraska.

[0096] A detailed simulation would use 3D data and give a full picture on a monitor of the buildings and landmarks along the route. This would give the runner or bicyclist a realistic feeling of running or biking along the route.

M. Classic computer games

[0097] Geographic data that represents actual, real-world locales can be advantageously used to make new versions of classic computer games like Snake and Pacman. In these new versions of these games, game players assume the identities of characters in the game. A player uses positioning equipment that determines the player's actual physical position in the real world. The player also has equipment that provides for wireless communication with a central database. This player becomes a virtual player in a classic game such as Pac-Man or Snake. The games would be played in either an online competitive mode or a single player (player versus machine) mode. In either case, the player acts as a character in the game. The distance and speed moved by the player would be translated to movement and speed in a virtual world, where the player may accomplish goals within the game or defeat other players. The system would be set up in translated "virtual boards" where a game would consist of an area regulated by the speed of transportation (a "board" for a vehicle can be significantly larger than one for a pedestrian).

N. Location based cannonball run car racing game

[0098] Another computer game that can use embodiments of the disclosed system and method for providing geographic data is a "cannonball run" car racing game. This game may be played in multi-player or single player mode. The multi-player mode game may be played online. In the game playing scenario, players compete against each other to race vehicles (e.g., cars, bikes, etc.) across a geographical area. Data that represent actual, real-world places would be used to add realism to the game, e.g., actual legal and physical restrictions. Alternative features include the addition of real-time traffic and weather conditions.

[0099] One scenario for a multi-player online version of the game would feature a community where players start out with a specific mode of transportation. This version of the game would provide an online culture and goal of being with the best group and driving the best vehicle. Players would start with a certain amount of virtual cash and a basic vehicle. Some races would be predefined events, whereas other races would be random city races with a user defined start and end points. The selection of routes for races would be based on real map data. The game would be based on winning virtual money by winning races, but winning a race could cost the player due to traffic tickets, illegal traffic maneuvers or other expenses. All fines would be based on legal restriction data and statistics of the percentage of drivers caught. Suggested routes would be provided in all races, and the amount of virtual cash used to buy a route would vary the quality or speed of the route.

[0100] Game players would have the option of racing through their hometowns, or through the streets of their favorite cities or countries all over the world. These would attract a larger demographic, and interest the casual game player as well.

O. Virtual trip planner and simulation

[0101] Data that represents actual, real world places can be used for a computer simulation application that would allow a user to preview a trip or specific route by virtually driving it on his or her personal computer or game console. The simulation would be based on a representation of the geographic database that included 3D renderings of buildings, signs, topographical features, and other related attributes. The simulation software could be provided on media, through an online vendor, or rented to users on an as-needed basis. Users would

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enter a route request via their personal computers or consoles and could use gaming steering wheels, joysticks, voice commands, or keyboards to drive the routes. A fast forward function could be used to skip the obvious or mundane sections of the trip or to speed up the pace.

[0102] To make the simulation more realistic, traffic features, such as vehicles coming and going on the route, could be included. These could perhaps even be based on actual traffic patterns or real-time traffic for a selected time of day.

[0103] A feature of this simulation application would be as a form of trip planner. The planner would provide information about an area to which one is traveling, such as local history, area specific trivia games, and point of interest descriptions and recommendations. Users would have the option of using this information while driving the area in advance (e.g., using the simulation application, described above), printing out the planner in advance as a reference, or loading it onto a device and accessing it during an actual trip (e.g., going on a long trip and using the planner interactively to keep children amused and informed). For example, if a family was traveling on vacation from Chicago to Miami by car, the parents could research and preview the attractions, hotels, and restaurants at which the family may want to stop along the way. They could also preview the route and create their own form of trip ticket to plan the best route. The parents could then set up an itinerary that would include games, information, quizzes etc., that would occupy the children throughout the trip.

[0104] It is intended that the foregoing detailed description be regarded as illustrative rather than limiting and that it is understood that the following claims including all equivalents are intended to define the scope of the invention.

Claims

1. A method of using a source database for forming derived products, wherein the source database contains data that represent geographic features in a region including roads in the region, the method comprising:

   providing a first set of data from the source database, wherein the first set of data represents at least some of the geographic features in the region and further wherein the first set of data includes attributes suitable for use for providing navigation-related functions; and
   using data from the source database to form a template database, wherein the template database represents an imaginary locale.

2. The method of Claim 1 wherein the template database includes data that provides a level of accuracy similar to a level of accuracy provided by the first set of data used for navigation-related functions

3. The method of Claim 1 wherein the template database includes data that provides a level of detail similar to a level of detail provided by the first set of data used for navigation-related functions

4. The method of Claim 1 wherein the step of using data from the source database to form a template database further comprises the steps of:

   selecting a real world locale;
   obtaining data that represents the real world locale, wherein the data that represents the real world locale is obtained from or derived from the source database;
   using the data that represents the real world locale to determine at least one parameter of geographic features represented thereby; and
   forming the template database using the parameter.

5. The method of Claim 4 wherein the parameter includes an overall size of the locale.

6. The method of Claim 4 wherein the parameter includes road densities.

7. The method of Claim 4 wherein the parameter includes road shapes.

8. The method of Claim 4 wherein the parameter includes road widths.

9. The method of Claim 4 wherein the parameter includes expressway density.

10. The method of Claim 4 wherein the parameter includes roadway orientation.

11. The method of Claim 4 wherein the parameter includes road alignment.

12. The method of Claim 4 wherein the parameter includes altitude changes.

13. The method of Claim 4 wherein the parameter includes geographic features selected from a group consisting of: lakes, rivers, and mountains.

14. The method of Claim 4 wherein the parameter includes open spaces in a locale selected from a group consisting of: parks and golf courses.

15. The method of Claim 4 wherein the parameter includes points of interest.

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16. The method of Claim 4 wherein the parameter includes buildings located in a locale.

17. The method of Claim 4 wherein the parameter includes signs.

18. The method of Claim 1 wherein data in the template database is combined with road model data to provide a realistic visual appearance of roads in the imaginary locale.

19. The method of Claim 1 wherein data in the template database is combined with road model data to provide a realistic visual appearance of roads in the region, wherein the road model data includes as road pavement colors, lane stripe markings, curbs, sidewalks, signs, lampposts, lane dividers, traffic signals, speed bumps, and crosswalks.

20. The method of Claim 1 wherein data in the template database is combined with 3D model data to provide a realistic visual representation of polygon shaped features in the region.

21. The method of Claim 1 wherein data in the template database is combined with 3D model data to provide a realistic visual representation of cityscape and landscape features in the region.

22. The method of Claim 1 wherein data in the template database is combined with 3D model data to provide a realistic visual representation of one of a group consisting of: buildings, fences, trees, shrubbery, lawns, fences, and clouds in the region.

23. The method of Claim 1 wherein the data in the template database is combined with other game-related components to form the computer games.

24. The method of Claim 1 wherein the data in the template database is combined with other game-related components to form the computer games, wherein the other game-related components include at least one of a group consisting of: characters, game logic, vehicles, game rules and programs for rendering and graphics.

25. A method of developing a computer game comprising:

acquiring a template database from another party, wherein the template database contains data that represents a geographic locale;
incorporating data from the template geographic database, along with other computer game components, to form a computer game product; and
selling the computer game product.

26. The method of Claim 25 wherein the geographic locale is an imaginary locale.

27. The method of Claim 25 wherein the geographic locale is an actual locale.

28. A method of developing a computer game comprising:

providing template geographic databases to end users, wherein the template databases contain data that represents geographic locales; and
providing programming tools to the end user that allow the end users to incorporate data from the template geographic database into computer games, wherein the computer games include playing scenarios that include representations of the geographic locales.

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Page 892

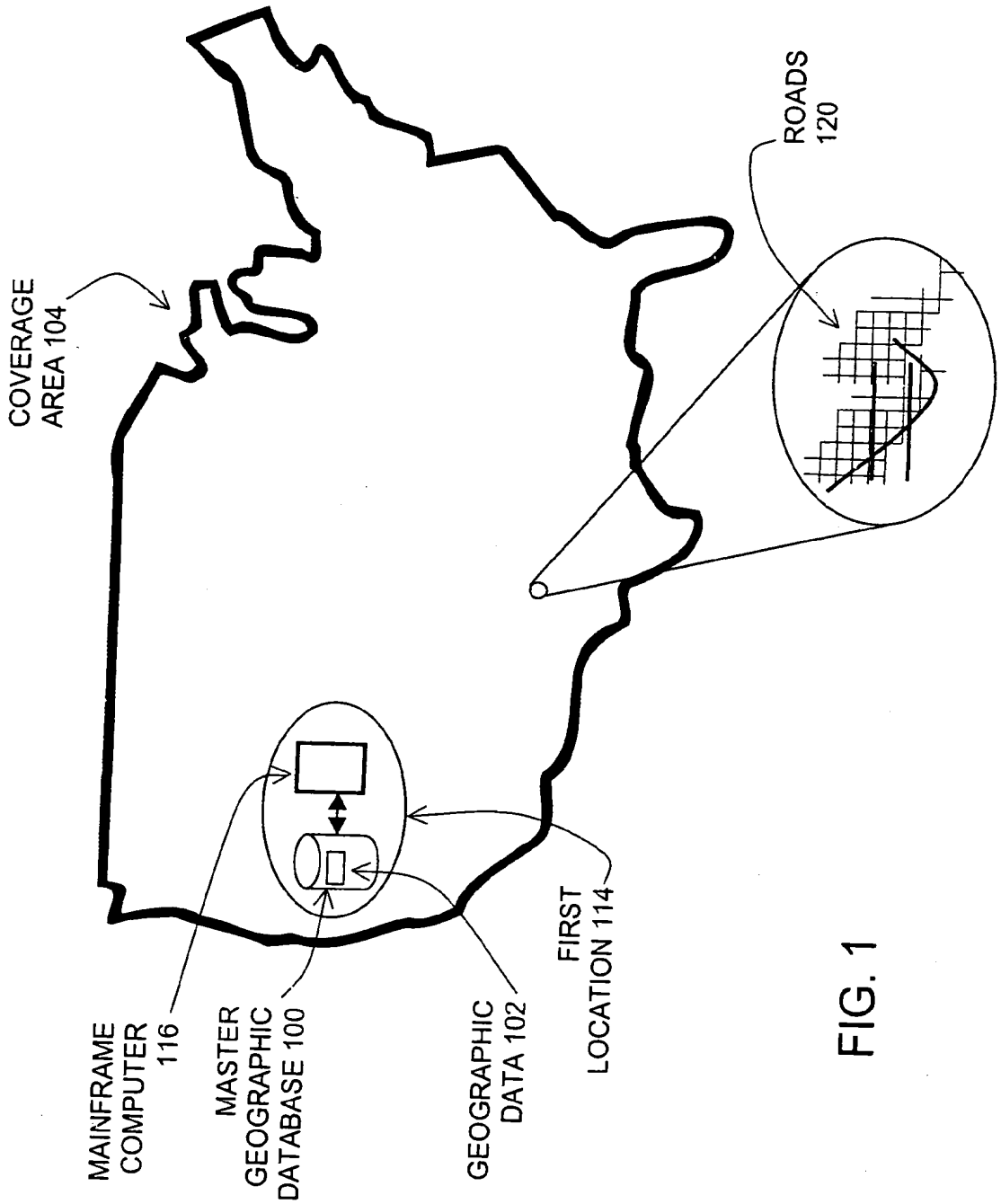

FIG. 1

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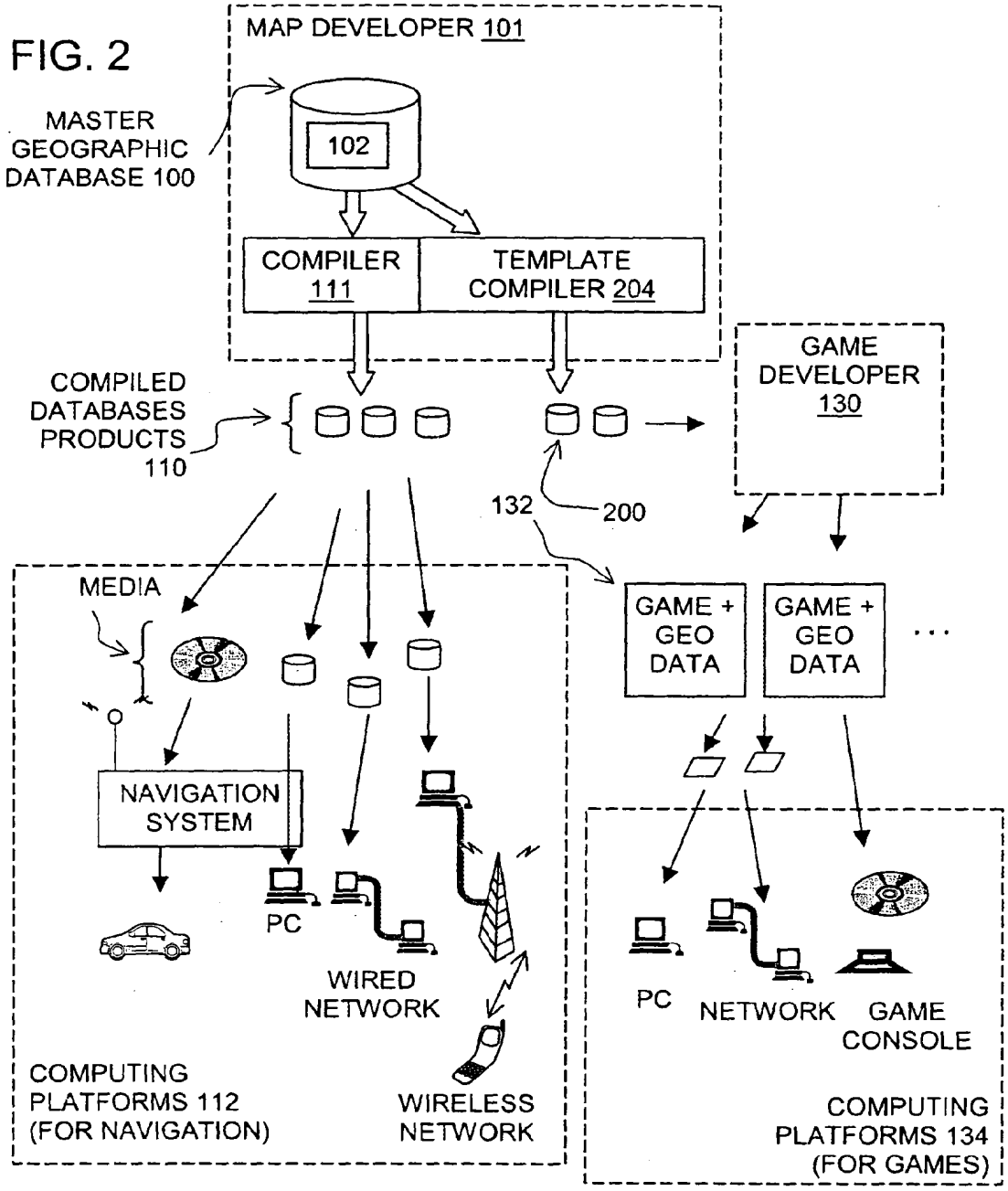
FIG. 2



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Page 894

FIG. 3

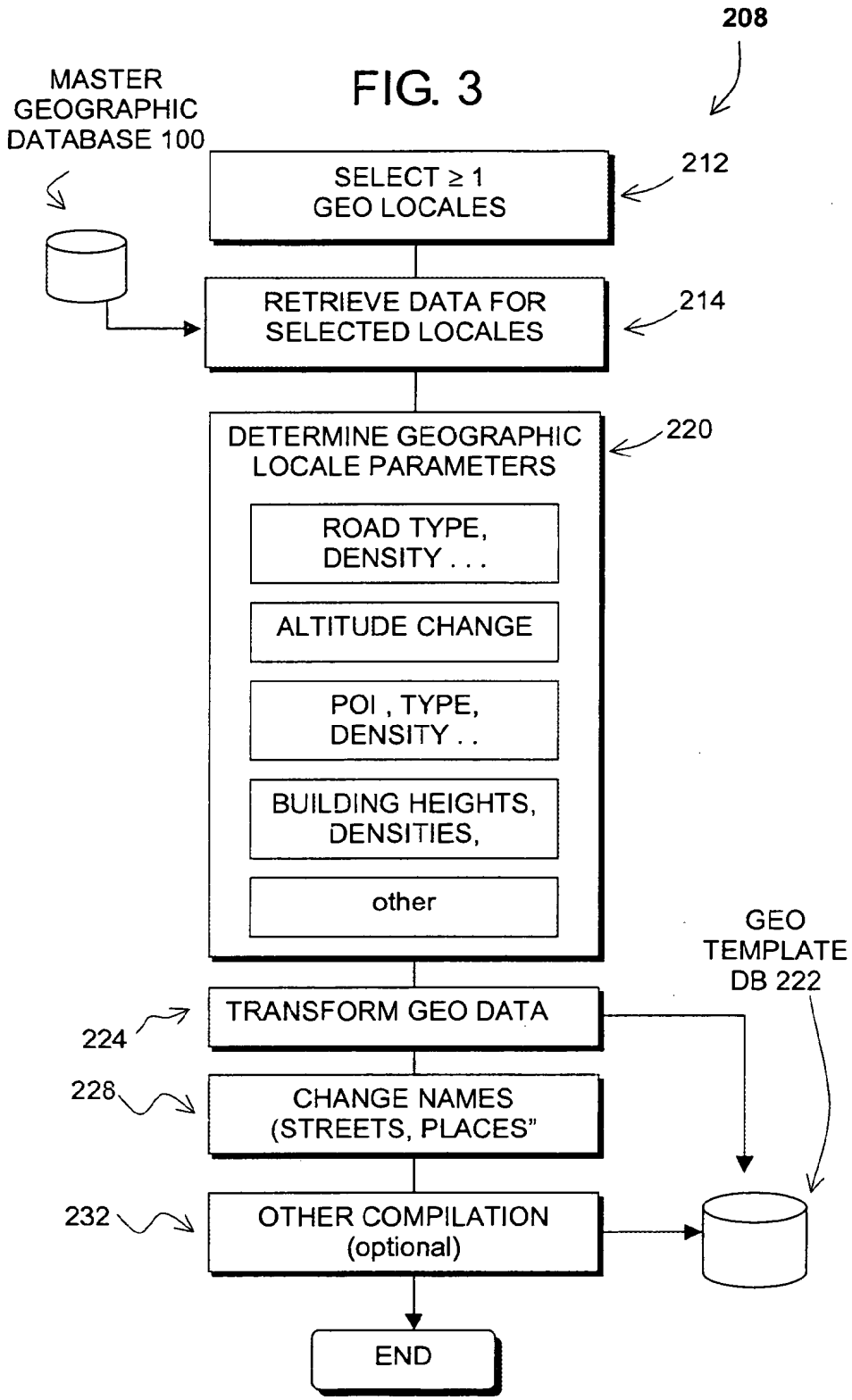

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Exhibit 1002
Page 895

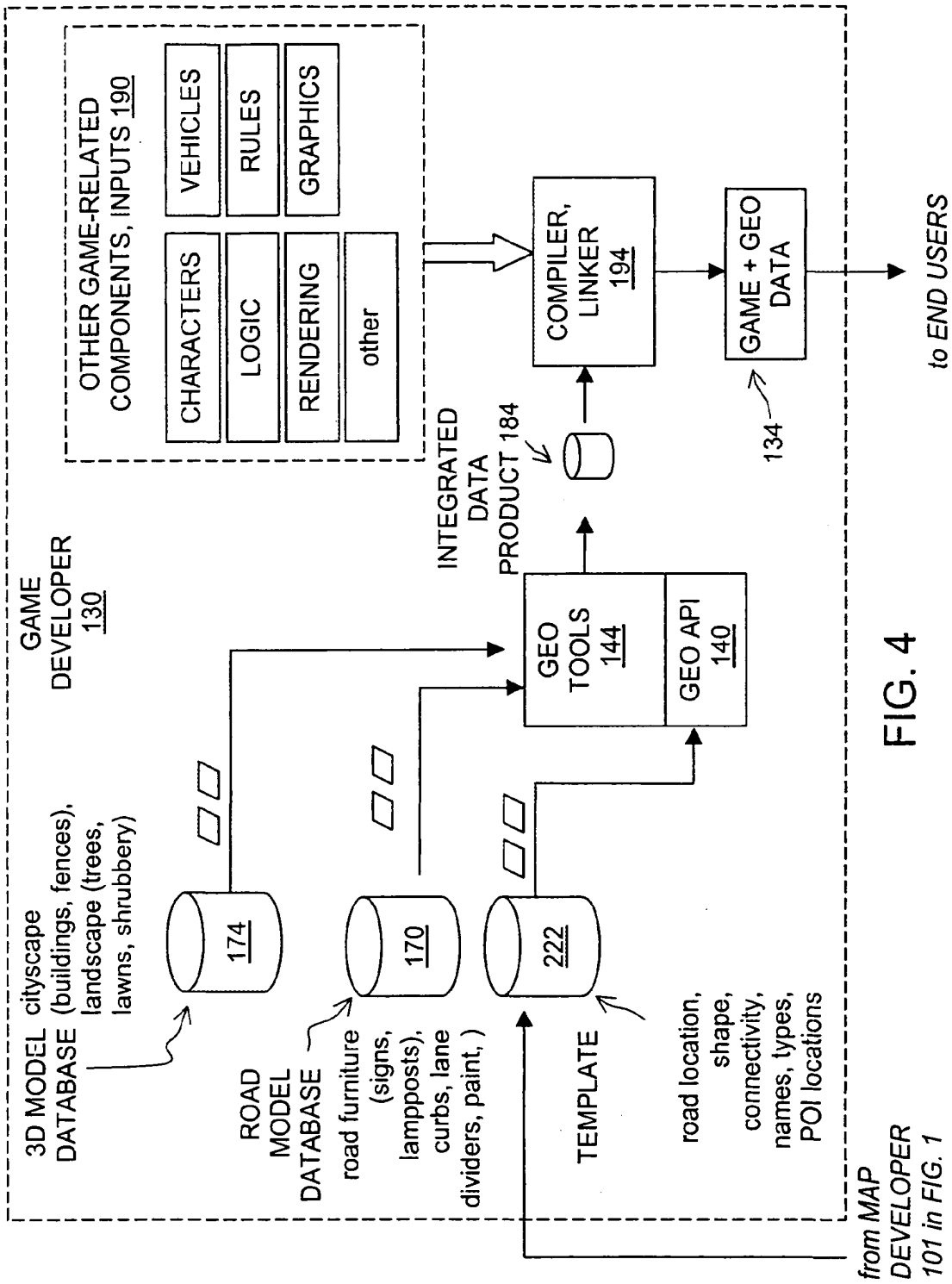

FIG. 4

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Page 896

FIG. 5

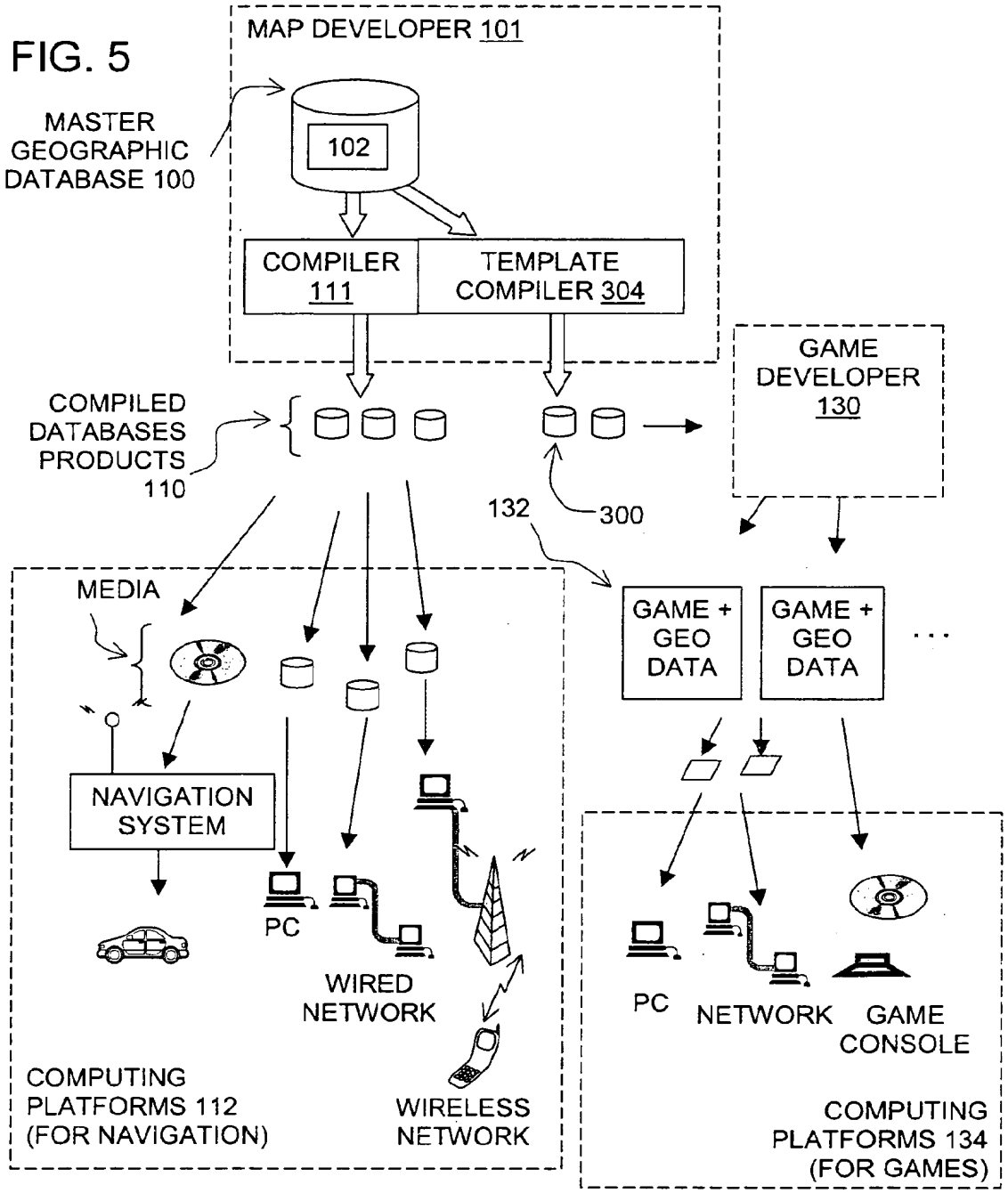

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Exhibit 1002
Page 897

FIG. 6

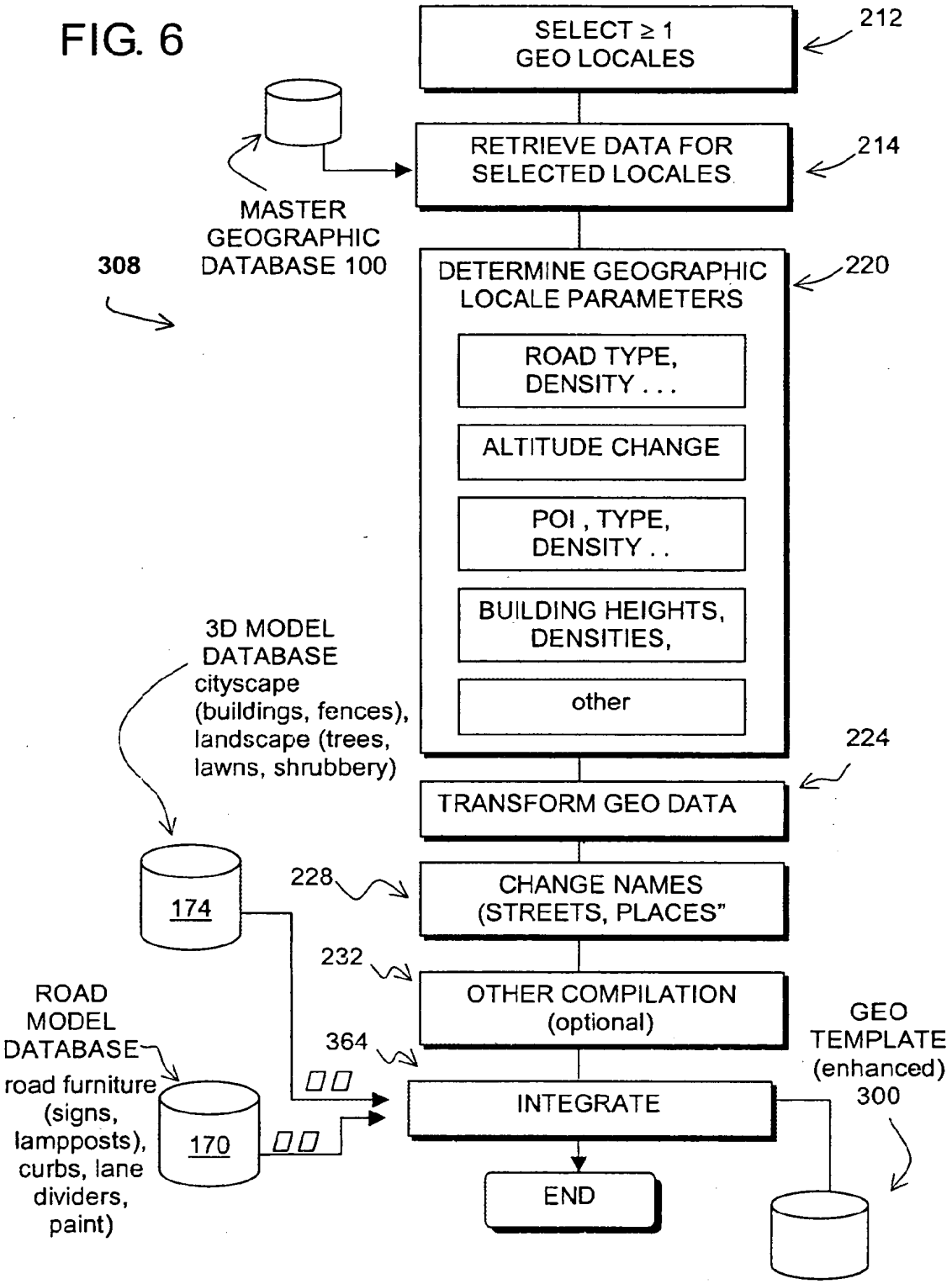

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Exhibit 1002
Page 898

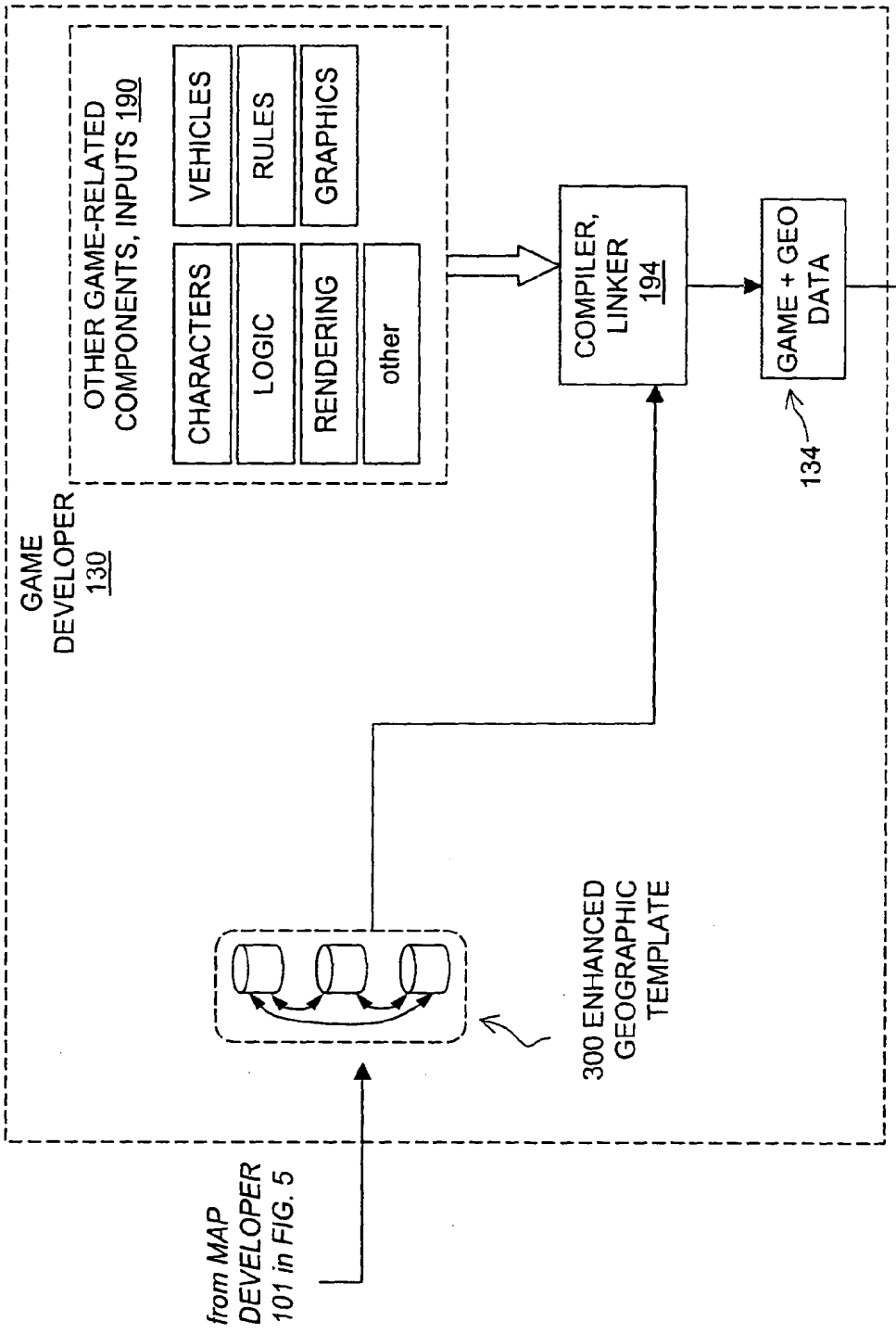

FIG. 7

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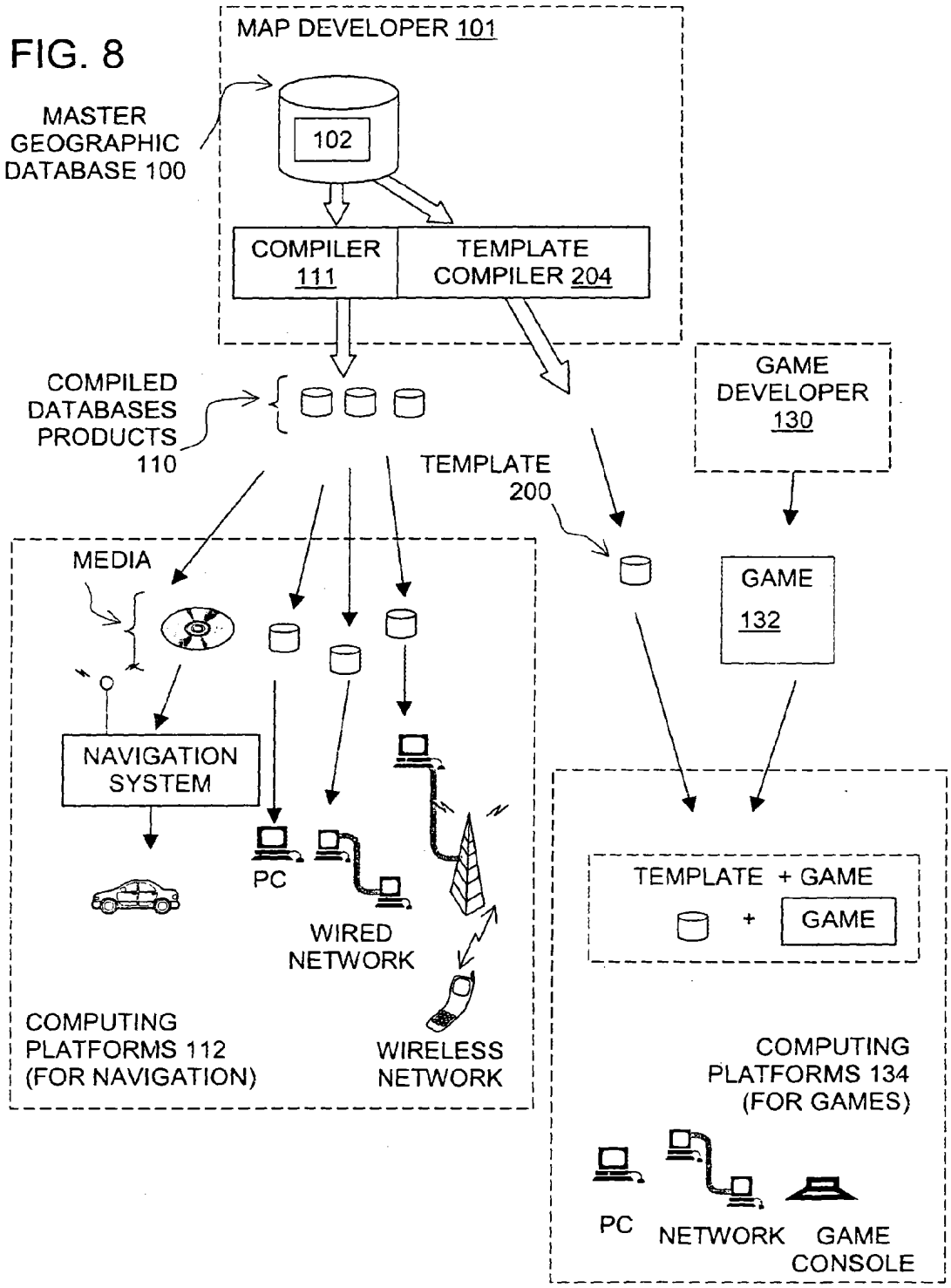
Page 899

FIG. 8



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Page 900

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 25 1377

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	TODD KLAUS: "TerraScene V2.0, Tutorials and Reference Guide" TERRASCENE SCENERY GENERATION SYSTEM, [Online] April 2000 (2000-04), pages 1-63, XP002335169 www.avsim.com Retrieved from the Internet: URL:http://library.avsim.net/sendfile.php?Location=AVSIM&Proto=ftp&DLID=7114> [retrieved on 2005-07-06] * pages 4, 10, 18, 21, 23-27, 33-35, 46, 53-54, 56, 58 *	1-28	A63F13/12 G06F17/30
X	TIM CABLE: "TerraScene, Review" AVSIM FREEWARE UTILITY REVIEW, [Online] May 2000 (2000-05), XP002335170 www.avsim.com Retrieved from the Internet: URL:http://www.avsim.com/pages/0500/terrascene/terrascene.shtml> [retrieved on 2005-07-05] * page 1 * * page 2, paragraphs 2,8 * * page 3, lines 1-7,24-26, paragraph 2 *	1-28	TECHNICAL FIELDS SEARCHED (Int.Cl.7) A63F G06F
A	US 6 183 364 B1 (TROVATO KAREN I) 6 February 2001 (2001-02-06) * claims 1-3; figure 2 *	1-28	
A	3D NATURE: "What is Visual Nature Studio"[Online] 2 February 2004 (2004-02-02), XP002335442 Retrieved from the Internet: URL:http://web.archive.org/web/20040202220153/http://www.3dnature.com/vnsinfo.html> [retrieved on 2005-07-11] * the whole document *	1-28	

-/--

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	12 July 2005	Ruf, A

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

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Page 901

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 25 1377

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	UNKNOWN: "Microsoft Flight Simulator 2002 SDK, Autogen"[Online] April 2002 (2002-04), XP002335786 Retrieved from the Internet: URL:http://www.microsoft.com/games/flightsimulator/fs2002_downloads_sdk.asp#scenery> [retrieved on 2005-07-01] * pages 3-5,8 * -----	1-28	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	12 July 2005	Ruf, A

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

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Page 902

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 05 25 1377

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-07-2005

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6183364 B1	06-02-2001	EP 0811206 A2	10-12-1997
		WO 9723845 A2	03-07-1997
		JP 11501431 T	02-02-1999

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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Page 903

Electronic Acknowledgement Receipt

EFS ID:	29169539
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	10-MAY-2017
Filing Date:	29-DEC-2016
Time Stamp:	13:17:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_IDS.pdf	5248082 ade53a4a355ed580cfaa90cfcdd1381e3c981539	yes	35

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Information Disclosure Statement (IDS) Form (SB08)	2	2
	Non Patent Literature	3	10
	Foreign Reference	11	35
Warnings:			
Information:			
	Total Files Size (in bytes):	5248082	

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	15/393,646	GAU:	3717
FILED:	December 29, 2016	EXAMINER:	AHMED, MASUD
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application. Copies of the listed reference(s) are attached, where required, as are either statements of relevancy or any readily available partial or full English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

■ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this information disclosure statement. 37 C.F.R. 1.704(d) And, each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1)

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	15393646
Filing Date	29-Dec-2016
First Named Inventor	Taiki EDA
Attorney Docket Number	481331US
Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
GREE, INC.	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

9597594

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○	I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

○ Small Entity

○ Micro Entity

◉ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Registration Number 56959

○ A sole inventor

○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application

○ A joint inventor; all of whom are signing this request

Signature	/Andrew T. Harry/
Name	Andrew T. Harry

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	15393646
Filing Date:	29-Dec-2016
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Bradley Davis Lytle/Sandra Miles
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**160**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 15393646

Filing Date: 29-Dec-2016

Applicant/Patent under Reexamination: EDA

Electronic Terminal Disclaimer filed on May 9, 2017

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	29153107
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	09-MAY-2017
Filing Date:	29-DEC-2016
Time Stamp:	10:57:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$160
RAM confirmation Number	050917INTEFSW10570000
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	33338 9d470010f94e8d9a67c8f1845911e80b2f0dbe01	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30270 a5bd23d58323790748f0a4c1f7d1f1a6ac5655c0	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	63608		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/393,646	12/29/2016	Taiki EDA	481331US

CONFIRMATION NO. 3602

PUBLICATION NOTICE

22850
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

OC000000090780369

Title:COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

Publication No.US-2017-0106287-A1
Publication Date:04/20/2017

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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Exhibit 1002
Page 914

DOCKET NO: 481331US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
TAIKI EDA	: EXAMINER: AHMED, MASUD
SERIAL NO: 15/393,646	:
FILED: DECEMBER 29, 2016	: GROUP ART UNIT: 3717
FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	:

AMENDMENT

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

In response to the Office Action dated March 9, 2017, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 11 of this paper.

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) One or more non-transitory computer readable media, including computer-program instructions, which when executed by a portable device, cause the portable device to:

arrange a plurality of game contents in first respective positions within a game space;

store information identifying the plurality of game contents and the first respective positions within the game space;

create, in response to a first command ~~input~~ received at an interface of the portable device, a first template defining one or more of the plurality of game contents in second respective positions within the game space;

store the first template responsive to the first command received at the interface of the portable electronic device; and

apply the first template to a predetermined area within the game space based on a second command received at the interface of the portable device.

2. (Original) The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to:

store image data corresponding to each of the plurality of game contents.

3. (Original) The one or more non-transitory computer readable media of claim 1, wherein

the plurality of game contents are categorized into a plurality of different types of game content;

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Page 916

different image data is associated with each of the plurality of different types of game content, and

the computer-program instructions, when executed by the portable device, cause the portable device to store each of the plurality of game contents, the type of each of the game contents and the image data associated with each of the game contents.

4. (Original) The one or more non-transitory computer readable media of claim 1, wherein

the second respective positions of the game contents are identified by coordinates in the game space.

5. (Original) The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to:

create a second template defining the plurality of game contents in third respective positions within the game space;

store the second template;

cause a display to display an interface configured to receive a selection between the first template and the second template; and

apply one of the first template or the second template to the predetermined area within the game space based on a received input selecting the first template or the second template.

6. (Original) The one or more non-transitory computer readable media of claim 1, wherein

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the plurality of game contents in the first respective positions and the one or more of the plurality of game contents in the second respective positions have a same number of game contents.

7. (Original) The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to:

move the plurality of game contents in the first respective positions within the game space to the second respective positions within the game space when applying the first template to the predetermined area within the game space.

8. (Original) The one or more non-transitory computer readable media of claim 1, wherein

the one or more non-transitory computer readable media is a memory of the portable electronic device, which includes a processor configured to execute the computer-program instructions.

9. (Original) The one or more non-transitory computer readable media of claim 1, wherein

the one or more non-transitory computer readable media is one or more memories included in one or more servers, which include a communication interface configured to transmit the computer-program instructions to the portable device via a network.

10. (Original) A method performed by a portable electronic device, the method comprising:

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Page 918

storing first positions of game contents;

creating a template defining game contents and second positions of one or more of the game contents arranged in a game space based on a received template creation command;

storing the created template in memory of the portable electronic device; and

applying the template to a predetermined area within the game space based on a received template application command.

11. (Original) The method of claim 10, wherein applying the template comprises:

applying the template to the predetermined area within the game space by replacing an existing area within the game space.

12. (Original) The method of claim 11, wherein

the predetermined area and the existing area extend a same area of the game space.

13. (Original) The method of claim 12, wherein applying the template comprises:

applying the template to the predetermined area within the game space by allocating one or more of the game contents arranged at the first positions in the existing area to the second positons of the game contents defined by the template.

14. (Original) The method of claim 10, comprising:

creating a plurality of templates each defining the game contents and the second positions of the game contents arranged in the game space.

15. (Original) The method of claim 14, comprising:

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selecting one of the created templates based on a received template selection command, wherein

applying the template includes applying the selected one of the created templates to the predetermined area.

16. (Original) The method of claim 10, comprising:

registering the created template to the server by transmitting information corresponding to the created template to the server via a communication interface of the portable electronic device.

17. (Original) A method performed by a portable electronic device, the method comprising:

executing a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by a second player;

receiving a command to create a template from the first player;

creating, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

creating a plurality of images that each correspond to one of the plurality of templates;

displaying a screen including the plurality of images;

receiving a selection corresponding to one of the displayed images; and

applying a template corresponding to the received selection to a predetermined area within the game space.

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18. (Original) The method of claim 17, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

19. (Original) The method of claim 17, comprising:

displaying an interface including the game space and images corresponding to a plurality of game contents; and

receiving a command to allocate at least one of the plurality of game contents in an area of the game space; and

allocating the at least one of the plurality of game contents to the area of the game space based on the received command.

20. (Original) The method of claim 19, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

21. (Original) The method of claim 17, comprising:

allocating the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

22. (Original) The method of claim 17, comprising:

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registering the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the portable electronic device.

23. (Original) One or more non-transitory computer readable media, including computer-program instructions, which when executed by an information processing system, cause the information processing system to:

receive information for reproducing a template for defending an attack initiated by a second player, the template defining positions of game contents in a game space and being created by a first terminal executing a game by arranging, based on a first command by a first player, the game contents within the game space, the game contents including at a least game content for defending from the attack initiated by the second player;

store the received information for reproducing the template; and

send the received information for reproducing the template to a second terminal different from the first terminal, the second terminal executing the game by arranging, based on a second command by the first player, game contents within the game space, the game contents including at least a game content for defending from an attack initiated by the second player.

24. (Original) The one or more non-transitory computer readable media of claim 23, wherein the computer-program instructions, when executed by the information processing system, cause the information processing system to:

receive, at the first terminal, a third command from the first player to create the template; and

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create the template defining the game contents and respective positions of the game contents within the game space based on the received third command.

25. (Original) The one or more non-transitory computer readable media of claim 23, wherein the computer-program instructions, when executed by the information processing system, cause the information processing system to:

cause the second terminal to display an interface including an image corresponding to the template;

receive a third command from the first player selecting the image corresponding to the template; and

apply the template corresponding to the received selection to a predetermined area within the game space.

26. (Original) The one or more non-transitory computer readable media of claim 23, wherein

the one or more non-transitory computer readable media includes at least a first memory of the first terminal and a second memory at the second terminal including respective processors configured to execute the computer-program instructions.

27. (Original) The one or more non-transitory computer readable media of claim 23, wherein

the one or more non-transitory computer readable media is one or more memories included in one or more servers, which include a communication interface configured to transmit the computer-program instructions to the first terminal and the second terminal via a network.

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28. (Original) The one or more non-transitory computer readable media of claim 23, wherein

the information processing system includes one or more servers communicatively coupled to the first terminal and the second terminal via a network.

29. (Original) The one or more non-transitory computer readable media of claim 28, wherein

the information processing system includes the first terminal and the second terminal.

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REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested

Claims 1-29 are pending in the present application. Claim 1 is amended by the present amendment to correct a minor informality noted in the outstanding Office Action. No new matter is presented.

In the Office Action, claims 1-29 are rejected on the ground of nonstatutory double patenting as unpatentable over claims 1-20 of U.S. Pat. 9,597,594 (hereinafter, "the 594 patent"); and claims 1-16 are rejected under 35 U.S.C. 112(b), as indefinite.

As an initial matter, Applicant appreciatively acknowledges the courtesy extended by Examiner Ahmed in holding an interview with the undersigned on March 20, 2017. During the interview an overview of the present amendment was presented and the outstanding double patenting rejection and rejection under 35 U.S.C. 112(b) we discussed.

Regarding the outstanding rejection under 35 U.S.C. 112(b), claim 1 is amended as discussed during the interview, to recite "a first command" in the "create ..." limitation thereby providing antecedent basis for the subsequent recitation of this limitation in the claim. Additionally, the features of the first and second command recited in claim 1 were discussed in relation to Figs. 3A-3E. In view of the amendment outlined above and the explanation provided during the interview, Examiner Ahmed agreed that the outstanding rejection under 35 U.S.C. 112(b) would be withdrawn.

Accordingly, Applicant respectfully requests that the outstanding rejection under 35 U.S.C. 112(b) be withdrawn.

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The Office Action rejects claims 1-29 on the ground of non-statutory obviousness-type double patenting as unpatentable over claims 1-20 of the '594 patent. As discussed during the interview, Applicant respectfully traverses this rejection.

As an initial matter, Applicant notes that the Office Action fails to set forth the rationale used as a basis for any finding of obviousness as set forth in M.P.E.P. § 804, which requires that "any obviousness-type double patenting rejection should make clear: (A) The differences between the inventions defined by the conflicting claims – a claim in the patent compared to a claim in the application; and (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue would have been an obvious variation of the invention defined in the claim in the patent."

In this regard, the Office Action fails to acknowledge clear differences between the pending claims and the claims of the '594 patent, and therefore also fails to provide a rationale as to why a person of ordinary skill in the art would conclude that the invention defined in pending claims 1-29 would have been an obvious variation of the invention defined in claims 1-20 of the '594 patent.

The double patenting rejection is presented in the form of a claim chart, but the claim chart merely lists the claims of the present application and the claims of the '594 patent without making clear "(A) The differences between the inventions defined by the conflicting claims – a claim in the patent compared to a claim in the application; and (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue would have been an obvious variation of the invention defined in the claim in the patent."

Claim 1 in the present application, for example, recites

> ... *create, in response to a first command received at an interface of the portable device,* a first template defining one or more of the plurality of game contents in second respective positions within the game space;

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store the first template *responsive to the first command received at the interface of the portable electronic device*; and

apply the first template to a predetermined area within the game space *based on a second command received at the interface of the portable device.*

None of the above-emphasized features are recited in claim 1 of the '594 patent. Independent claims 10, 17 and 23 similarly recite features that are not recited in, or rendered obvious by, the claims of the '549 patent.

Accordingly, for at least the reasons discussed above, Applicant respectfully requests that the rejection of claim 1 (and the claims that depend therefrom) on the ground of obviousness-type double patenting in view of the '594 patent be withdrawn. As independent claims 10, 17 and 23 also recite features that are not obvious in view of the claims of the '594 patent, it is also submitted that these claims (and the claims that depend therefrom) patentably define over the claims of the '594 patent.

Consequently, no further issues are believed to be outstanding in the present application and the present application including claims 1-29 is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Attorney of Record
Registration No. 56,959

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

Electronic Acknowledgement Receipt

EFS ID:	28720185
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	23-MAR-2017
Filing Date:	29-DEC-2016
Time Stamp:	15:38:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_Amendment.pdf	9685017 9da0c65c1147e94e6348a4646d8f38dc5bae683b	yes	14

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Amendment/Req. Reconsideration-After Non-Final Reject	2	2
	Claims	3	11
	Applicant Arguments/Remarks Made in an Amendment	12	14
Warnings:			
Information:			
	Total Files Size (in bytes):	9685017	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) Taiki EDA

SERIAL NO: 15/393,646 ART UNIT: 3717

FILING DATE: December 29, 2016 EXAMINER: AHMED, MASUD

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FEE TRANSMITTAL

■ No additional fee is required

☐ Small entity status of this application under 37 C.F.R. §1.9 and §1.27 is claimed.

☐ Track 1 Prioritized Examination

The Fee has been calculated as shown below:

FOR	NUMBER FILED	NUMBER EXTRA	RATE	CALCULATIONS
TOTAL CLAIMS	29 - 29 =	0	x $80 =	$ 0.00
INDEPENDENT CLAIMS	4 - 4 =	0	x $420 =	$ 0.00
☐ MULTIPLE DEPENDENT CLAIMS (If applicable)			+ $780 =	$0.00
☐ LATE FILING OF DECLARATION			+ $140 =	$0.00
☐ NON-ELECTRONIC FILING FEE			+ $400 =	$0.00
			BASIC FEES	$0.00
			TOTAL OF ABOVE CALCULATIONS	$ 0.00
☐ REDUCTION BY 50% FOR FILING BY SMALL ENTITY				$0.00
☐ FILING IN NON-ENGLISH LANGUAGE			+ $140 =	$0.00
			TOTAL	$ 0.00

☐ Please charge Deposit Account No. **15-0030** in the amount of **$0.00**

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount of **$0.00**.

■ The Director is hereby authorized to charge any additional fees which may be required for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to Deposit Account No. **15-0030**, with the **EXCEPTION** of deficiencies in fees for multiple dependent claims in new applications.

■ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 15-0030.

Submitted by: /Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/393,646	Filing Date 12/29/2016	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **03/23/2017**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 29	Minus	** 29	= 0	X $80 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $420 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SLIE
MARIDOL GARCIA JOY

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/393,646	12/29/2016	Taiki EDA	481331US	3602

22850 7590 03/09/2017

OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
AHMED, MASUD

ART UNIT	PAPER NUMBER
3717	

NOTIFICATION DATE	DELIVERY MODE
03/09/2017	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
tfarrell@oblon.com

Office Action Summary	Application No. 15/393,646	Applicant(s) EDA, TAIKI	
	Examiner MASUD AHMED	Art Unit 3717	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 12/29/16.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) 1-29 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) 1-29 is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☒ All b)☐ Some** c)☐ None of the:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 11-13) Office Action Summary Part of Paper No./Mail Date 201[illegible]

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The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal

Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Claims 1-29 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of U.S. Patent No. US 9,597,594. Although the claims at issue are not identical, they are not patentably distinct from each other because the limitations claimed within the current claims are already covered by the patented claims.

US 9,597,594	**Current claims**
1. (currently amended) A method for controlling a computer that is provided with a storage unit configured to store game contents arranged within a game space, first positions of the game contents within the game space, and a template defining second positions of one or more of the game contents, and that progresses a game by arranging the game contents within the game space based on a command by a player, the method comprising: when the template is applied to a predetermined area within the game space based on the command by the player, moving, by the computer, the game contents arranged at the first positions within the game space to the second positions of the game contents defined by the template within the predetermined area.	1. One or more non-transitory computer readable media, including computer-program instructions, which when executed by a portable device, cause the portable device to: arrange a plurality of game contents in first respective positions within a game space; store information identifying the plurality of game contents and the first respective positions within the game space; create, in response to a first input received at an interface of the portable device, a first template defining one or more of the plurality of game contents in second respective positions within the game space; store the first template responsive to the first command received at the interface of the portable electronic device; and apply the first template to a predetermined area

2. (currently amended) The method according to claim 1, wherein the storage unit further stores a template related to a different player, and when the template related to the different player is applied to a predetermined area within the game space based on the command by the player, the computer moves the game contents arranged at the first positions within the game space to the second positions of the game contents defined by the template related to the different player.	within the game space based on a second command received at the interface of the portable device. 2. The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to: store image data corresponding to each of the plurality of game contents.
3. (currently amended) The method according to claim 2, wherein the storage unit further stores game contents which are arranged within the game space and are related to the different player, and positions of the game contents related to the different player, and when the template related to the different player is applied to a predetermined area within the game space based on a command by the different player, the computer moves, out of the game contents arranged within the game space, the game contents related to the different player to the positions of the game contents defined by the template related to the different player.	3. The one or more non-transitory computer readable media of claim 1, wherein the plurality of game contents are categorized into a plurality of different types of game content; different image data is associated with each of the plurality of different types of game content, and the computer-program instructions, when executed by the portable device, cause the portable device to store each of the plurality of game contents, the type of each of the game contents and the image data associated with each of the game contents. 4. The one or more non-transitoiy computer readable media of claim 1, wherein the second respective positions of the game contents are

4. (original) The method according to claim 1, wherein
when a start of an event is reported by a different computer, the computer obtains a template for the event from the different computer and moves the game contents arranged within the game space to the positions of the game contents defined by the template obtained from the a different computer.

5. (currently amended) The method according to claim 1, wherein
when the number of game contents arranged within the game space is smaller than the number of game contents for which the second positions are defined by the template, the computer moves the game contents arranged at the first positions within the game space to the second positions of the game contents defined by the template to which the moving distance is the smallest.

6. (currently amended) The method according to claim 5, wherein
out of the second positions of the game contents defined by the template, the computer displays positions on which no game contents are arranged and the game contents, in a discernible condition.

identified by coordinates in the game space.

5. The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to
create a second template defining the plurality of game contents in third respective positions within the game space;
store the second template;
cause a display to display an interface configured to receive a selection between the first template and the second template; and
apply one of the first template or the second template to the predetermined area within the game space based on a received input selecting the first template or the second template.

6. The one or more non-transitory computer readable media of claim 1, wherein
the plurality of game contents in the first respective positions and the one or more of the plurality of game contents in the second respective positions have a same number of game contents.

7. The one or more non-transitory computer

7. (currently amended) The method according to claim 1, wherein when the number of game contents arranged within the game space is larger than the number of game contents for which the second position are defined by the template, the computer moves the game contents arranged at the first positions within the game space for which the moving distance to the second positions of the game contents defined by the template is the smallest, to the positions. 8. (original) The method according to claim 1, wherein when a template is created for a predetermined area within the game space based on a command from the player, the computer stores positions of game contents arranged within the predetermined area, as the template, in the storage unit. 9. (original) The method according to claim 1, wherein when a template is created by combining a plurality of templates based on a command from the player or a different player, or commands from the player and the different player, the computer stores the	readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to: move the plurality of game contents in the first respective positions within the game space to the second respective positions within the game space when applying the first template to the predetermined area within the game space. 8. The one or more non-transitory computer readable media of claim 1, wherein the one or more non-transitory computer readable media is a memory of the portable electronic device, which includes a processor configured to execute the computer-program instructions. 9. The one or more non-transitory computer readable media of claim 1, wherein the one or more non-transitory computer readable media is one or more memories included in one or more servers, which include a communication interface configured to transmit the computer-program instructions to the portable device via a network. 10. A method performed by a portable electronic

positions of the game contents defined by the plurality of templates, as the template, in the storage unit. 10. (currently amended) A non-transitory computer-readable recording medium having recorded thereon a program for a computer that is provided with a storage unit configured to store game contents arranged within a game space, first positions of the game contents within the game space, and a template defining second positions of one or more of game contents, and that progresses a game by arranging the game contents within the game space based on a command by a player, the program causing the computer to execute a process, the process comprising: when the template is applied to a predetermined area within the game space based on the command by the player, moving, by the computer, the game contents arranged at the first positions within the game space to the second positions of the game contents defined by the template. 11. (currently amended) A computer that progresses a game by arranging game contents within a game space based on a command by a	device, the method comprising: storing first positions of game contents; creating a template defining game contents and second positions of one or more of the game contents arranged in a game space based on a received template creation command: storing the created template in memory of the portable electronic device; and applying the template to a predetermined area within the game space based on a received template application command. 11. The method of claim 10, wherein applying the template comprises-applying the template to the predetermined area within the game space by replacing an existing area within the game space. 12. The method of claim 11, wherein the predetermined area and the existing area extend a same area of the game space. 13. The method of claim 12, wherein applying the template comprises: applying the template to the predetermined area within the game space by allocating one or more of the game contents arranged at the first positions in the existing area to

player, the computer comprising:
a storage unit configured to store game contents arranged within the game space, first positions of the game contents within the game space, and a template defining second positions of one or more of game contents; and
a processing unit configured to apply the template to a predetermined area within the game space based on the command by the player,
wherein when the template is applied, the processing unit moves the game contents arranged at the first positions within the game space to the second positions of the game contents defined by the template.

12. (currently amended) A device in communication with a server, comprising:
a memory device storing game software instructions; and one or more hardware processors configured to execute the game software instructions perform operations including:
storing first positions of game contents;
creating a template defining game contents and second positions of one or more of the game contents arranged in a game space based on a template creation command by a game player,

the second positons of the game contents defined by the template.

14. The method of claim 10, comprising: creating a plurality of templates each defining the game contents and the second positions of the game contents arranged in the game space.

15. The method of claim 14, comprising: selecting one of the created templates based on a received template selection command, wherein applying the template includes applying the selected one of the created templates to the predetermined area.

16. The method of claim 10, comprising:
registering the created template to the server by transmitting information corresponding to the created template to the server via a communication interface of the portable electronic device.

17. A method performed by a portable electronic device, the method comprising: executing a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an

storing the created template in the memory device, and applying the template to a predetermined area within the game space based on a template application command by the game player. 13. (previously presented) The device of claim 12, wherein the template is applied to the predetermined area within the game space by replacing an existing area within the game space. 14. (previously presented) The device of claim 13, wherein the predetermined area and the existing area extend the same area as the game space. 15. (currently amended) The device of claim 13, wherein the template is applied to the predetermined area within the game space by moving one or more of the game contents arranged at the second positions in the existing area to the first positions of the game contents defined by the template. 16. (previously presented) The device of claim 12, wherein the memory device stores game content data and game contents position data of	attack initiated by a second player; receiving a command to create a template from the first player; creating, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space; creating a plurality of images that each correspond to one of the plurality of templates; displaying a screen including the plurality of images; receiving a selection corresponding to one of the displayed images; and applying a template corresponding to the received selection to a predetermined area within the game space. 18. The method of claim 17, wherein the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space. 19. The method of claim 17, comprising: displaying an interface including the game space and images corresponding to a plurality of game contents; and receiving a command to allocate at

the existing area, and stores the template after the template was created. 17. (currently amended) The device of claim 12, wherein the operation performed by the one or more hardware processors operations includes creating a plurality of the templates each defining the game contents and the first positions of the game contents arranged in the game space and storing the plurality of the created templates in the memory device. 18. (previously presented) The device of claim 17, wherein the operation performed by the one or more hardware processors operations includes selecting one of the created templates based on a template selection command by the game player and applying the selected template to the predetermined area. 19. (previously presented) The device of claim 12, further including a communication unit having a communication interface circuit for receiving and transmitting data from and to the server, and the operation performed by the one or more	least one of the plurality of game contents in an area of the game space; and allocating the at least one of the plurality of game contents to the area of the game space based on the received command. 20. The method of claim 19, wherein the plurality of game contents are categorized into a plurality of different types of game content, and different image data is associated with each of the plurality of different types of game content. 21. The method of claim 17, comprising: allocating the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player. 22. The method of claim 17, comprising: registering the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the portable electronic device. 23. One or more non-transitory computer readable media, including computer-program instructions, which when executed by an information processing system, cause the

hardware processors operations includes registering the created template in the server via the communicated unit. 20. (currently amended) The device of claim 12, wherein the template defines the game contents and the first positions of the game contents arranged in the game space in one or more tables.	information processing system to: receive information for reproducing a template for defending an attack initiated by a second player, the template defining positions of game contents in a game space and being created by a first terminal executing a game by-arranging, based on a first command by a first player, the game contents within the game space, the game contents including at a least game content for defending from the attack initiated by the second player; store the received information for reproducing the template! and send the received information for reproducing the template to a second terminal different from the first terminal, the second terminal executing the game by arranging, based on a second command by the first player, game contents within the game space, the game contents including at least a game content for defending from an attack initiated by the second player. 24. The one or more non-transitory computer readable media of claim 23, wherein the computer-program instructions, when executed by the information processing system, cause the information processing system to:

	receive, at the first terminal, a third command from the first player to create the template! And create the template defining the game contents and respective positions of the game contents within the game space based on the received third command. 25. The one or more non-transitory computer readable media of claim 23, wherein the computer-program instructions, when executed by the information processing system, cause the information processing system to: cause the second terminal to display an interface including an image corresponding to the template! receive a third command from the first player selecting the image corresponding to the template! and apply the template corresponding to the received selection to a predetermined area within the game space. 26. The one or more non-transitory computer readable media of claim 23, wherein the one or more non-transitory computer readable media includes at least a first memory of the first terminal and a second memory at the second terminal

	including respective processors configured to execute the computer-program instructions. 27. The one or more non-transitory computer readable media of claim 23, wherein the one or more non-transitory computer readable media is one or more memories included in one or more servers, which include a communication interface configured to transmit the computer-program instructions to the first terminal and the second terminal via a network. 28. The one or more non-transitory computer readable media of claim 23, wherein the information processing system includes one or more servers communicatively coupled to the first terminal and the second terminal via a network. 29. The one or more non-transitory computer readable media of claim 28, wherein the information processing system includes the first terminal and the second terminal.

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):

> (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.
>
> The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claim 1 recites the limitation "the first command received" in line 11, however there is no recitation of a first command anywhere in the claim. There is insufficient antecedent basis for this limitation in the claim.

Specifically in claim 1, the limitations

"store the first template responsive to the first command received at the interface of the portable electronic device; and

apply the first template to a predetermined area within the game space based on a second command received at the interface of the portable device." It is unclear to the examiner exactly what first and second command is and how this triggers the application of the template that is created. It's almost impossible to make out how the created template is being applied in the game space and what location. A clarification is respectfully requested to properly treat these claims on their merits.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MASUD AHMED whose telephone number is (571)270-1315. The examiner can normally be reached on 10 AM -7 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kang Hu can be reached on (571)270-1344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MASUD AHMED/
Primary Examiner, Art Unit 3717

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	Examiner MASUD AHMED	Art Unit 3717	Page 1 of 1

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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	15393646	EDA, TAIKI
	Examiner	Art Unit
	MASUD AHMED	3717

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	29-42	3/3/2017	MA

SEARCH NOTES		
Search Notes	Date	Examiner
TEXT SEARCH ON EAST	3/18/2016	MA
CONDUCTED INVENTOR SEARCH ON EAST	3/3/2017	MA
CONDUCTED CITAITON SEARCH ON EAST	3/3/2017	MA
CONDUCTE NPL SEARCH ON GOOGLE FOR BUILDING GAMES	3/3/2017	MA

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	/M.A./ Primary Examiner.Art Unit 3717

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LIST OF REFERENCES CITED BY APPLICANT	APPLICANT Taiki EDA	
	FILING DATE Herewith	GROUP Unassigned

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	FILING DATE: Herewith	GROUP: Unassigned

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	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	PC Game Review of Medieval Lords, August 2005. URL: http://game.watch.impress.co.jp/docs/20050801/medieval.htm (with English Translation)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner	/MASUD AHMED/	Date considered	03/03/2017

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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APPLICANTS
Gree, Inc., Minato-ku, JAPAN;

INVENTORS
Taiki EDA, Tokyo, JAPAN;

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ADDRESS
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

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【発明者】
　【住所又は居所】　東京都港区六本木六丁目１０番１号　グリー株式会社内
　【氏名】　江田　大輝
【特許出願人】
　【識別番号】　504437801
　【氏名又は名称】　グリー株式会社
【代理人】
　【識別番号】　100099759
　【弁理士】
　【氏名又は名称】　青木　篤
【選任した代理人】
　【識別番号】　100092624
　【弁理士】
　【氏名又は名称】　鶴田　準一
【選任した代理人】
　【識別番号】　100114018
　【弁理士】
　【氏名又は名称】　南山　知広
【選任した代理人】
　【識別番号】　100165191
　【弁理士】
　【氏名又は名称】　河合　章
【選任した代理人】
　【識別番号】　100151459
　【弁理士】
　【氏名又は名称】　中村　健一
【選任した代理人】
　【識別番号】　100180806
　【弁理士】
　【氏名又は名称】　三浦　剛
　【電話番号】　03-5470-1900
　【連絡先】　担当
【選任した代理人】
　【識別番号】　100161089
　【弁理士】
　【氏名又は名称】　萩原　良一
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【書類名】明細書
【発明の名称】コンピュータ、その制御方法、及びその制御プログラム
【技術分野】
【０００１】
本発明は、コンピュータ、その制御方法、及びその制御プログラムに関する。
【背景技術】
【０００２】
近年、サーバから通信ネットワークを介して携帯端末にゲームプログラムをインストールしてプレイするゲームが普及している。このようなゲームには、複数のプレイヤが参加可能なもの（所謂「ソーシャルゲーム」）があり、プレイヤ同士が、対戦、協力のみならず、相互にコミュニケーション可能なものが知られている。
【０００３】
また、このようなゲームには、プレイヤがゲームプログラム上で用意された仮想的な空間（以下「ゲーム空間」と称する）内で街作りを行うもの（所謂「街作りゲーム」）も知られている（例えば、非特許文献１）。街作りゲームでは、プレイヤは、自分の好きな位置に様々な施設（例えば、家、道路、港、駅、空港、城、訓練所等）を建設し、自分好みの街を作り上げていく。
【先行技術文献】
【非特許文献】
【０００４】
【非特許文献１】”SimCity”, [online], 2013年8月27日, [2013年9月13日検索], インターネット<URL: http://en.wikipedia.org/wiki/SimCity>
【非特許文献２】”Clash of Clans”, [online], 2013年9月6日, [2013年9月13日検索], インターネット<URL: http://en.wikipedia.org/wiki/Clash_of_Clans>
【発明の概要】
【発明が解決しようとする課題】
【０００５】
従来の街作りゲームでは、自分好みの街を作ることが目的であり、一度作った街を大きく作り直す必要はなかった。一方、近年の街作りゲーム（例えば、非特許文献２）では、プレイヤが作った街並みに他のプレイヤが攻撃を加えるが、その勝敗や優劣においては、その街並み（防御の壁、攻撃対象となる建物、防御する兵士、武器等のアイテムの配置）が要素の一つとなっている。しかしながら、プレイヤにとっては、その街が発展するほど自分の街のアイテム（ゲーム媒体）が増えてしまうため、そのアイテムを個別にその配置、種類、レベル等を変更するのは非常に煩雑であった。また、その街並みを変更することが他のプレイヤからの攻撃に対してどのような効果があるかわかりづらかった。したがって、兵士や武器のように、配置、種類、レベル等の変更が容易な一部のアイテムのみを変更するにとどまってしまうプレイヤも少なくなかった。結果として、ゲームが進行するにつれてマンネリ化し、プレイヤに飽きられてしまうおそれがあった。
【０００６】
本発明は、このような課題を解決すべくなされたものであり、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることを可能とするコンピュータ、その制御方法、及びその制御プログラムを提供することを目的とする。
【課題を解決するための手段】
【０００７】
本発明に係るコンピュータの制御方法は、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体を、テンプレートにより規定されたゲー

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媒体の配置位置に移動させることを含む。
なお、コンピュータは、上記の手順を実行可能であればよく、例えば、携帯端末、据置端末、サーバ等である。
【０００８】
また、本発明に係るコンピュータの制御方法において、記憶部は、他のプレイヤに係るテンプレートをさらに記憶し、プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体を、他のプレイヤに係るテンプレートにより規定されたゲーム媒体の配置位置に移動させることが好ましい。
【０００９】
また、本発明に係るコンピュータの制御方法において、記憶部は、ゲーム空間内に配置された他のプレイヤに係るゲーム媒体及びゲーム媒体の配置位置をさらに記憶し、他のプレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体のうちの他のプレイヤに係るゲーム媒体を、他のプレイヤに係るテンプレートにより規定されたゲーム媒体の配置位置に移動させることが好ましい。
【００１０】
また、本発明に係るコンピュータの制御方法において、他のコンピュータからイベントの開始が通知された場合に、コンピュータが、他のコンピュータからイベントに係るテンプレートを取得し、ゲーム空間内に配置されたゲーム媒体を、他のコンピュータから取得したテンプレートにより規定されたゲーム媒体の配置位置に移動させることが好ましい。
【００１１】
また、本発明に係るコンピュータの制御方法において、ゲーム空間内に配置されたゲーム媒体の数がテンプレートにより配置位置が規定されたゲーム媒体の数よりも少ない場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体をテンプレートにより規定されたゲーム媒体の配置位置のうちの移動距離が最小となる配置位置に移動させることが好ましい。
【００１２】
また、本発明に係るコンピュータの制御方法において、コンピュータが、テンプレートにより規定されたゲーム媒体の配置位置のうちのゲーム媒体が配置されなかった配置位置及びゲーム媒体を識別可能な態様で表示することが好ましい。
【００１３】
また、本発明に係るコンピュータの制御方法において、ゲーム空間内に配置されたゲーム媒体の数がテンプレートにより配置位置が規定されたゲーム媒体の数よりも多い場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体のうちのテンプレートにより規定されたゲーム媒体の配置位置への移動距離が最小となるゲーム媒体を配置位置に移動させることが好ましい。
【００１４】
また、本発明に係るコンピュータの制御方法において、プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、コンピュータが、所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして記憶部に格納することが好ましい。
【００１５】
さらに、本発明に係るコンピュータの制御方法において、プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、コンピュータが、複数のテンプレートの各々により規定されたゲーム媒体の配置位置をテンプレートとして記憶部に格納することが好ましい。
【００１６】
本発明に係るコンピュータの制御プログラムは、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプ

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レートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいてテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータに、ゲーム空間内に配置されたゲーム媒体をテンプレートにより規定されたゲーム媒体の配置位置に移動させることを実行させる。

【００１７】

本発明に係るコンピュータは、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、プレイヤからの指示に基づいてテンプレートをゲーム空間内の所定の範囲に適用するテンプレート適用部とを備え、テンプレートが適用された場合に、テンプレート適用部は、ゲーム空間内に配置されたゲーム媒体をテンプレートにより規定されたゲーム媒体の配置位置に移動させる。

【発明の効果】

【００１８】

本発明に係るコンピュータ、その制御方法、及びその制御プログラムは、テンプレートを用いてゲーム媒体の変更やゲーム媒体の配置を変更可能にすることにより、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることを可能とする。

【図面の簡単な説明】

【００１９】

【図１】ゲームシステムの概略構成の一例を示す図である。
【図２】携帯端末の概略構成の一例を示す図である。
【図３】携帯端末の表示画面の一例を示す図である。
【図４】テンプレートの作成及び適用の概念を示す図である。
【図５】サーバの概略構成の一例を示す図である。
【図６】携帯端末の動作フローの一例を示す図である。
【図７】サーバの動作フローの一例を示す図である。
【図８】第２実施形態での携帯端末の概略構成の一例を示す図である。
【図９】マルチプレイヤ環境でのテンプレートの適用の概念を示す図である。
【図１０】携帯端末の動作フローの一例を示す図である。
【図１１】マルチプレイヤ環境でのテンプレートの組み合わせの概念を示す図である。
【図１２】第３実施形態での携帯端末の概略構成の一例を示す図である。
【図１３】サーバの概略構成の一例を示す図である。
【図１４】携帯端末の動作フローの一例を示す図である。
【図１５】サーバの動作フローの一例を示す図である。

【発明を実施するための形態】

【００２０】

以下、図面を参照しつつ、本発明の様々な実施形態について説明する。ただし、本発明の技術的範囲はそれらの実施形態に限定されず、特許請求の範囲に記載された発明とその均等物に及ぶ点に留意されたい。

【００２１】

（第１実施形態）

１．本実施形態の概略

本実施形態では、プレイヤは、ゲーム空間内で街作りを行う。プレイヤは、ゲーム空間内にゲーム媒体の一例である様々な施設を配置することができる。また、プレイヤは、ゲーム空間内の所定の範囲について、その範囲内に配置された施設の種類や施設の配置位置に基づいて、施設の種類や施設の配置位置を規定するテンプレートを作成することもできる。さらに、プレイヤは、作成したテンプレートを、ゲーム空間内の所定の範囲に適用することもできる。テンプレートが適用されると、ゲーム空間内に配置された施設は、テ

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プレートにより規定された当該施設に自動的に変更されたり、規定された配置位置に自動的に移動される。
なお、ゲーム媒体とは、ゲームに用いられるデジタルコンテンツのことをいい、施設以外に、例えば、キャラクタ、兵士、武器、カード、フィギア、アバター、アイテム等である。
【００２２】
２．ゲームシステム１の構成
図１は、ゲームシステム１の概略構成の一例を示す図である。
【００２３】
ゲームシステム１は、少なくとも一台の携帯端末２と、サーバ３とを備える。携帯端末２とサーバ３とは、通信ネットワークを介して相互に接続され、例えば、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介して相互に接続される。携帯端末２で実行されるプログラム（例えば、ゲームプログラム）と、サーバ３で実行されるプログラム（例えば、ゲーム管理プログラム）とは、ハイパーテキスト転送プロトコル（Hypertext Transfer Protocol，HTTP）等の通信プロトコルを用いて通信を行う。
【００２４】
２．１．携帯端末２の構成
図２（ａ）は、携帯端末２の概略構成の一例を示す図である。
【００２５】
携帯端末２は、プレイヤによる操作部２３の操作に応じてゲームを進行させる。また、携帯端末２は、必要に応じて、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介してサーバ３に接続し、サーバ３と通信を行う。そのために、携帯端末２は、端末通信部２１と、端末記憶部２２と、操作部２３と、表示部２４と、端末処理部２５とを備える。
【００２６】
なお、本実施形態では、携帯端末２として、多機能携帯電話（所謂「スマートフォン」）を想定するが、本発明はこれに限定されるものではない。携帯端末２は、本発明が適用可能であればよく、例えば、携帯電話（所謂「フィーチャーフォン」）、携帯情報端末（Personal Digital Assistant，PDA）、携帯ゲーム機、携帯音楽プレーヤ、タブレット端末、タブレットＰＣ、ノートＰＣ等でもよい。
【００２７】
端末通信部２１は、所定の周波数帯を感受帯域とするアンテナを含む、通信インターフェース回路を備え、携帯端末２を無線通信ネットワークに接続する。端末通信部２１は、基地局４により割り当てられるチャネルを介して、基地局４との間でＣＤＭＡ（Code Division Multiple Access）方式等による無線信号回線を確立し、基地局４との間で通信を行う。そして、端末通信部２１は、端末処理部２５から供給されたデータをサーバ３等に送信する。また、端末通信部２１は、サーバ３等から受信したデータを端末処理部２５に供給する。
【００２８】
端末記憶部２２は、例えば、半導体メモリ装置を備える。端末記憶部２２は、端末処理部２５での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、端末記憶部２２は、ドライバプログラムとして、操作部２３を制御する入力デバイスドライバプログラム、表示部２４を制御する出力デバイスドライバプログラム等を記憶する。また、端末記憶部２２は、アプリケーションプログラムとして、ゲームを進行させ、その結果を表示するゲームプログラム等を記憶する。また、端末記憶部２２は、データとして、プレイヤの識別番号（ＩＤ）、ゲーム空間内に配置された施設を管理する施設管理テーブル（図２（ｂ））、施設の種類を管理する施設種類管理テーブル（図２（ｃ））、テンプレートを管理するテンプレート管理テーブル（図２（ｄ））、施設、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、端末記憶部２２は、所定の処理に係る一時的なデータを一時

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的に記憶してもよい。
【００２９】
図２（ｂ）には、施設管理テーブルが示されている。施設管理テーブルには、各施設について、当該施設のＩＤ、種類ＩＤ、ゲーム空間内での配置位置等が記憶される。
なお、本実施形態では、ゲーム空間は格子状に構成されており、一の施設は一の格子に配置され、その位置は所定の格子（例えば、ゲーム空間左上）を原点とする格子の座標で表現されるものとするが、本発明はこれに限定されるものではない。ゲーム空間の構成等は、本発明が適用可能であれば、どのようなものでもよい。
【００３０】
図２（ｃ）には、施設種類管理テーブルが示されている。施設種類管理テーブルには、施設の各種類について、当該種類のＩＤ、名称、画像データのファイル名等が記憶される。
【００３１】
図２（ｄ）には、テンプレート管理テーブルが示されている。テンプレート管理テーブルには、各テンプレートについて、当該テンプレートのＩＤ、サムネイル画像データのファイル名、各施設の種類ＩＤ及びテンプレート内での配置位置等が記憶される。
なお、図２（ｂ）と同様に、施設の配置位置は、所定の格子（例えば、テンプレート左上）を原点とする格子の座標で表現されるものとするが、本発明はこれに限定されるものではない。配置位置の表現は、本発明が適用可能であれば、どのようなものでもよい。
【００３２】
操作部２３は、携帯端末２の操作が可能であればどのようなデバイスでもよく、例えば、タッチパネル、キーボタン等である。プレイヤは、操作部２３を用いて、文字、数字、記号等を入力することができる。操作部２３は、プレイヤにより操作されると、その操作に対応する信号を発生する。そして、発生した信号は、プレイヤの指示として、端末処理部２５に供給される。
【００３３】
表示部２４も、映像、画像等の表示が可能であればどのようなデバイスでもよく、例えば、液晶ディスプレイ、有機ＥＬ（Electro―Luminescence）ディスプレイ等である。表示部２４は、端末処理部２５から供給された画像データに応じた画像、映像データに応じた映像等を表示する。
【００３４】
端末処理部２５は、一又は複数個のプロセッサ及びその周辺回路を備える。端末処理部２５は、携帯端末２の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵ（Central Processing Unit）である。端末処理部２５は、携帯端末２の各種処理が端末記憶部２２に記憶されているプログラム、操作部２３の操作等に基づいて適切な手順で実行されるように、端末通信部２１、表示部２４等の動作を制御する。端末処理部２５は、端末記憶部２２に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、端末処理部２５は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【００３５】
２．１．１．端末処理部２５の機能
図３は、携帯端末２の表示画面の一例を示す図である。
【００３６】
図３（ａ）には、ゲームの開始を指示したときに表示されるゲーム進行画面３００が示されている。
ゲーム進行画面３００には、ゲーム空間３０１と、その空間内に配置された様々な施設３０２～３０６とが表示されている。
また、ゲーム進行画面３００下部には、複数のボタンが表示されている。「作成」ボタン３０７の押下によりテンプレートの作成が、「適用」ボタン３０８の押下によりテン

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レートの適用が、それぞれ指示される。
【００３７】
図３（ｂ）には、図３（ａ）に示されるゲーム進行画面３００でテンプレートの作成を指示したときに表示される範囲選択画面３１０が示されている。
範囲選択画面３１０にはゲーム空間３０１が表示されており、例えば、任意の二点のタップにより、当該二点を対頂点とする範囲３１１が選択される。
また、範囲選択画面３１０下部には「決定」ボタン３１２が表示されており、当該ボタンの押下により、選択された範囲３１１についてテンプレート作成の実行が指示される。
【００３８】
一方、図３（ｃ）には、図３（ａ）に示されるゲーム進行画面３００でテンプレートの適用を指示したときに表示されるテンプレート選択画面３２０が示されている。
テンプレート選択画面３２０には、各テンプレートについて、当該テンプレートのサムネイル画像３２１及び「選択」ボタン３２２が表示されている。「選択」ボタン３２２の押下により、対応するテンプレートが選択される。
【００３９】
図３（ｄ）には、図３（ｃ）に示されるテンプレート選択画面３２０でテンプレートを選択したときに表示されるテンプレート表示画面３３０が示されている。
テンプレート表示画面３３０左部には、テンプレートをゲーム空間内の所定の範囲（例えば、中央周辺）に適用したプレビュー画像３３１が表示されている。
また、テンプレート表示画面３３０右部には、テンプレートにより配置位置が規定された各施設の名称及び数３３２が一覧表示されている。
さらに、テンプレート表示画面３３０下部には「決定」ボタン３３３が表示されており、当該ボタンの押下により、テンプレートが決定される。
【００４０】
図３（ｅ）には、図３（ｄ）に示されるテンプレート表示画面３３０でテンプレートを決定したときに表示される範囲選択画面３４０が示されている。
範囲選択画面３４０にはゲーム空間３０１が表示されており、例えば、任意の二点のタップにより、当該二点を対頂点とする範囲３４１が選択される。
また、範囲選択画面３４０下部には「決定」ボタン３４２が表示されており、当該ボタンの押下により、選択された範囲３４１についてテンプレート適用の実行が指示される。
【００４１】
図４は、テンプレートの作成及び適用の概念を示す図である。
【００４２】
４００は、ゲーム空間を示している。ゲーム空間４００内には、九つの施設が配置されている。即ち、施設「●」が四つ、施設「▲」が三つ、及び施設「■」が二つ配置されている。
【００４３】
ゲーム空間４００内の範囲４０１について、テンプレートを作成したとする。４１０は、作成したテンプレートを示している。テンプレート４１０により、種類「○」の施設「●」が（１，１）及び（１，２）に、種類「△」の施設「▲」が（１，３）、（２，１）、及び（２，２）に、種類「□」の施設「■」が（２，３）に配置されることが規定されている。
【００４４】
４２０は、他のゲーム空間を示している。ゲーム空間４２０内には、六つの施設が配置されている。即ち、施設「●」が二つ、施設「▲」が三つ、及び施設「■」が一つ配置されている。
【００４５】
ゲーム空間４２０内の範囲４２１について、テンプレート４１０を適用したとする。ゲーム空間４２０内に配置された施設の各種類の数は、テンプレート４１０により配置位置が規定された施設の各種類の数と同じである。したがって、ゲーム空間４２０内に配置さ

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れたすべての施設が、テンプレート４１０により規定された当該施設の配置位置に移動される。実際には、範囲４２１外に配置された施設４２２～４２５が、範囲４２１内の当該施設の配置位置に移動される。４２０’は、施設４２２～４２５が移動された後のゲーム空間４２０を示している。

【００４６】

４３０は、さらに他のゲーム空間を示している。ゲーム空間４３０内には、九つの施設が配置されている。即ち、施設「●」が三つ、施設「▲」が五つ、及び施設「■」が一つ配置されている。

【００４７】

ゲーム空間４３０内の範囲４３１について、テンプレート４１０を適用したとする。ゲーム空間４３０内に配置された施設の各種類の数は、テンプレート４１０により配置位置が規定された施設の各種類の数と同じであるか、それよりも多い。したがって、ゲーム空間４２０内に配置された施設のうちのテンプレート４１０により規定された当該施設の配置位置への移動距離（例えば、マンハッタン距離）が最小となる施設が、当該施設の配置位置に移動される。実際には、範囲４３１外に配置された施設４３２～４３５が、範囲４３１内の当該施設の配置位置に移動される。４３０’は、施設４３２～４３５が移動された後のゲーム空間４３０を示している。

なお、移動距離が最小となる施設に限らず、移動対象となる施設や移動対象となる施設を含む範囲をプレイヤが指定してもよい。また、予め移動させない施設や移動させない施設を含む範囲をプレイヤが指定してもよい。

【００４８】

４４０は、さらに他のゲーム空間を示している。ゲーム空間４４０内には、四つの施設が配置されている。即ち、施設「●」が一つ、施設「▲」が二つ、及び施設「■」が一つ配置されている。

【００４９】

ゲーム空間４４０内の範囲４４１について、テンプレート４１０を適用したとする。ゲーム空間４４０内に配置された施設の各種類の数は、テンプレート４１０により配置位置が規定された施設の各種類の数と同じであるか、それよりも少ない。したがって、ゲーム空間４４０内に配置されたすべての施設が、テンプレート４１０により規定された当該施設の配置位置のうちの移動距離が最小となる配置位置に移動される。実際には、範囲４４１外に配置された施設４４２及び４４３が、範囲４４１内の当該施設の配置位置に移動される。４４０’は、施設４４２及び４４３が移動された後のゲーム空間４４０を示している。

なお、ゲーム空間４４０’には、テンプレート４１０により規定された施設の配置位置のうちの当該施設が配置されなかった配置位置に、当該施設の種類が識別可能な態様（例えば、「○」４４４及び「△」４４５）で示されている。

また、施設が配置されなかった場合に、プレイヤに対して、同種の施設や類似の施設を候補として提示することも可能である。

さらに、施設が配置されなかった配置位置に対応する施設をプレイヤが購入したり、後述するマルチプレイヤ環境では、他のプレイヤからトレード等により入手したりすることも可能である。さらに、テンプレートに規定された施設を、プレイヤがゲーム空間には配置してはいないが、倉庫に格納していたような場合、テンプレートに基づいてその施設を配置するようにし、逆にテンプレートに規定されていない施設を倉庫に格納するようにしてもよい。また、テンプレートはプレイヤが作成するようにしたが、サービス側のサーバ３から配布されたり、他のプレイヤから入手するようにしてもよい。その場合、テンプレートに規定されている施設をプレイヤが持っていないこともあり得るが、携帯端末２側もしくはサーバ３側で所持の有無を判断し、所持していないと判断した施設を購入する画面を携帯端末２上で表示することで自動的にプレイヤを購入画面に誘導するようにしてもよい。

【００５０】

２．１．２．端末処理部２５の構成
以上の機能を実現するために、端末処理部２５は、ゲーム進行部２５１と、テンプレート作成部２５２と、テンプレート適用部２５３とを備える。これらの各部は、端末処理部２５が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとして携帯端末２に実装されてもよい。
【００５１】
以下、ゲーム進行部２５１による処理について説明する。
【００５２】
ゲーム進行部２５１は、ゲームの開始及び進行を制御し、適宜テンプレート作成部２５２、テンプレート適用部２５３等に処理の実行を指示する。
【００５３】
具体的には、プレイヤにより操作部２３を介して、ゲームの開始が指示された場合に、ゲーム進行部２５１は、ゲーム進行画面３００を表示する。
即ち、ゲーム進行部２５１は、端末記憶部２２に記憶されている施設管理テーブルを参照し、各施設の種類ＩＤ及び配置位置を抽出する。また、ゲーム進行部２５１は、抽出した種類ＩＤをキーとして、端末記憶部２２に記憶されている施設種類管理テーブルを参照し、対応する種類の画像データのファイル名を抽出する。また、ゲーム進行部２５１は、抽出したファイル名に対応する画像データを端末記憶部２２から取得する。そして、ゲーム進行部２５１は、取得した画像データが示す画像を、抽出した配置位置に基づいて表示すると共に、テンプレート作成、テンプレート適用等の指示を受け付けるボタン等を所定のレイアウトで表示するゲーム進行画面３００を構成し、表示部２４に出力する。
【００５４】
プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、ゲーム進行部２５１は、テンプレート作成部２５２に処理の実行を指示する。
【００５５】
プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に、ゲーム進行部２５１は、テンプレート適用部２５３に処理の実行を指示する。
【００５６】
プレイヤにより操作部２３を介して、他の処理が指示された場合に、ゲーム進行部２５１は、当該他の処理を実行する。
【００５７】
以下、テンプレート作成部２５２による処理について説明する。
【００５８】
テンプレート作成部２５２は、テンプレートを作成して端末記憶部２２に格納すると共に、作成したテンプレートをサーバ３に登録する。
【００５９】
具体的には、テンプレート作成部２５２は、範囲選択画面３１０を表示する。
【００６０】
プレイヤにより操作部２３を介して、範囲が選択され、テンプレート作成の実行が指示された場合に、テンプレート作成部２５２は、テンプレートを作成する。
即ち、テンプレート作成部２５２は、選択された範囲を示す座標をキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、選択された範囲内に配置された各施設の種類ＩＤ及びゲーム空間内での配置位置を抽出する。また、テンプレート作成部２５２は、抽出したゲーム空間内での配置位置を、テンプレート内での配置位置に変換する。さらに、テンプレート作成部２５２は、選択された範囲について、サムネイル画像データを作成し、端末記憶部２２に格納する。そして、テンプレート作成部２５２は、格納したサムネイル画像データのファイル名、抽出した各施設の種類ＩＤ及びテンプレート内での配置位置等を、新たに採番したテンプレートＩＤを付与した上で、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。
【００６１】

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また、テンプレート作成部２５２は、作成したテンプレートをサーバ３に登録する。
即ち、テンプレート作成部２５２は、プレイヤのＩＤ、採番したテンプレートＩＤ、作成したサムネイル画像データ、並びに抽出した各施設の種類ＩＤ及びテンプレート内での配置位置をパラメータとして、テンプレート登録要求を、端末通信部２１を介してサーバ３に送信する。
【００６２】
そして、テンプレート作成部２５２は、処理を終了する。
【００６３】
以下、テンプレート適用部２５３による処理について説明する。
【００６４】
テンプレート適用部２５３は、端末記憶部２２又はサーバ３からテンプレートを取得し、取得したテンプレートを適用する。
【００６５】
具体的には、テンプレート適用部２５３は、テンプレート選択画面３２０を表示する。
即ち、テンプレート適用部２５３は、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、各テンプレートのＩＤ及びサムネイル画像データのファイル名を抽出する。また、テンプレート適用部２５３は、抽出したファイル名に対応するサムネイル画像データを端末記憶部２２から取得する。
必要に応じて、テンプレート適用部２５３は、プレイヤのＩＤをパラメータとして、テンプレート一覧提供要求を、端末通信部２１を介してサーバ３に送信する。また、テンプレート適用部２５３は、サーバ３から端末通信部２１を介して、各テンプレートのＩＤ及びサムネイル画像データを受信する。
そして、テンプレート適用部２５３は、取得等したサムネイル画像データが示すサムネイル画像、テンプレート選択の指示を受け付けるボタン等を所定のレイアウトで表示するテンプレート選択画面３２０を構成し、表示部２４に出力する。
【００６６】
プレイヤにより操作部２３を介して、テンプレートが選択された場合に、テンプレート適用部２５３は、テンプレート表示画面３３０を表示する。
即ち、選択されたテンプレートがサーバ３から提供されるものである場合に、テンプレート適用部２５３は、選択されたテンプレートのＩＤをパラメータとして、テンプレート提供要求を、端末通信部２１を介してサーバ３に送信する。また、テンプレート適用部２５３は、サーバ３から端末通信部２１を介して、対応するテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を受信する。そして、テンプレート適用部２５３は、受信したサムネイル画像データを端末記憶部２２に格納する。また、テンプレート適用部２５３は、選択されたテンプレートのＩＤ、格納したサムネイル画像データのファイル名、受信した各施設の種類ＩＤ及び配置位置等を、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。
選択されたテンプレートのＩＤをキーとして、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤを抽出する。また、テンプレート適用部２５３は、抽出した施設の各種類の数を計数する。また、テンプレート適用部２５３は、抽出した種類ＩＤをキーとして、端末記憶部２２に記憶されている施設種類管理テーブルを参照し、対応する種類の名称を抽出する。さらに、テンプレート適用部２５３は、選択されたテンプレートをゲーム空間内の所定の範囲に適用したプレビュー画像を作成する。そして、テンプレート適用部２５３は、抽出した各施設の名称及び数、作成したプレビュー画像、テンプレート決定の指示を受け付けるボタン等を所定のレイアウトで表示するテンプレート表示画面３３０を構成し、表示部２４に出力する。
なお、テンプレートを適用する手順については後述する。
【００６７】
プレイヤにより操作部２３を介して、テンプレートが決定された場合に、テンプレート適用部２５３は、範囲選択画面３４０を表示する。

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【００６８】
プレイヤにより操作部２３を介して、範囲が選択され、テンプレート適用の実行が指示された場合に、テンプレート適用部２５３は、テンプレートを適用する。
即ち、テンプレート適用部２５３は、端末記憶部２２に記憶されている施設管理テーブルを参照し、各施設のＩＤ、種類ＩＤ、及びゲーム空間内での配置位置を抽出する。また、テンプレート適用部２５３は、抽出した施設の各種類の数を計数する。同様に、テンプレート適用部２５３は、選択されたテンプレートのＩＤをキーとして、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤ及びテンプレート内での配置位置を抽出する。また、テンプレート適用部２５３は、抽出した施設の各種類の数を計数する。さらに、テンプレート適用部２５３は、抽出したテンプレート内での配置位置を、選択された範囲を示す座標に基づいて、ゲーム空間内での配置位置に変換する。そして、テンプレート適用部２５３は、施設の各種類について、ゲーム空間内の当該種類の施設の数と、テンプレート内の当該種類の施設の数とを比較する。
両者が同じである場合に、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置に移動させる。即ち、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設のＩＤをキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、対応する施設のゲーム空間内での配置位置として、テンプレート内の当該種類の施設の配置位置を格納する。
一方、前者が後者よりも多い場合に、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設のうちのテンプレート内の当該種類の施設の配置位置への移動距離が最小となる施設を、当該施設の配置位置に移動させる。即ち、テンプレート適用部２５３は、テンプレート内の当該種類の施設の各配置位置について、ゲーム空間内の当該種類の施設のうちの当該配置位置への移動距離が最小となる施設を特定する。そして、テンプレート適用部２５３は、特定した施設のＩＤをキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、対応する施設のゲーム空間内での配置位置として、当該配置位置を格納する。
一方、前者が後者よりも少ない場合に、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置のうちの移動距離が最小となる配置位置に移動させる。即ち、テンプレート適用部２５３は、ゲーム空間内の当該種類の各施設について、テンプレート内の当該種類の施設の配置位置のうちの移動距離が最小となる配置位置を特定する。そして、テンプレート適用部２５３は、当該施設のＩＤをキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、対応する施設のゲーム空間内での配置位置として、特定した配置位置を格納する。
なお、移動距離が最小となる施設に限らず、移動対象となる施設や移動対象となる施設を含む範囲をプレイヤが指定してもよい。また、予め移動させない施設や移動させない施設を含む範囲をプレイヤが指定してもよい。
【００６９】
そして、テンプレート適用部２５３は、処理を終了する。
【００７０】
２．２．サーバ３の構成
図５（ａ）は、サーバ３の概略構成の一例を示す図である。
【００７１】
サーバ３は、携帯端末２からの要求に応じてテンプレートの登録及び提供を行う。そのために、サーバ３は、サーバ通信部３１と、サーバ記憶部３２と、サーバ処理部３３とを備える。
【００７２】
サーバ通信部３１は、サーバ３をインターネット７に接続するための通信インターフェース回路を備え、インターネット７との間で通信を行う。そして、サーバ通信部３１は、携帯端末２等から受信したデータをサーバ処理部３３に供給する。また、サーバ通信部３

１は、サーバ処理部３３から供給されたデータを携帯端末２等に送信する。
【００７３】
サーバ記憶部３２は、例えば、磁気テープ装置、磁気ディスク装置、又は光ディスク装置のうちの少なくともいずれか一つを備える。サーバ記憶部３２は、サーバ処理部３３での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、サーバ記憶部３２は、アプリケーションプログラムとして、テンプレートの登録及び提供を行うゲーム管理プログラム等を記憶する。また、サーバ記憶部３２は、データとして、プレイヤを管理するプレイヤ管理テーブル（図５（ｂ））、テンプレートを管理するテンプレート管理テーブル（図５（ｃ））、プレイヤ、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、サーバ記憶部３２は、所定の処理に係る一時的なデータを一時的に記憶してもよい。
【００７４】
図５（ｂ）には、プレイヤ管理テーブルが示されている。プレイヤ管理テーブルには、各プレイヤについて、当該プレイヤのＩＤ、名前、画像データのファイル名、作成したテンプレートのＩＤ等が記憶される。
【００７５】
図５（ｃ）には、テンプレート管理テーブルが示されている。図２（ｄ）と同様に、テンプレート管理テーブルには、各テンプレートについて、当該テンプレートのＩＤ、サムネイル画像データのファイル名、各施設の種類ＩＤ及びテンプレート内での配置位置等が記憶される。
【００７６】
サーバ処理部３３は、一又は複数個のプロセッサ及びその周辺回路を備える。サーバ処理部３３は、サーバ３の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。サーバ処理部３３は、サーバ３の各種処理がサーバ記憶部３２に記憶されているプログラム等に基づいて適切な手順で実行されるように、サーバ通信部３１等の動作を制御する。サーバ処理部３３は、サーバ記憶部３２に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、サーバ処理部３３は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【００７７】
２．２．１．サーバ処理部３３の構成
サーバ処理部３３は、サーバ制御部３３１と、テンプレート登録部３３２と、テンプレート提供部３３３とを備える。これらの各部は、サーバ処理部３３が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとしてサーバ３に実装されてもよい。
【００７８】
以下、サーバ制御部３３１による処理について説明する。
【００７９】
サーバ制御部３３１は、サーバの動作を制御し、適宜テンプレート登録部３３２、テンプレート提供部３３３等に処理の実行を指示する。
【００８０】
具体的には、携帯端末２からサーバ通信部３１を介して、テンプレート登録要求を受信した場合に、サーバ制御部３３１は、受信したテンプレート登録要求をパラメータとして、テンプレート登録部３３２に処理の実行を指示する。
【００８１】
携帯端末２からサーバ通信部３１を介して、テンプレート一覧提供要求又はテンプレート提供要求を受信した場合に、サーバ制御部３３１は、受信したテンプレート一覧提供要求等をパラメータとして、テンプレート提供部３３３に処理の実行を指示する。
【００８２】
携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に、サーバ制御部

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３３１は、対応する他の処理を実行する。
【００８３】
以下、テンプレート登録部３３２による処理について説明する。
【００８４】
テンプレート登録部３３２は、テンプレートをサーバ記憶部３２に格納する。
即ち、テンプレート登録部３３２は、与えられたテンプレート登録要求を解析し、プレイヤのＩＤ、テンプレートのＩＤ、サムネイル画像データ、並びに各施設の種類ＩＤ及び配置位置を特定する。そして、テンプレート登録部３３２は、特定したサムネイル画像データをサーバ記憶部３２に格納する。また、テンプレート登録部３３２は、特定したプレイヤＩＤをキーとして、サーバ記憶部３２に記憶されているプレイヤ管理テーブルを参照し、対応するプレイヤが作成したテンプレートのＩＤとして、特定したテンプレートＩＤを格納する。さらに、テンプレート登録部３３２は、特定したテンプレートＩＤ、格納したサムネイル画像データのファイル名、特定した各施設の種類ＩＤ及び配置位置等を、サーバ記憶部３２に記憶されているテンプレート管理テーブルに格納する。
【００８５】
そして、テンプレート登録部３３２は、処理を終了する。
【００８６】
以下、テンプレート提供部３３３による処理について説明する。
【００８７】
テンプレート提供部３３３は、サーバ記憶部３２からテンプレート一覧又はテンプレートを取得し、取得したテンプレート一覧等を携帯端末２に送信する。
【００８８】
具体的には、テンプレート一覧提供要求が与えられた場合に、テンプレート提供部３３３は、サーバ記憶部３２からテンプレート一覧を取得する。
即ち、テンプレート提供部３３３は、与えられたテンプレート一覧提供要求を解析し、プレイヤのＩＤを特定する。そして、テンプレート提供部３３３は、特定したプレイヤＩＤをキーとして、サーバ記憶部３２に記憶されているプレイヤ管理テーブルを参照し、対応するプレイヤ以外のプレイヤが作成したテンプレートのＩＤを抽出する。また、テンプレート提供部３３３は、抽出したテンプレートＩＤをキーとして、サーバ記憶部３２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートのサムネイル画像データのファイル名を抽出する。さらに、テンプレート提供部３３３は、抽出したファイル名に対応するサムネイル画像データをサーバ記憶部３２から取得する。
【００８９】
一方、テンプレート提供要求が与えられた場合に、テンプレート提供部３３３は、サーバ記憶部３２からテンプレートを取得する。
即ち、テンプレート提供部３３３は、与えられたテンプレート提供要求を解析し、テンプレートのＩＤを特定する。そして、テンプレート提供部３３３は、特定したテンプレートＩＤをキーとして、サーバ記憶部３２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートのサムネイル画像データのファイル名並びに各施設の種類ＩＤ及び配置位置を抽出する。また、テンプレート提供部３３３は、抽出したファイル名に対応するサムネイル画像データをサーバ記憶部３２から取得する。
【００９０】
テンプレート提供部３３３は、取得したテンプレート一覧等を携帯端末２に送信する。
即ち、テンプレート提供部３３３は、抽出した各テンプレートのＩＤ及びサムネイル画像データ、又は取得等したテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を、サーバ通信部３１を介して携帯端末２に送信する。
【００９１】
そして、テンプレート提供部３３３は、処理を終了する。
【００９２】
３．ゲームシステム１の動作

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図６は、携帯端末２の動作フローの一例を示す図である。
なお、以下に説明する動作フローは、予め端末記憶部２２に記憶されているプログラムに基づいて、主に端末処理部２５により、携帯端末２の各要素と協働して実行される。
【００９３】
図６（ａ）は、ゲーム進行部２５１の動作フローの一例を示す図である。
【００９４】
プレイヤは、操作部２３を介して端末処理部２５に、ゲームの開始を指示する。端末処理部２５は、ゲームプログラムに基づいて処理を開始する。即ち、ゲームプログラムにより実現されるゲーム進行部２５１は、ゲーム進行画面３００を表示する（ステップＳ１００）。
【００９５】
プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に（ステップＳ１０２―Ｙｅｓ）、ゲーム進行部２５１は、テンプレート作成部２５２に処理の実行を指示する（ステップＳ１０４）。
【００９６】
図６（ｂ）は、テンプレート作成部２５２の動作フローの一例を示す図である。
【００９７】
テンプレート作成部２５２は、範囲選択画面３１０を表示する（ステップＳ１２０）。
【００９８】
プレイヤにより操作部２３を介して、範囲が選択され（ステップＳ１２２）、テンプレート作成の実行が指示された場合に、テンプレート作成部２５２は、テンプレートを作成する（ステップＳ１２４）。
【００９９】
テンプレート作成部２５２は、作成したテンプレートをサーバ３に登録する（ステップＳ１２６）。そして、テンプレート作成部２５２は、処理を終了する。
【０１００】
一方、プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に（ステップＳ１０６―Ｙｅｓ）、ゲーム進行部２５１は、テンプレート適用部２５３に処理の実行を指示する（ステップＳ１０８）。
【０１０１】
図６（ｃ）は、テンプレート適用部２５３の動作フローの一例を示す図である。
【０１０２】
テンプレート適用部２５３は、テンプレート選択画面３２０を表示する（ステップＳ１３０）。
【０１０３】
プレイヤにより操作部２３を介して、テンプレートが選択された場合に（ステップＳ１３２）、テンプレート適用部２５３は、テンプレート表示画面３３０を表示する。
【０１０４】
プレイヤにより操作部２３を介して、テンプレートが決定された場合に（ステップＳ１３４）、テンプレート適用部２５３は、範囲選択画面３４０を表示する。
【０１０５】
プレイヤにより操作部２３を介して、範囲が選択され（ステップＳ１３６）、テンプレート適用の実行が指示された場合に、テンプレート適用部２５３は、テンプレートを適用する（ステップＳ１３８）。そして、テンプレート適用部２５３は、処理を終了する。
【０１０６】
一方、プレイヤにより操作部２３を介して、他の処理が指示された場合に（ステップＳ１０６―Ｎｏ）、ゲーム進行部２５１は、当該他の処理を実行する（ステップＳ１１０）。
【０１０７】
図７は、サーバ３の動作フローの一例を示す図である。

なお、以下に説明する動作フローは、予めサーバ記憶部３２に記憶されているプログラムに基づいて、主にサーバ処理部３３により、サーバ３の各要素と協働して実行される。

【０１０８】

図７（ａ）は、サーバ制御部３３１の動作フローの一例を示す図である。

【０１０９】

携帯端末２からサーバ通信部３１を介して、テンプレート登録要求を受信した場合に（ステップＳ２００―Ｙｅｓ）、サーバ制御部３３１は、受信したテンプレート登録要求をパラメータとして、テンプレート登録部３３２に処理の実行を指示する（ステップＳ２０２）。

【０１１０】

図７（ｂ）は、テンプレート登録部３３２の動作フローの一例を示す図である。

【０１１１】

テンプレート登録部３３２は、与えられたテンプレート登録要求内のテンプレートをサーバ記憶部３２に格納する（ステップＳ２２０）。そして、テンプレート登録部３３２は、処理を終了する。

【０１１２】

一方、携帯端末２からサーバ通信部３１を介して、テンプレート一覧提供要求又はテンプレート提供要求を受信した場合に（ステップＳ２０４―Ｙｅｓ）、サーバ制御部３３１は、受信したテンプレート一覧提供要求等をパラメータとして、テンプレート提供部３３３に処理の実行を指示する（ステップＳ２０６）。

【０１１３】

図７（ｃ）は、テンプレート提供部３３３の動作フローの一例を示す図である。

【０１１４】

テンプレート一覧提供要求が与えられた場合に（ステップＳ２３０―Ｙｅｓ）、テンプレート提供部３３３は、与えられたテンプレート一覧提供要求内のプレイヤＩＤに対応するプレイヤ以外のプレイヤに係るテンプレート一覧を、サーバ記憶部３２から取得する（ステップＳ２３２）。

【０１１５】

一方、テンプレート提供要求が与えられた場合に（ステップＳ２３０―Ｎｏ）、テンプレート提供部３３３は、与えられたテンプレート提供要求内のテンプレートＩＤに対応するテンプレートを、サーバ記憶部３２から取得する（ステップＳ２３４）。

【０１１６】

テンプレート提供部３３３は、取得したテンプレート一覧等を携帯端末２に送信する（ステップＳ２３６）。そして、テンプレート提供部３３３は、処理を終了する。

【０１１７】

一方、携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に（ステップＳ２０４―Ｎｏ）、サーバ制御部３３１は、対応する他の処理を実行する（ステップＳ２０８）。

【０１１８】

以上説明してきたように、テンプレートを用いて施設の配置を変更可能にすることにより、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることが可能となる。

【０１１９】

なお、上記実施形態においては、テンプレートを適用するとそのテンプレートの規定にもとづいて自動的に施設がゲーム空間に配置される例について説明を行ったが、テンプレートを適用する場合、目安となる表示がゲーム空間上に表示され、プレイヤは、その表示を目安にして、自ら施設の種類や、施設の配置を変更することにしてもよい。

また、例えば、建物や壁・柵といったような施設のみならず、他のプレイヤからの攻撃に対して応戦する兵士や武器の種類、数量といった情報であってもよい。

また、テンプレートには、その目的に応じて複数用意されており、目的に応じてプレ

ヤが選択可能にしてもよい。具体例としては、他のプレイヤの攻撃してくる兵士の種類には複数あり、弓矢を用いた兵士への防御に強い街並みを実現するテンプレート、巨人を用いる攻撃への防御に力を発揮する街並みを実現するテンプレート、空からの攻撃への防御に強いテンプレート等である。

【０１２０】

（第２実施形態）

１．本実施形態の概略

第１実施形態では、プレイヤが一人でゲームを進行させるシングルプレイヤ環境を想定していた。しかしながら、本発明は、プレイヤが複数人でゲームを進行させるマルチプレイヤ環境にも適用することができる。本実施形態では、複数人のプレイヤが一のゲーム空間内で街作りを行うものとし、各プレイヤがゲーム空間内の所定の範囲にテンプレートを適用するものとする。プレイヤによりテンプレートが適用されると、ゲーム空間内に配置された施設のうちの当該プレイヤに係る施設が、テンプレートにより規定された当該施設の配置位置に移動される。

【０１２１】

２．ゲームシステム１の構成

ゲームシステム１の概略構成は、図１に示されるものと同一であるので、以下では説明を省略する。

【０１２２】

２．１．携帯端末２の構成

図８（ａ）は、携帯端末２の概略構成の一例を示す図である。

【０１２３】

携帯端末２は、プレイヤによる操作部２３の操作又は他の携帯端末２からの指示に応じてゲームを進行させる。また、携帯端末２は、必要に応じて、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介してサーバ３に接続し、サーバ３と通信を行う。そのために、携帯端末２は、端末通信部２１と、端末記憶部２２’と、操作部２３と、表示部２４と、端末処理部２５とを備える。

なお、これらの構成のうち、端末通信部２１、操作部２３、及び表示部２４については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０１２４】

端末記憶部２２’は、例えば、半導体メモリ装置を備える。端末記憶部２２’は、端末処理部２５での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、端末記憶部２２’は、ドライバプログラムとして、操作部２３を制御する入力デバイスドライバプログラム、表示部２４を制御する出力デバイスドライバプログラム等を記憶する。また、端末記憶部２２’は、アプリケーションプログラムとして、ゲームを進行させ、その結果を表示するゲームプログラム等を記憶する。また、端末記憶部２２’は、データとして、プレイヤのＩＤ、ゲーム空間内に配置された施設を管理する施設管理テーブル（図８（ｂ））、施設の種類を管理する施設種類管理テーブル（図２（ｃ））、テンプレートを管理するテンプレート管理テーブル（図２（ｄ））、施設、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、端末記憶部２２’は、所定の処理に係る一時的なデータを一時的に記憶してもよい。

【０１２５】

図８（ｂ）には、施設管理テーブルが示されている。施設管理テーブルには、各プレイヤについて、当該プレイヤがゲーム空間内に配置した各施設のＩＤ、種類ＩＤ、ゲーム空間内での配置位置等が記憶される。

【０１２６】

端末処理部２５は、一又は複数個のプロセッサ及びその周辺回路を備える。端末処理部２５は、携帯端末２の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。端末処理部２５は、携帯端末２の各種処理が端末記憶部２２’に記憶されているプ

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グラム、操作部２３の操作等に基づいて適切な手順で実行されるように、端末通信部２１、表示部２４等の動作を制御する。端末処理部２５は、端末記憶部２２’に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、端末処理部２５は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。

【０１２７】

２．１．１．端末処理部２５の機能

図９は、マルチプレイヤ環境でのテンプレートの適用の概念を示す図である。

【０１２８】

９００は、ゲーム空間を示している。ゲーム空間９００内には、十二の施設が配置されている。即ち、施設「●」が四つ、施設「▲」が四つ、及び施設「■」が四つ配置されている。これらの施設のうち、右上の３×３マスに配置されている一つの施設「●」及び二つの施設「▲」は、プレイヤ$_1$に係るものであるとする。同様に、右下の３×３マスに配置されている三つの施設「■」はプレイヤ$_2$に係るものであり、左下の３×３マスに配置されている二つの施設「▲」及び一つの施設「■」はプレイヤ$_3$に係るものであり、左上の３×３マスに配置されている三つの施設「●」はプレイヤ$_4$に係るものであるとする。

【０１２９】

プレイヤ$_1$が、ゲーム空間９００内の範囲９０１について、テンプレート９１０を適用したとする。同様に、プレイヤ$_2$～プレイヤ$_4$が、範囲９０２～９０４について、テンプレート９２０～９４０をそれぞれ適用したとする。ゲーム空間９００内に配置された施設のうちのプレイヤ$_1$に係るものの各種類の数は、テンプレート９１０により配置位置が規定された施設の各種類の数と同じである。したがって、プレイヤ$_1$に係るすべての施設が、テンプレート９１０により規定された当該施設の配置位置に移動される。同様に、プレイヤ$_2$～プレイヤ$_4$に係るすべての施設が、テンプレート９２０～９４０により規定された当該施設の配置位置に移動される。９００’は、すべての施設が移動された後のゲーム空間９００を示している。

【０１３０】

２．１．２．端末処理部２５の構成

以上の機能を実現するために、端末処理部２５は、ゲーム進行部２５１’と、テンプレート作成部２５２と、テンプレート適用部２５３と、第２テンプレート適用部２５４とを備える。これらの各部は、端末処理部２５が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとして携帯端末２に実装されてもよい。

なお、これらの構成のうち、テンプレート作成部２５２及びテンプレート適用部２５３については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０１３１】

以下、ゲーム進行部２５１’による処理について説明する。

【０１３２】

ゲーム進行部２５１’は、ゲームの開始及び進行を制御し、適宜テンプレート作成部２５２、テンプレート適用部２５３、第２テンプレート適用部２５４等に処理の実行を指示する。

【０１３３】

具体的には、プレイヤにより操作部２３を介して、ゲームの開始が指示された場合に、ゲーム進行部２５１’は、ゲーム進行画面３００を表示する。

【０１３４】

プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、ゲーム進行部２５１’は、テンプレート作成部２５２に処理の実行を指示する。

【０１３５】

プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に、ゲーム進行部２５１’は、テンプレート適用部２５３に処理の実行を指示する。

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【０１３６】
他の携帯端末２から端末通信部２１を介して、テンプレート適用指示を受信した場合に、ゲーム進行部２５１’は、受信したテンプレート適用指示をパラメータとして、第２テンプレート適用部２５４に処理の実行を指示する。
【０１３７】
プレイヤにより操作部２３を介して、他の処理が指示された場合に、ゲーム進行部２５１’は、当該他の処理を実行する。
【０１３８】
以下、第２テンプレート適用部２５４による処理について説明する。
【０１３９】
第２テンプレート適用部２５４は、サーバ３からテンプレートを取得し、取得したテンプレートを適用する。
【０１４０】
具体的には、第２テンプレート適用部２５４は、サーバ３からテンプレートを取得する。
即ち、第２テンプレート適用部２５４は、与えられたテンプレート適用指示を解析し、プレイヤのＩＤ、テンプレートのＩＤ、及びテンプレートが適用される範囲を示す座標を特定する。また、第２テンプレート適用部２５４は、特定したテンプレートＩＤをパラメータとして、テンプレート提供要求を、端末通信部２１を介してサーバ３に送信する。また、第２テンプレート適用部２５４は、サーバ３から端末通信部２１を介して、対応するテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を受信する。そして、第２テンプレート適用部２５４は、受信したサムネイル画像データを端末記憶部２２’に格納する。また、第２テンプレート適用部２５４は、特定したテンプレートＩＤ、格納したサムネイル画像データのファイル名、受信した各施設の種類ＩＤ及び配置位置等を、端末記憶部２２’に記憶されているテンプレート管理テーブルに格納する。
【０１４１】
第２テンプレート適用部２５４は、取得したテンプレートを適用する。
即ち、第２テンプレート適用部２５４は、特定したプレイヤＩＤをキーとして、端末記憶部２２’に記憶されている施設管理テーブルを参照し、対応するプレイヤに係る各施設のＩＤ、種類ＩＤ、及びゲーム空間内での配置位置を抽出する。また、第２テンプレート適用部２５４は、抽出した施設の各種類の数を計数する。同様に、第２テンプレート適用部２５４は、特定したテンプレートＩＤをキーとして、端末記憶部２２’に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤ及びテンプレート内での配置位置を抽出する。また、第２テンプレート適用部２５４は、抽出した施設の各種類の数を計数する。さらに、第２テンプレート適用部２５４は、抽出したテンプレート内での配置位置を、特定した範囲を示す座標に基づいて、ゲーム空間内での配置位置に変換する。そして、第２テンプレート適用部２５４は、施設の各種類について、ゲーム空間内の当該種類の施設の数と、テンプレート内の当該種類の施設の数とを比較し、その結果に応じて、ゲーム空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置に移動させる。
【０１４２】
そして、第２テンプレート適用部２５４は、処理を終了する。
【０１４３】
２．２．サーバ３の構成
サーバ３の概略構成は、図５（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１４４】
３．ゲームシステム１の動作
図１０は、携帯端末２の動作フローの一例を示す図である。
なお、以下に説明する動作フローは、予め端末記憶部２２’に記憶されているプログラ

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ムに基づいて、主に端末処理部２５により、携帯端末２の各要素と協働して実行される。
【０１４５】
図１０（ａ）は、ゲーム進行部２５１’の動作フローの一例を示す図である。
なお、これらのステップのうち、ステップＳ１００～Ｓ１０８については、図６（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１４６】
他の携帯端末２から端末通信部２１を介して、テンプレート適用指示を受信した場合に（ステップＳ３００―Ｙｅｓ）、ゲーム進行部２５１’は、受信したテンプレート適用指示をパラメータとして、第２テンプレート適用部２５４に処理の実行を指示する（ステップＳ３０２）。
【０１４７】
図１０（ｂ）は、第２テンプレート適用部２５４の動作フローの一例を示す図である。
【０１４８】
第２テンプレート適用部２５４は、与えられたテンプレート適用指示内のテンプレートＩＤに対応するテンプレートをサーバ３から取得する（ステップＳ３１０）。
【０１４９】
第２テンプレート適用部２５４は、取得したテンプレートを適用する（ステップＳ３１２）。そして、第２テンプレート適用部２５４は、処理を終了する。
【０１５０】
一方、プレイヤにより操作部２３を介して、他の処理が指示された場合に（ステップＳ３００―Ｎｏ）、ゲーム進行部２５１’は、当該他の処理を実行する（ステップＳ１１０）。
【０１５１】
以上説明してきたように、マルチプレイヤ環境において各プレイヤがテンプレートを用いて施設の配置を変更可能にすることにより、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることが可能となる。
【０１５２】
なお、本発明は、上記実施形態に限定されるものではない。例えば、上記実施形態では、複数のテンプレートを組み合わせて一のテンプレートを作成するには、プレイヤが複数のテンプレートをそれぞれゲーム空間内の所定の領域に適用するか、複数人のプレイヤがそれぞれテンプレートをゲーム空間内の所定の領域に適用した上で、それらの領域を包含する所定の領域についてテンプレートを作成するものとした。しかしながら、プレイヤが複数のテンプレートを指定するか、複数人のプレイヤがそれぞれテンプレートを指定した上で、それらを直接組み合わせて一のテンプレートを作成してもよい。
図１１は、マルチプレイヤ環境でのテンプレートの組み合わせの概念を示す図である。
プレイヤ$_1$が、範囲１１００について、テンプレート１１１０を指定したとする。同様に、プレイヤ$_2$～プレイヤ$_4$が、範囲１１０１～１１０３について、テンプレート１１２０～１１４０をそれぞれ指定したとする。１１５０は、テンプレート１１１０～１１４０が組み合されたテンプレートを示している。
以上の機能を実現するために、携帯端末２は、以下のような処理を行えばよい。
プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、携帯端末２は、所定の画面を表示し、テンプレート及び範囲の指定を受け付ける。同様に、携帯端末２は、他の携帯端末２からテンプレート及び範囲の指定を受け付ける。そして、携帯端末２は、指定されたテンプレートを端末記憶部２２又はサーバ３から取得し、取得したテンプレートを指定された範囲に配置することにより、新たなテンプレートを作成する。
即ち、携帯端末２は、取得したテンプレートにより規定された各施設の配置位置を、指定された範囲が示す座標に基づいて補正する。そして、携帯端末２は、取得したテンプレートにより規定された各施設の種類ＩＤ及び補正配置位置等を、新たに採番したテンプレートＩＤを付与した上で、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。

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【０１５３】
（第３実施形態）
１．本実施形態の概略
上記実施形態では、テンプレートは、プレイヤが作成するものとした。しかしながら、サーバ等が既成のテンプレートを配布することもできる。本実施形態では、街作りゲームでのイベント（例えば、敵キャラクタから街を防御する）の開催に応じてサーバが既成のテンプレートを配布するものとし、プレイヤは配布されたテンプレートを自身のゲーム空間内の所定の範囲に適用し、必要に応じて施設を移動したり、追加したりして、イベントの実行に備えるものとする。所定の時間が経過した後にイベントが実行され、その結果に応じてプレイヤには様々な特典（例えば、テンプレート、施設等）が付与される。ここでいうテンプレートは、イベントにおけるプレイヤに与えられた課題のようなものともいえる。
【０１５４】
２．ゲームシステム１の構成
ゲームシステム１の概略構成は、図１に示されるものと同一であるので、以下では説明を省略する。
【０１５５】
２．１．携帯端末２の構成
図１２は、携帯端末２の概略構成の一例を示す図である。
【０１５６】
携帯端末２は、プレイヤによる操作部２３の操作に応じてゲームを進行させる。また、携帯端末２は、必要に応じて、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介してサーバ３に接続し、サーバ３と通信を行う。そのために、携帯端末２は、端末通信部２１と、端末記憶部２２と、操作部２３と、表示部２４と、端末処理部２５とを備える。
なお、これらの構成のうち、端末通信部２１、端末記憶部２２、操作部２３、及び表示部２４については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１５７】
端末処理部２５は、一又は複数個のプロセッサ及びその周辺回路を備える。端末処理部２５は、携帯端末２の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。端末処理部２５は、携帯端末２の各種処理が端末記憶部２２に記憶されているプログラム、操作部２３の操作等に基づいて適切な手順で実行されるように、端末通信部２１、表示部２４等の動作を制御する。端末処理部２５は、端末記憶部２２に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、端末処理部２５は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【０１５８】
２．１．１．端末処理部２５の構成
端末処理部２５は、ゲーム進行部２５１’’と、テンプレート作成部２５２と、テンプレート適用部２５３と、第３テンプレート適用部２５５とを備える。これらの各部は、端末処理部２５が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとして携帯端末２に実装されてもよい。
なお、これらの構成のうち、テンプレート作成部２５２及びテンプレート適用部２５３については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１５９】
以下、ゲーム進行部２５１’’による処理について説明する。
【０１６０】
ゲーム進行部２５１’’は、ゲームの開始及び進行を制御し、適宜テンプレート作成部

２５２、テンプレート適用部２５３、第３テンプレート適用部２５５等に処理の実行を指示する。
【０１６１】
具体的には、プレイヤにより操作部２３を介して、ゲームの開始が指示された場合に、ゲーム進行部２５１’’は、ゲーム進行画面３００を表示する。
【０１６２】
プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、ゲーム進行部２５１’’は、テンプレート作成部２５２に処理の実行を指示する。
【０１６３】
プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に、ゲーム進行部２５１’’は、テンプレート適用部２５３に処理の実行を指示する。
【０１６４】
サーバ３から端末通信部２１を介して、イベント開始通知を受信した場合に、ゲーム進行部２５１’’は、受信したイベント開始通知をパラメータとして、第３テンプレート適用部２５５に処理の実行を指示する。
【０１６５】
プレイヤにより操作部２３を介して、他の処理が指示された場合に、ゲーム進行部２５１’’は、当該他の処理を実行する。
【０１６６】
以下、第３テンプレート適用部２５５による処理について説明する。
【０１６７】
第３テンプレート適用部２５５は、イベントに係るテンプレートをサーバ３から取得し、取得したテンプレートを適用する。
【０１６８】
具体的には、第３テンプレート適用部２５５は、イベントに係るテンプレートをサーバ３から取得する。
即ち、第３テンプレート適用部２５５は、与えられたイベント開始通知を解析し、イベントのＩＤを特定する。また、プレイヤにより操作部２３を介して、イベントへの参加が指示された場合に、第３テンプレート適用部２５５は、プレイヤのＩＤ及び特定したイベントＩＤをパラメータとして、イベント参加要求を、端末通信部２１を介してサーバ３に送信する。また、第３テンプレート適用部２５５は、サーバ３から端末通信部２１を介して、対応するイベントに係るテンプレートのＩＤ、サムネイル画像データ、並びに各施設の種類ＩＤ及び配置位置を受信する。そして、第３テンプレート適用部２５５は、受信したサムネイル画像データを端末記憶部２２に格納する。また、第３テンプレート適用部２５５は、受信したテンプレートＩＤ、格納したサムネイル画像データのファイル名、受信した各施設の種類ＩＤ及び配置位置等を、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。
【０１６９】
第３テンプレート適用部２５５は、取得したテンプレートを適用する。
即ち、第３テンプレート適用部２５５は、端末記憶部２２に記憶されている施設管理テーブルを参照し、各施設のＩＤ、種類ＩＤ、及びゲーム空間内での配置位置を抽出する。また、第３テンプレート適用部２５５は、抽出した施設の各種類の数を計数する。同様に、第３テンプレート適用部２５５は、受信したテンプレートＩＤをキーとして、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤ及びテンプレート内での配置位置を抽出する。また、第３テンプレート適用部２５５は、抽出した施設の各種類の数を計数する。さらに、第３テンプレート適用部２５５は、抽出したテンプレート内での配置位置を、プレイヤにより操作部２３を介して選択された範囲を示す座標に基づいて、ゲーム空間内での配置位置に変換する。そして、第３テンプレート適用部２５５は、施設の各種類について、ゲーム空間内の当該種類の施設の数と、テンプレート内の当該種類の施設の数とを比較し、その結果に応じて、ゲー

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空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置に移動させる。
【０１７０】
そして、第３テンプレート適用部２５５は、処理を終了する。
【０１７１】
２．２．サーバ３の構成
図１３（ａ）は、サーバ３の概略構成の一例を示す図である。
【０１７２】
サーバ３は、携帯端末２からの要求に応じてテンプレートの登録及び提供を行う。また、イベントの管理及びテンプレートの提供を行う。そのために、サーバ３は、サーバ通信部３１と、サーバ記憶部３２’と、サーバ処理部３３とを備える。
なお、これらの構成のうち、サーバ通信部３１については、図５（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１７３】
サーバ記憶部３２’は、例えば、磁気テープ装置、磁気ディスク装置、又は光ディスク装置のうちの少なくともいずれか一つを備える。サーバ記憶部３２’は、サーバ処理部３３での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、サーバ記憶部３２’は、アプリケーションプログラムとして、テンプレートの登録及び提供並びにイベントの管理を行うゲーム管理プログラム等を記憶する。また、サーバ記憶部３２’は、データとして、プレイヤを管理するプレイヤ管理テーブル（図５（ｂ））、テンプレートを管理するテンプレート管理テーブル（図５（ｃ））、イベントを管理するイベント管理テーブル（図１３（ｂ））、プレイヤ、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、サーバ記憶部３２’は、所定の処理に係る一時的なデータを一時的に記憶してもよい。
【０１７４】
図１３（ｂ）には、イベント管理テーブルが示されている。イベント管理テーブルには、各イベントについて、当該イベントのＩＤ、開始日時、用いられるテンプレートのＩＤ、参加しているプレイヤのＩＤ等が記憶される。
【０１７５】
サーバ処理部３３は、一又は複数個のプロセッサ及びその周辺回路を備える。サーバ処理部３３は、サーバ３の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。サーバ処理部３３は、サーバ３の各種処理がサーバ記憶部３２’に記憶されているプログラム等に基づいて適切な手順で実行されるように、サーバ通信部３１等の動作を制御する。サーバ処理部３３は、サーバ記憶部３２’に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、サーバ処理部３３は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【０１７６】
２．２．１．サーバ処理部３３の構成
サーバ処理部３３は、サーバ制御部３３１’と、テンプレート登録部３３２と、テンプレート提供部３３３と、イベント管理部３３４とを備える。これらの各部は、サーバ処理部３３が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとしてサーバ３に実装されてもよい。
なお、これらの構成のうち、テンプレート登録部３３２及びテンプレート提供部３３３については、図５（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１７７】
以下、サーバ制御部３３１’による処理について説明する。
【０１７８】
サーバ制御部３３１’は、サーバの動作を制御し、適宜テンプレート登録部３３２、テンプレート提供部３３３、イベント管理部３３４等に処理の実行を指示する。

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【０１７９】
具体的には、携帯端末２からサーバ通信部３１を介して、テンプレート登録要求を受信した場合に、サーバ制御部３３１’は、受信したテンプレート登録要求をパラメータとして、テンプレート登録部３３２に処理の実行を指示する。
【０１８０】
携帯端末２からサーバ通信部３１を介して、テンプレート一覧提供要求又はテンプレート提供要求を受信した場合に、サーバ制御部３３１’は、受信したテンプレート一覧提供要求等をパラメータとして、テンプレート提供部３３３に処理の実行を指示する。
【０１８１】
開始日時を経過したイベントが存在する場合に、サーバ制御部３３１’は、当該イベントのＩＤをパラメータとして、イベント管理部３３４に処理の実行を指示する。
即ち、サーバ制御部３３１’は、サーバ記憶部３２’に記憶されているイベント管理テーブルを参照し、各イベントのＩＤ及び開始日時を抽出する。また、サーバ制御部３３１’は、不図示の時計から現在日時を取得する。そして、取得した現在日時が開始日時を経過したイベントが存在する場合に、サーバ制御部３３１’は、当該イベントのＩＤをパラメータとして、イベント管理部３３４に処理の実行を指示する。
【０１８２】
携帯端末２からサーバ通信部３１を介して、イベント参加要求を受信した場合に、サーバ制御部３３１’は、受信したイベント参加要求をパラメータとして、イベント管理部３３４に処理の実行を指示する。
【０１８３】
携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に、サーバ制御部３３１’は、対応する他の処理を実行する。
【０１８４】
以下、イベント管理部３３４による処理について説明する。
【０１８５】
イベント管理部３３４は、イベントの開始通知を携帯端末２に送信する。また、イベント管理部３３４は、イベントに係るテンプレートをサーバ記憶部３２’から取得し、取得したテンプレートを携帯端末２に送信する。
【０１８６】
具体的には、イベントのＩＤが与えられた場合に、イベント管理部３３４は、イベントの開始通知を携帯端末２に送信する。
即ち、イベント管理部３３４は、サーバ記憶部３２’に記憶されているプレイヤ管理テーブルを参照し、各プレイヤを特定する。そして、イベント管理部３３４は、サーバ通信部３１を介して特定した各プレイヤの携帯端末２に、与えられたイベントＩＤをパラメータとして、イベント開始通知を送信する。
【０１８７】
そして、イベント管理部３３４は、処理を終了する。
【０１８８】
一方、イベント参加要求が与えられた場合に、イベント管理部３３４は、対応するイベントにプレイヤを参加させる。
即ち、イベント管理部３３４は、与えられたイベント参加要求を解析し、イベントのＩＤ及びプレイヤのＩＤを特定する。そして、イベント管理部３３４は、特定したイベントＩＤをキーとして、サーバ記憶部３２’に記憶されているイベント管理テーブルを参照し、対応するイベントに参加しているプレイヤとして、特定したプレイヤＩＤを格納する。
【０１８９】
イベント管理部３３４は、対応するイベントに係るテンプレートをサーバ記憶部３２’から取得する。
即ち、イベント管理部３３４は、特定したイベントＩＤをキーとして、サーバ記憶部３２’に記憶されているイベント管理テーブルを参照し、対応するイベントに係るテンプ

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ートのＩＤを抽出する。そして、イベント管理部３３４は、抽出したテンプレートＩＤをキーとして、サーバ記憶部３２’に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートのサムネイル画像データのファイル名並びに各施設の種類ＩＤ及び配置位置を抽出する。また、イベント管理部３３４は、抽出したファイル名に対応するサムネイル画像データをサーバ記憶部３２’から取得する。

【０１９０】

イベント管理部３３４は、取得したテンプレートを携帯端末２に送信する。

即ち、イベント管理部３３４は、取得等したテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を、サーバ通信部３１を介して携帯端末２に送信する。

【０１９１】

そして、イベント管理部３３４は、処理を終了する。

【０１９２】

３．ゲームシステム１の動作

図１４は、携帯端末２の動作フローの一例を示す図である。

なお、以下に説明する動作フローは、予め端末記憶部２２に記憶されているプログラムに基づいて、主に端末処理部２５により、携帯端末２の各要素と協働して実行される。

【０１９３】

図１４（ａ）は、ゲーム進行部２５１’’の動作フローの一例を示す図である。

なお、これらのステップのうち、ステップＳ１００～Ｓ１０８については、図６（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０１９４】

サーバ３から端末通信部２１を介して、イベント開始通知を受信した場合に（ステップＳ４００―Ｙｅｓ）、ゲーム進行部２５１’’は、受信したイベント開始通知をパラメータとして、第３テンプレート適用部２５５に処理の実行を指示する（ステップＳ４０２）。

【０１９５】

図１４（ｂ）は、第３テンプレート適用部２５５の動作フローの一例を示す図である。

【０１９６】

第３テンプレート適用部２５５は、イベントに係るテンプレートをサーバ３から取得する（ステップＳ４１０）。

【０１９７】

第３テンプレート適用部２５５は、取得したテンプレートを適用する（ステップＳ４１２）。そして、第３テンプレート適用部２５５は、処理を終了する。

【０１９８】

一方、プレイヤにより操作部２３を介して、他の処理が指示された場合に（ステップＳ４００―Ｎｏ）、ゲーム進行部２５１’’は、当該他の処理を実行する（ステップＳ１１０）。

【０１９９】

図１５は、サーバ３の動作フローの一例を示す図である。

なお、以下に説明する動作フローは、予めサーバ記憶部３２’に記憶されているプログラムに基づいて、主にサーバ処理部３３により、サーバ３の各要素と協働して実行される。

【０２００】

図１５（ａ）は、サーバ制御部３３１’の動作フローの一例を示す図である。

なお、これらのステップのうち、ステップＳ２００～Ｓ２０６については、図７（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０２０１】

開始日時を経過したイベントが存在する場合に（ステップＳ５００―Ｙｅｓ）、サーバ制御部３３１’は、当該イベントのＩＤをパラメータとして、イベント管理部３３４に処理の実行を指示する（ステップＳ５０２）。

【０２０２】
図１５（ｂ）は、イベント管理部３３４の動作フローの一例を示す図である。
【０２０３】
イベントのＩＤが与えられた場合に、イベント管理部３３４は、イベントの開始通知を携帯端末２に送信する（ステップＳ５１０）。そして、イベント管理部３３４は、処理を終了する。
【０２０４】
一方、携帯端末２からサーバ通信部３１を介して、イベント参加要求を受信した場合に（ステップＳ５０４―Ｙｅｓ）、サーバ制御部３３１’は、受信したイベント参加要求をパラメータとして、イベント管理部３３４に処理の実行を指示する（ステップＳ５０６）。
【０２０５】
図１５（ｃ）は、イベント管理部３３４の動作フローの他の一例を示す図である。
【０２０６】
イベント参加要求が与えられた場合に、イベント管理部３３４は、対応するイベントにプレイヤを参加させる（ステップＳ５２０）。
【０２０７】
イベント管理部３３４は、対応するイベントに係るテンプレートをサーバ記憶部３２’から取得する（ステップＳ５２２）。
【０２０８】
イベント管理部３３４は、取得したテンプレートを携帯端末２に送信する（ステップＳ５２４）。そして、イベント管理部３３４は、処理を終了する。
【０２０９】
一方、携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に（ステップＳ５０４―Ｎｏ）、サーバ制御部３３１’は、対応する他の処理を実行する（ステップＳ２０８）。
【０２１０】
以上説明してきたように、既成のテンプレートを配布可能にすることにより、施設の配置に応じたイベントの開催等が可能となり、街作りゲームの興趣を向上させ、プレイヤをゲームに惹きつけ続けることが可能となる。
【０２１１】
なお、本発明は、上記実施形態に限定されるものではない。例えば、上記実施形態では、イベントの開催に応じて既成のテンプレートを配布するものとしたが、イベントが実行される際にテンプレートを利用するだけでなく、種々の施設をどのように配置して遊ぶべきものかを分り易く覚えてもらうことを目的とした所謂チュートリアルの際に、バランス型やリソース保護型等、用途の異なる配置のテンプレートを提供してもよい。
【０２１２】
また、上記実施形態では、テンプレートの作成及び適用は、携帯端末２で行うものとしたが、サーバ３で行ってもよい。その場合に、サーバ３は、各プレイヤについて、ゲーム空間内に配置された施設を記憶し、プレイヤからの指示に応じて、当該プレイヤに係るゲーム空間内の所定の範囲について、テンプレートの作成及び／又は適用を行えばよい。
【０２１３】
また、上記実施形態では、テンプレートの規定に基づいて施設の配置を変更する例で説明を行ったが、施設の種類を変更する例であってもよい。
また、いわゆる建物、壁、柵といったようなものに限られず、他のプレイヤの攻撃に対して応戦可能な兵士、武器等、どのようなゲームアイテムであってもよい。
【０２１４】
また、端末処理部２５及びサーバ処理部３３が備える各機能をコンピュータに実現させるためのコンピュータプログラムは、半導体記録媒体、磁気記録媒体、光記録媒体等のコンピュータにより読み取り可能な記録媒体に記録された形で提供され、当該記録媒体から

公知のセットアッププログラム等を用いて端末記憶部２２及びサーバ記憶部３２にインストールされてもよい。

【０２１５】

当業者は、本発明の精神及び範囲から外れることなく、様々な変更、置換、及び修正をこれに加えることが可能であることを理解されたい。

【符号の説明】

【０２１６】

１　ゲームシステム
２　携帯端末
２１　端末通信部
２２　端末記憶部
２３　操作部
２４　表示部
２５　端末処理部
２５１　ゲーム進行部
２５２　テンプレート作成部
２５３　テンプレート適用部
２５４　第２テンプレート適用部
２５５　第３テンプレート適用部
３　サーバ
３１　サーバ通信部
３２　サーバ記憶部
３３　サーバ処理部
３３１　サーバ制御部
３３２　テンプレート登録部
３３３　テンプレート提供部
３３４　イベント管理部
４　基地局
５　移動体通信網
６　ゲートウェイ
７　インターネット

【書類名】特許請求の範囲
【請求項１】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、
前記ゲーム空間内に配置されたゲーム媒体を、前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
ことを含むことを特徴とするコンピュータの制御方法。
【請求項２】
前記記憶部は、他のプレイヤに係るテンプレートをさらに記憶し、
プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、前記ゲーム空間内に配置されたゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項１に記載のコンピュータの制御方法。
【請求項３】
前記記憶部は、ゲーム空間内に配置された他のプレイヤに係るゲーム媒体及び前記ゲーム媒体の配置位置をさらに記憶し、
他のプレイヤからの指示に基づいて前記他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、前記ゲーム空間内に配置されたゲーム媒体のうちの前記他のプレイヤに係るゲーム媒体を、前記他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項２に記載のコンピュータの制御方法。
【請求項４】
他のコンピュータからイベントの開始が通知された場合に、前記コンピュータが、前記他のコンピュータから前記イベントに係るテンプレートを取得し、前記ゲーム空間内に配置されたゲーム媒体を、前記他のコンピュータから取得した前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項１に記載のコンピュータの制御方法。
【請求項５】
前記ゲーム空間内に配置されたゲーム媒体の数が前記テンプレートにより配置位置が規定された前記ゲーム媒体の数よりも少ない場合に、前記コンピュータが、前記ゲーム空間内に配置された前記ゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置のうちの移動距離が最小となる配置位置に移動させる、請求項１～４のいずれか一項に記載のコンピュータの制御方法。
【請求項６】
前記コンピュータが、前記テンプレートにより規定されたゲーム媒体の配置位置のうちの前記ゲーム媒体が配置されなかった配置位置及び前記ゲーム媒体を識別可能な態様で表示する、請求項５に記載のコンピュータの制御方法。
【請求項７】
前記ゲーム空間内に配置されたゲーム媒体の数が前記テンプレートにより配置位置が規定された前記ゲーム媒体の数よりも多い場合に、前記コンピュータが、前記ゲーム空間内に配置された前記ゲーム媒体のうちの前記テンプレートにより規定された前記ゲーム媒体の配置位置への移動距離が最小となるゲーム媒体を前記配置位置に移動させる、請求項１～６のいずれか一項に記載のコンピュータの制御方法。
【請求項８】
プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータが、前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～７のいずれか一項に記載の

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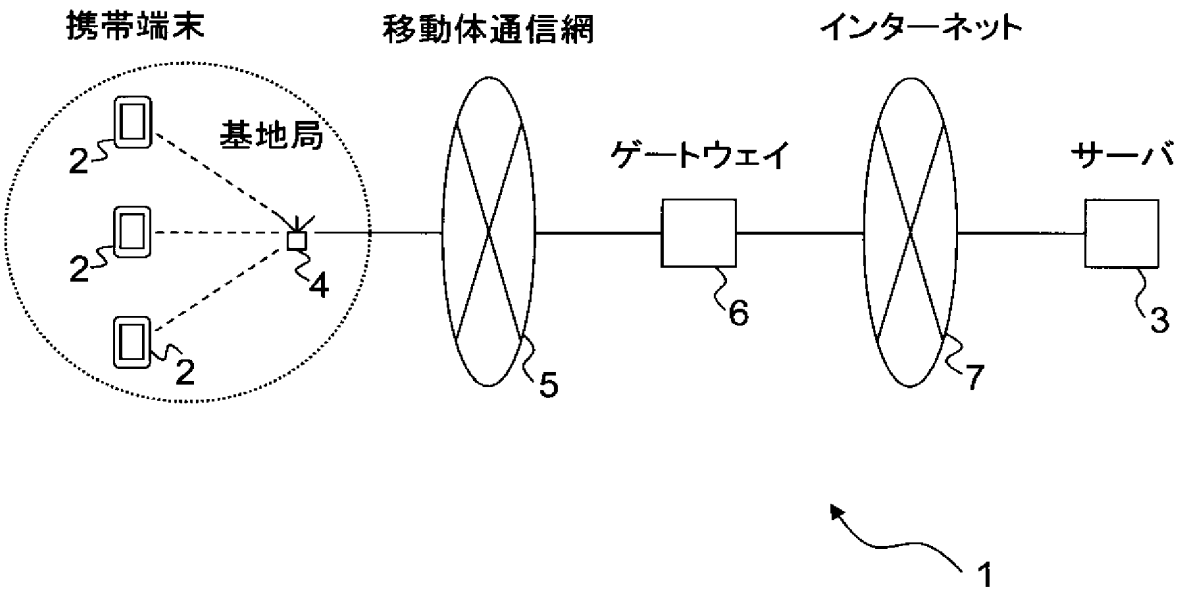
ンピュータの制御方法。
【請求項９】
　プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～８のいずれか一項に記載のコンピュータの制御方法。
【請求項１０】
　ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいて前記テンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータに、
　前記ゲーム空間内に配置されたゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
　ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１１】
　プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、
　ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、
　プレイヤからの指示に基づいて前記テンプレートをゲーム空間内の所定の範囲に適用するテンプレート適用部とを備え、
　前記テンプレートが適用された場合に、前記テンプレート適用部は、前記ゲーム空間内に配置されたゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
　ことを特徴とするコンピュータ。

【書類名】要約書
【要約】
【課題】本発明は、街作りゲームのユーザビリティを向上させることを可能とするコンピュータの制御方法等を提供することを目的とする。
【解決手段】本発明に係るコンピュータの制御方法は、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部（２２）を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータ（２）の制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体を、テンプレートにより規定されたゲーム媒体の配置位置に移動させることを含む。
【選択図】図６

【書類名】図面
【図１】

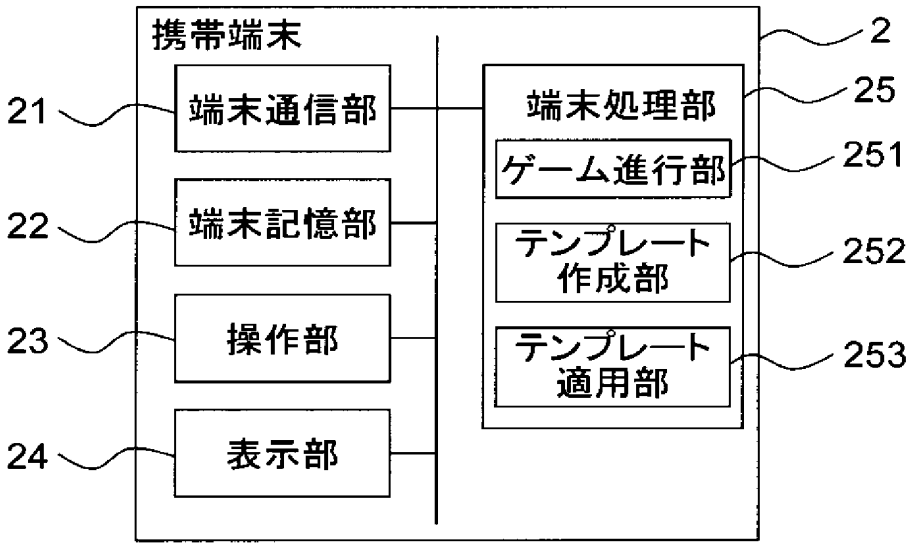
図1



【図２】

図2

(a)



(b)

施設	種類	配置位置	…
F_001	S_001	(3, 2)	…
F_002	S_001	(3, 3)	…
F_003	S_002	(4, 2)	…
…	…	…	…

(c)

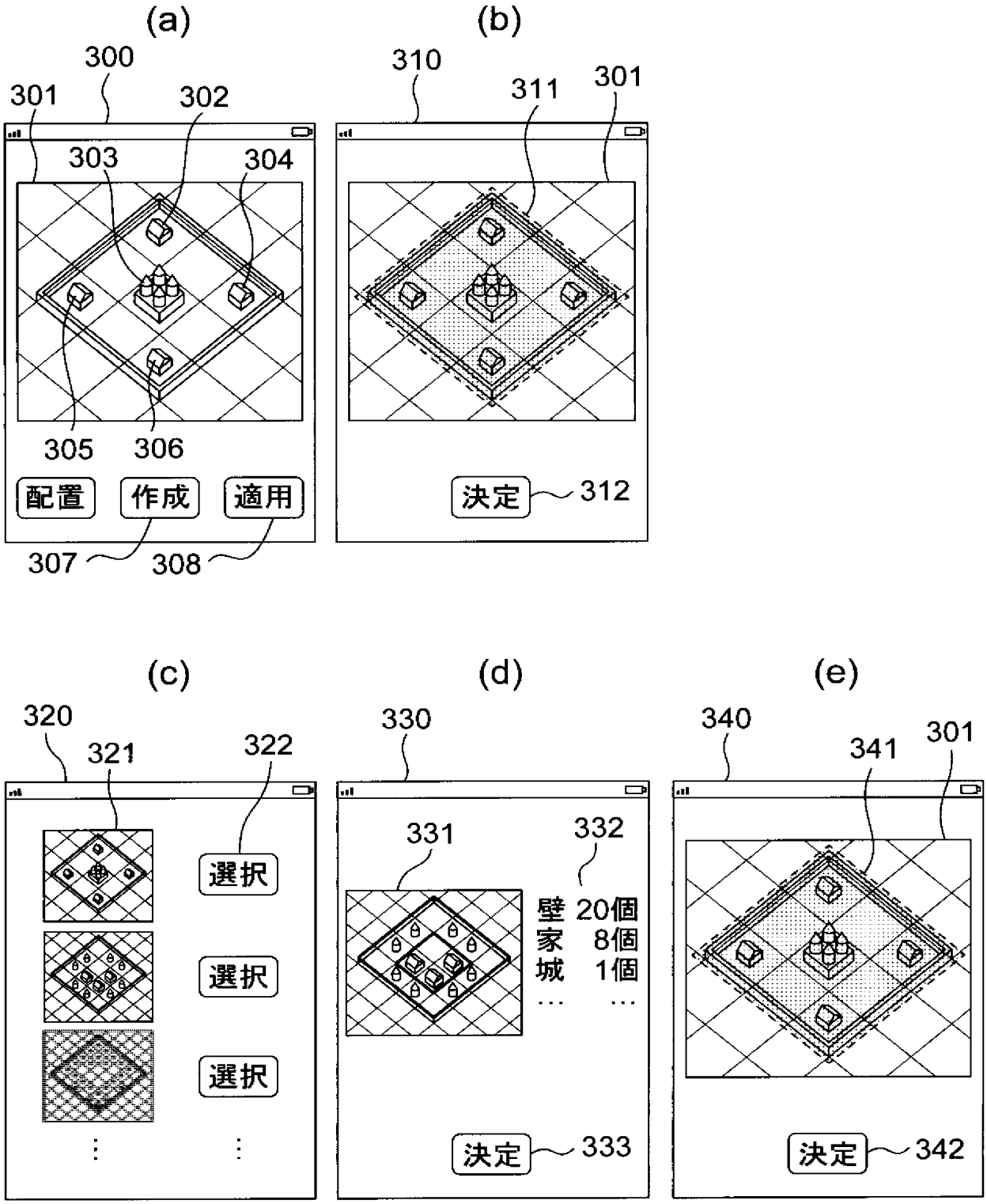
種類	名称	画像	…
S_001	壁	S_001.jpg	…
S_002	家	S_002.jpg	…
S_003	城	S_003.jpg	…
…	…	…	…

(d)

テンプレート	画像	種類	配置位置	…
T_001	T_001.jpg	S_001	(1, 1)	…
		S_001	(1, 2)	…
		S_002	(2, 1)	…
…		…	…	…

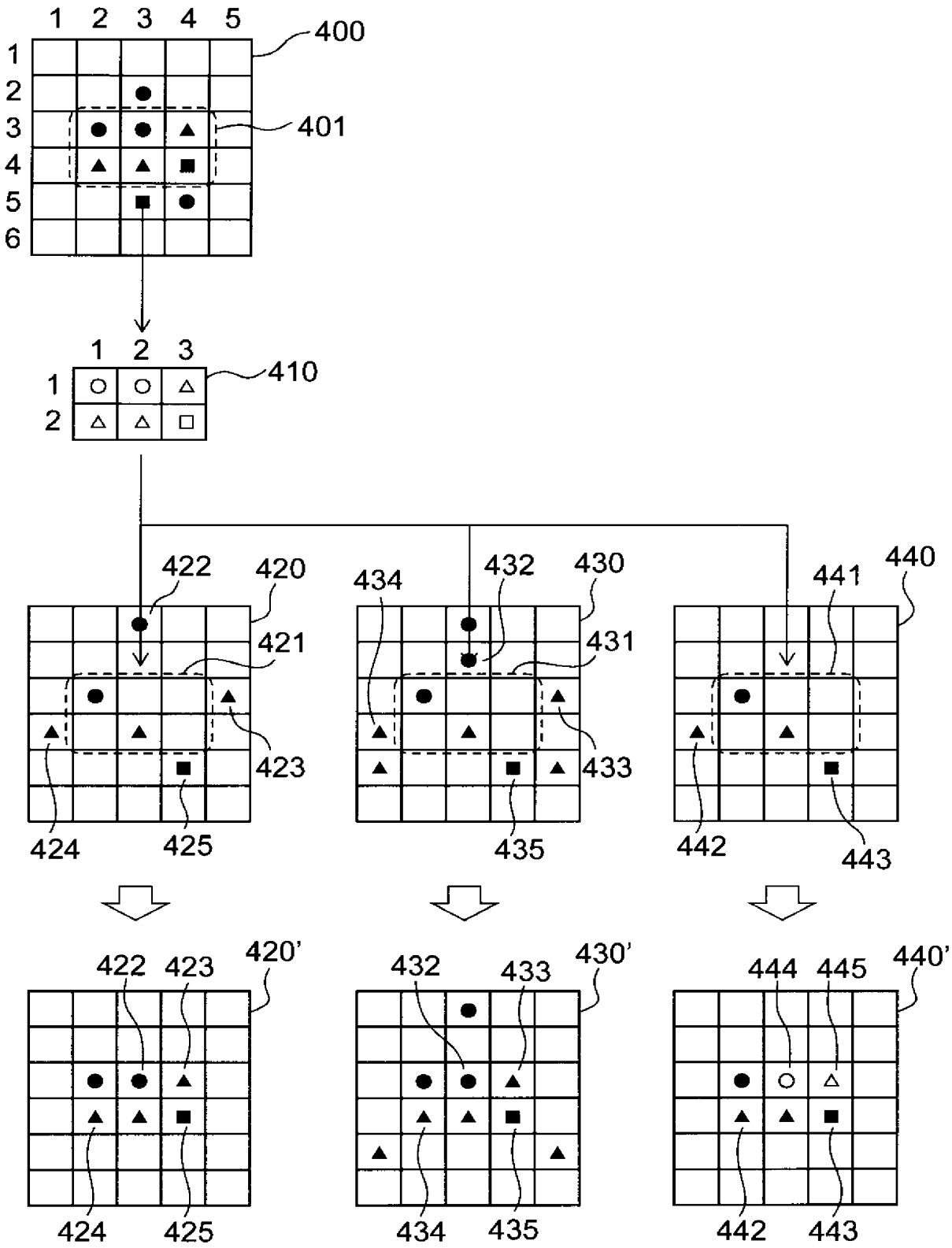
【図３】

図3


(a)
300
301
302
303
304
305
306
配置
作成
適用
307
308
(b)
310
311
301
決定
312
(c)
320
321
322
選択
選択
選択
(d)
330
331
332
壁 20個
家 8個
城 1個
決定
333
(e)
340
341
301
決定
342

【図４】

図4


1 2 3 4 5
400
401
1 2 3 4 5 6
1 2 3
410
1 2
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443
422 423
420'
424
425
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430'
434
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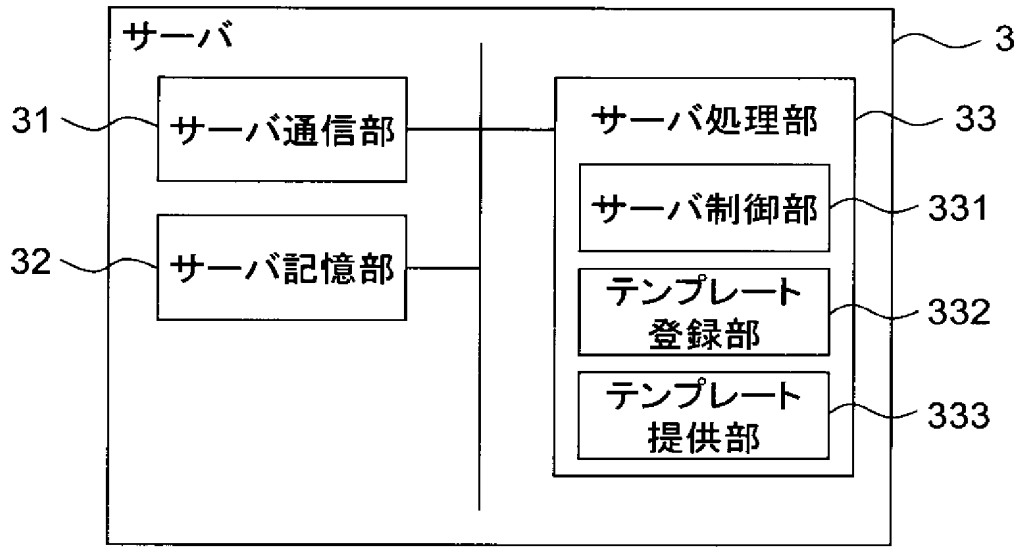
444 445
440'
442
443

【図５】

図5

(a)



(b)

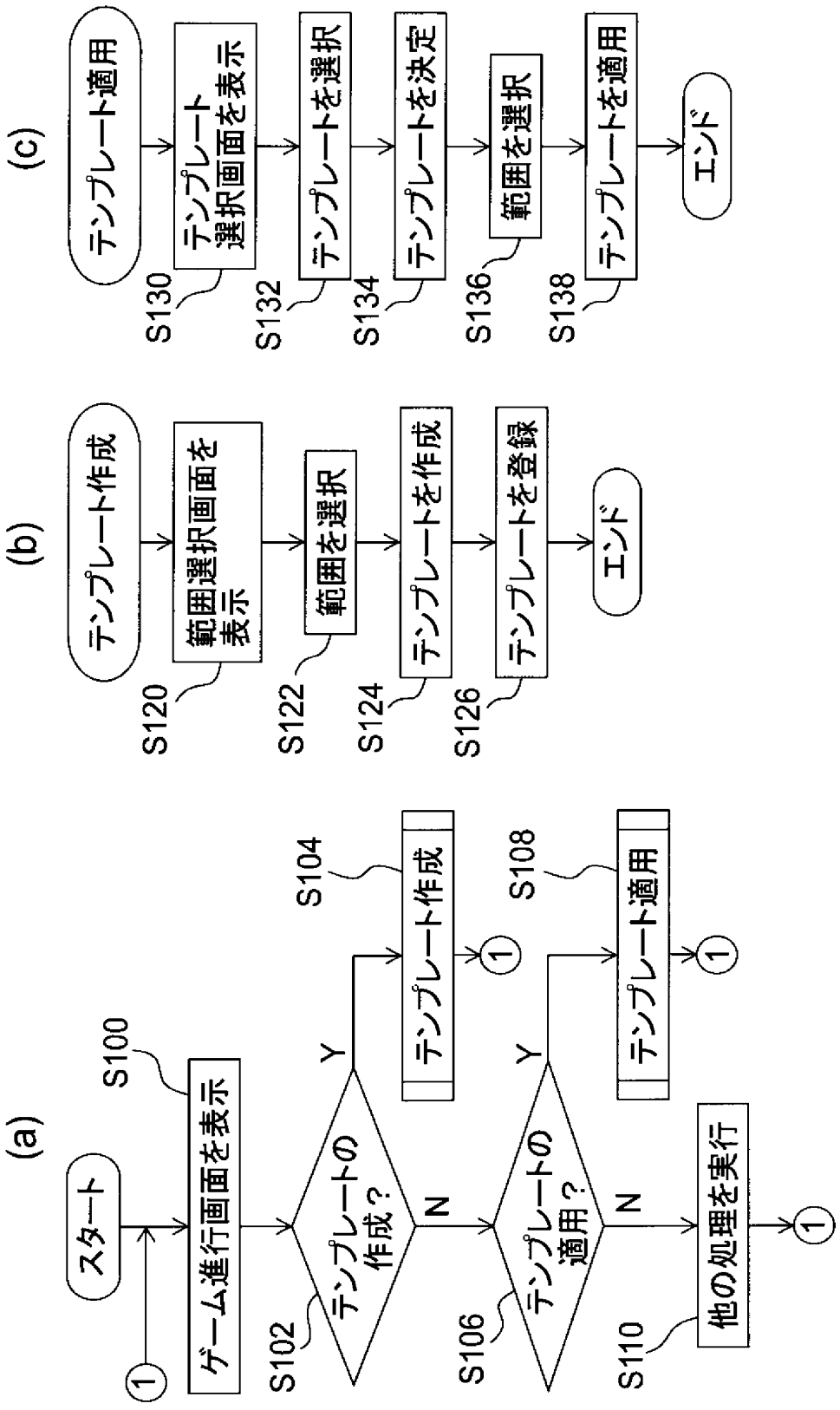
プレイヤ	名前	画像	テンプレート	…
P_001	プレイヤ$_1$	P_001.jpg	T_001,…	…
P_002	プレイヤ$_2$	P_002.jpg	T_003,…	…
P_003	プレイヤ$_3$	P_003.jpg	T_004,…	…
…	…	…	…	…

(c)

テンプレート	画像	種類	配置位置	…
T_001	T_001.jpg	S_001	(1, 1)	…
		S_001	(1, 2)	…
		S_002	(2, 1)	…
…		…	…	…

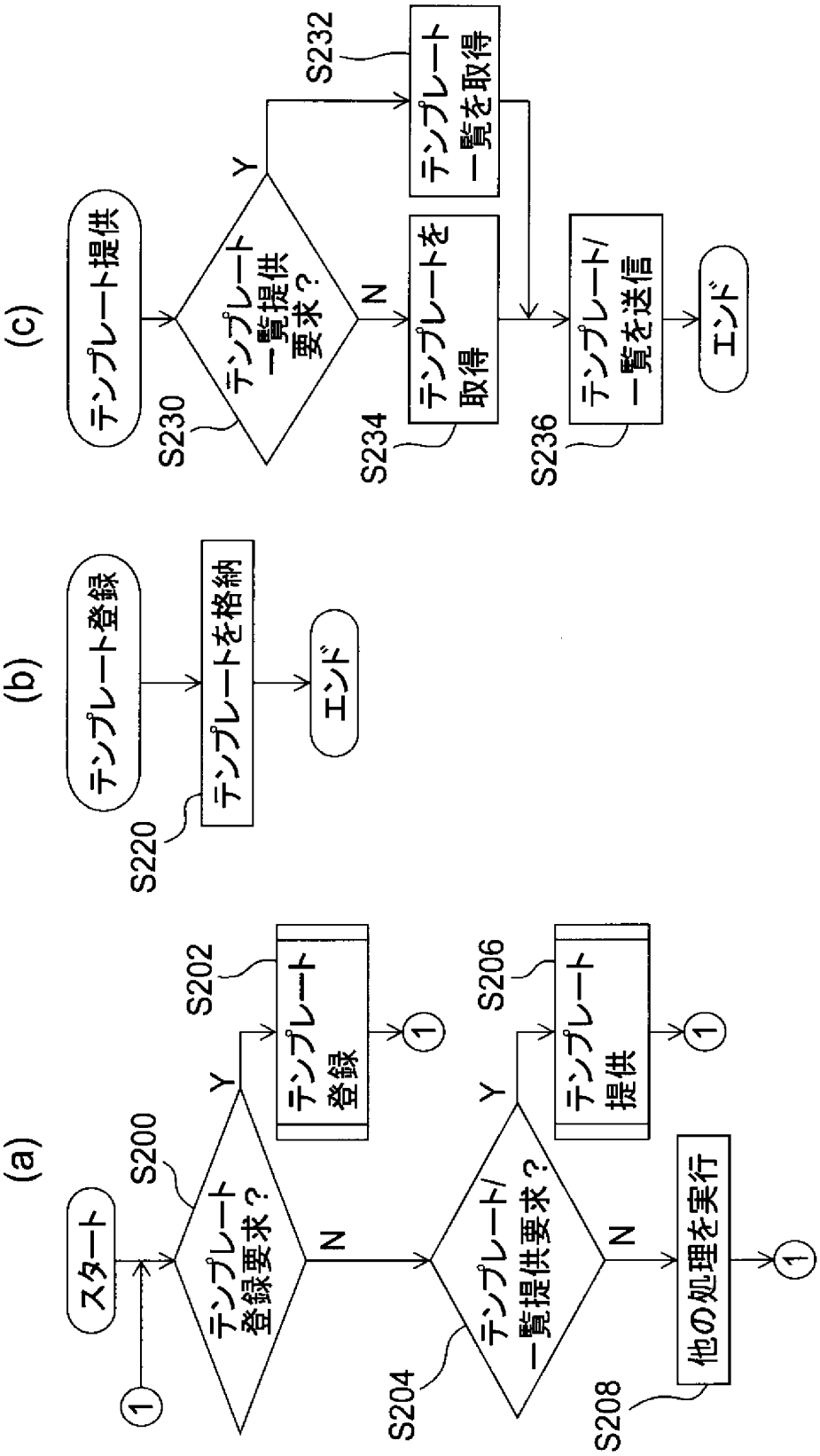
【図６】

図6


(a)
スタート
S100
ゲーム進行画面を表示
S102
テンプレートの作成？
Y
S104
テンプレート作成
N
S106
テンプレートの適用？
Y
S108
テンプレート適用
N
S110
他の処理を実行
(b)
テンプレート作成
S120
範囲選択画面を表示
S122
範囲を選択
S124
テンプレートを作成
S126
テンプレートを登録
エンド
(c)
テンプレート適用
S130
テンプレート選択画面を表示
S132
テンプレートを選択
S134
テンプレートを決定
S136
範囲を選択
S138
テンプレートを適用
エンド

【図７】

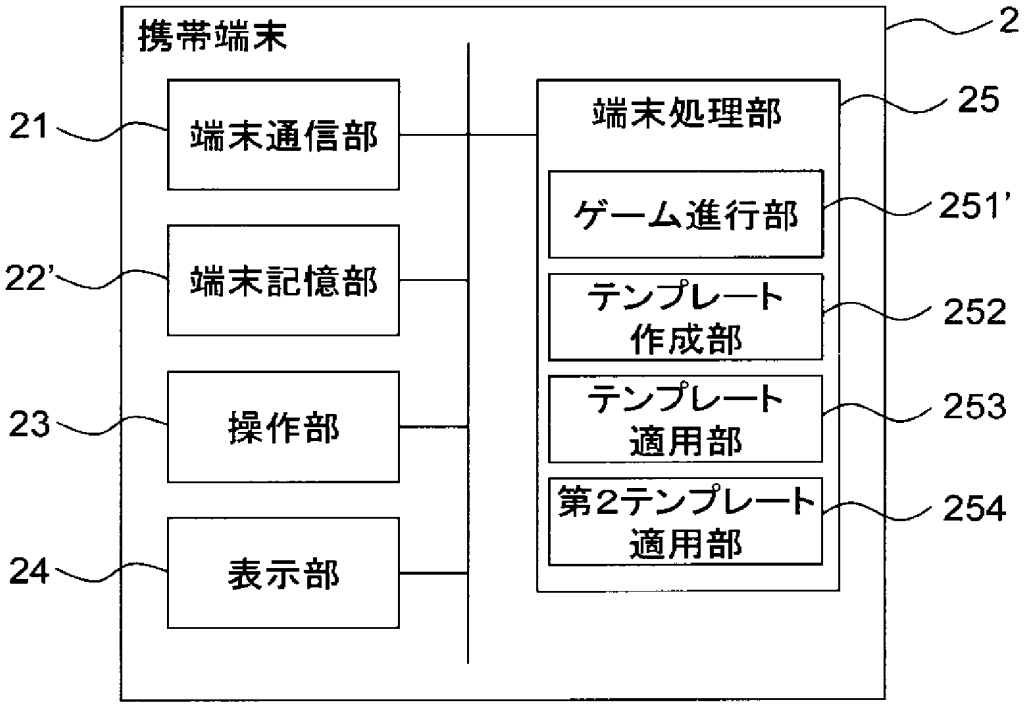
図7


(a)
スタート
①
S200
テンプレート登録要求？
Y
S202
テンプレート登録
①
N
S204
テンプレート/一覧提供要求？
Y
S206
テンプレート提供
①
N
S208
他の処理を実行
①
(b)
テンプレート登録
S220
テンプレートを格納
エンド
(c)
テンプレート提供
S230
テンプレート一覧提供要求？
Y
S232
テンプレート一覧を取得
N
S234
テンプレートを取得
S236
テンプレート/一覧を送信
エンド

【図８】

図8

(a)

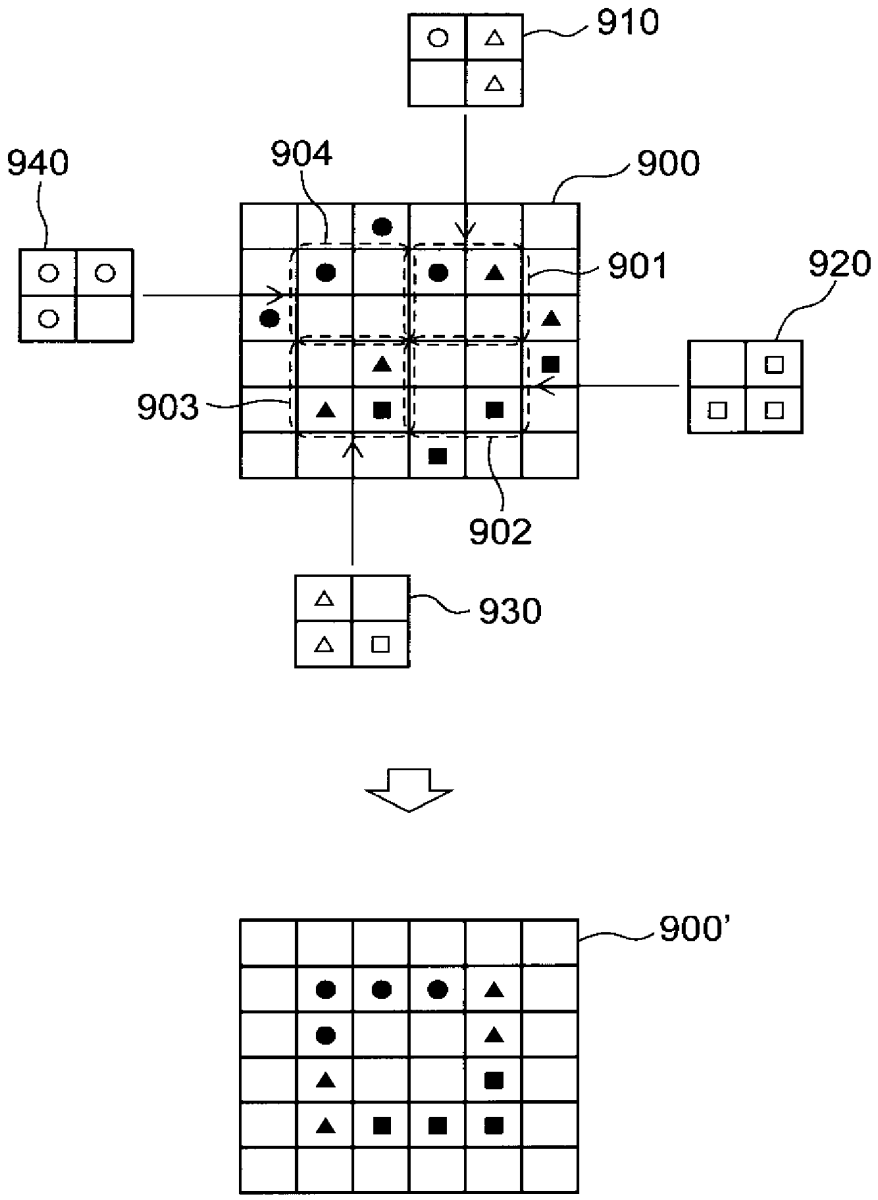


(b)

プレイヤ	施設	種類	配置位置	…
P_001	F_001	S_001	(3, 2)	…
	F_002	S_002	(3, 3)	…
	F_003	S_003	(4, 2)	…
…	…	…	…	…

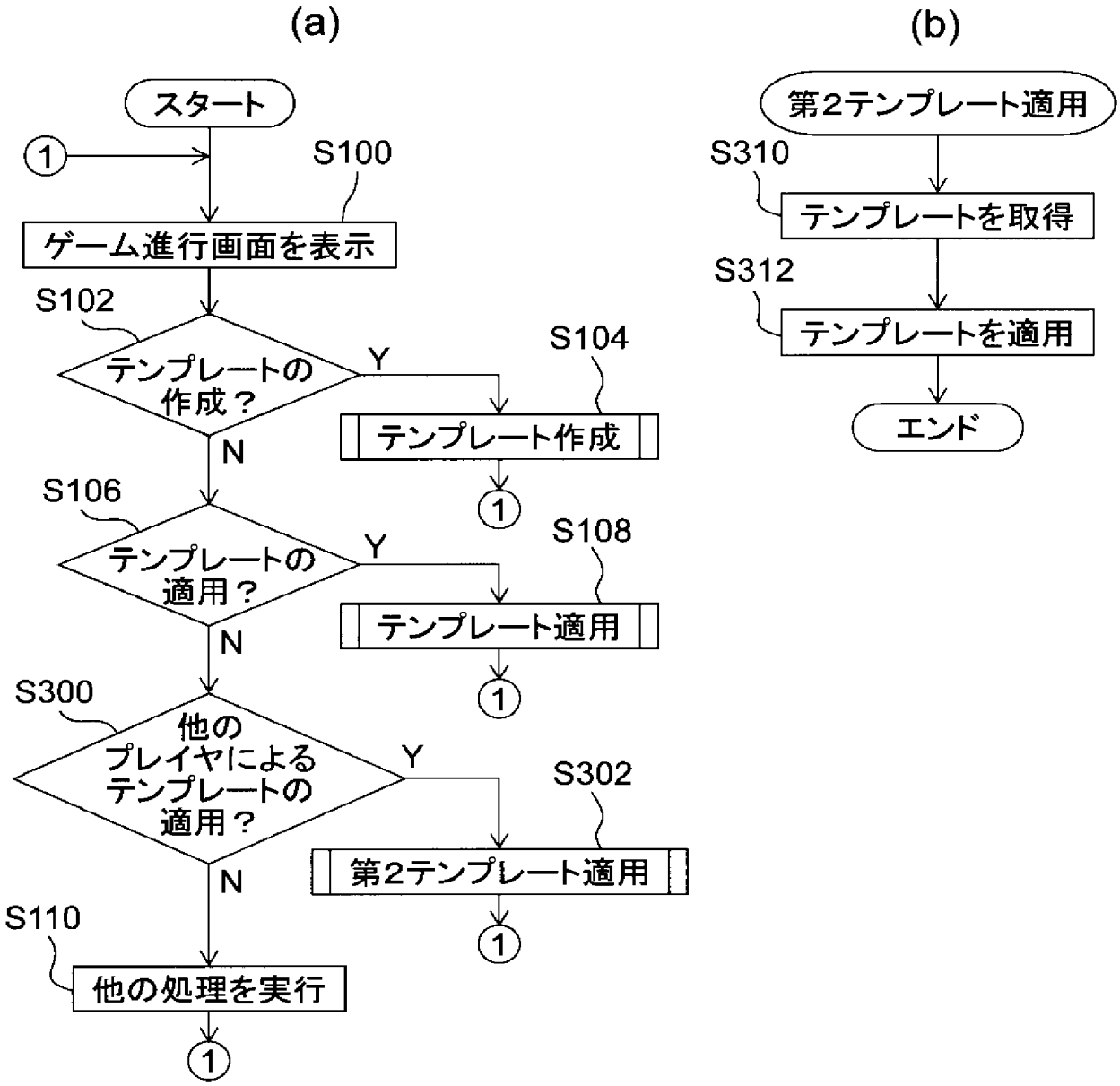
【図９】

図9



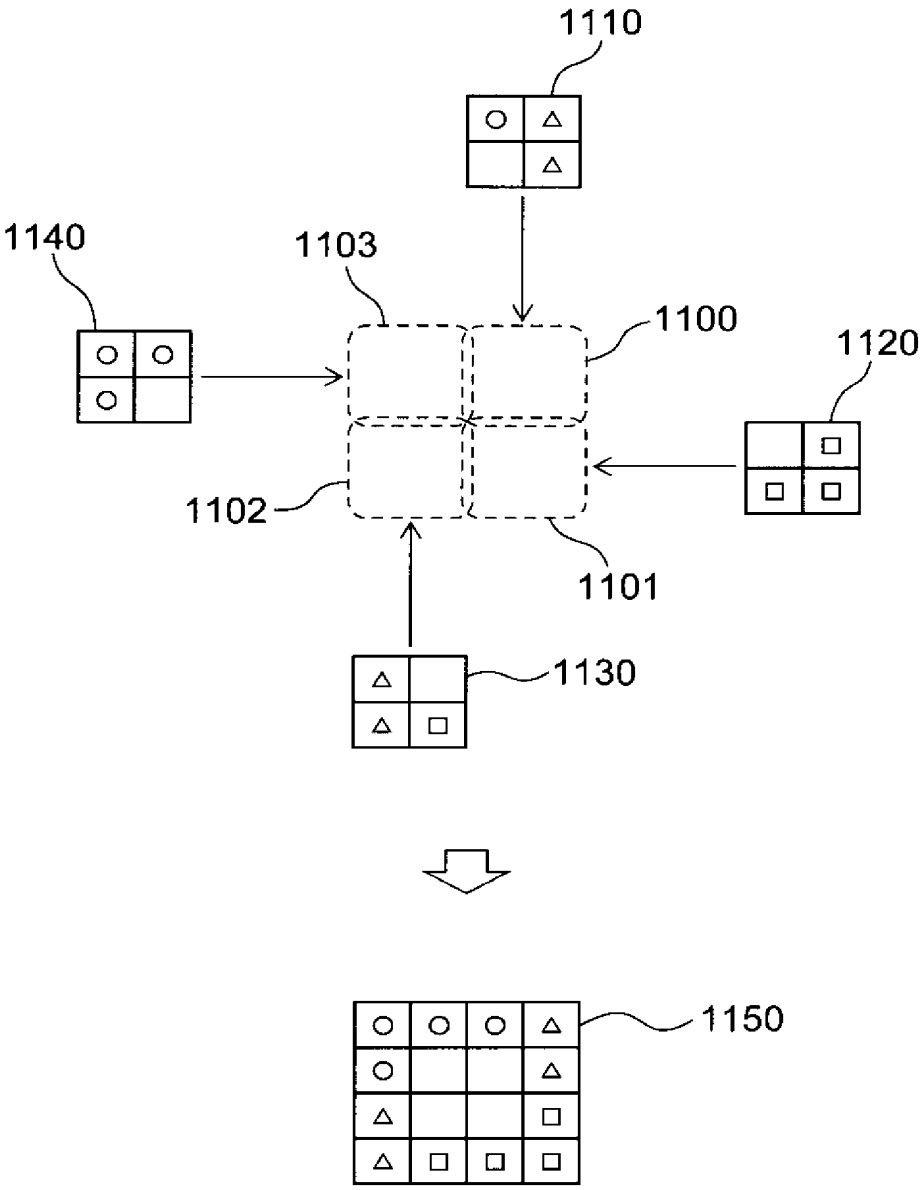
【図１０】

図10


(a)
スタート
①
S100
ゲーム進行画面を表示
S102
テンプレートの作成？
Y
S104
テンプレート作成
①
N
S106
テンプレートの適用？
Y
S108
テンプレート適用
①
N
S300
他のプレイヤによるテンプレートの適用？
Y
S302
第2テンプレート適用
①
N
S110
他の処理を実行
①
(b)
第2テンプレート適用
S310
テンプレートを取得
S312
テンプレートを適用
エンド

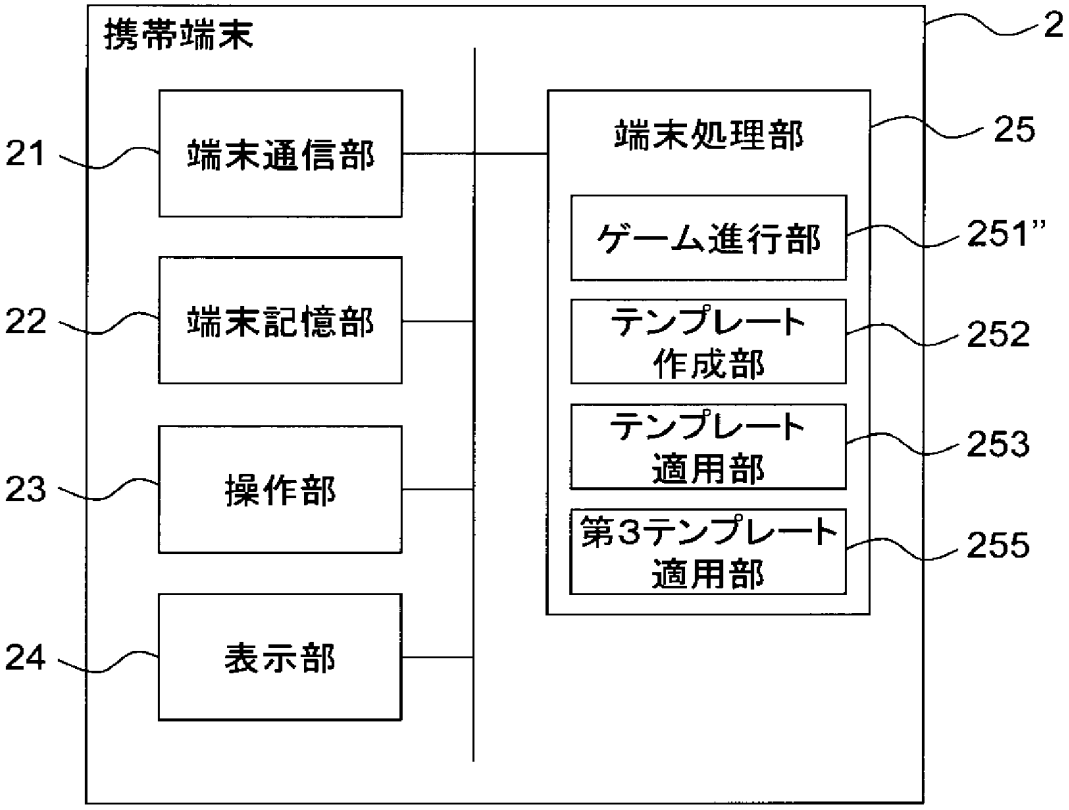
【図１１】

図11



【図１２】

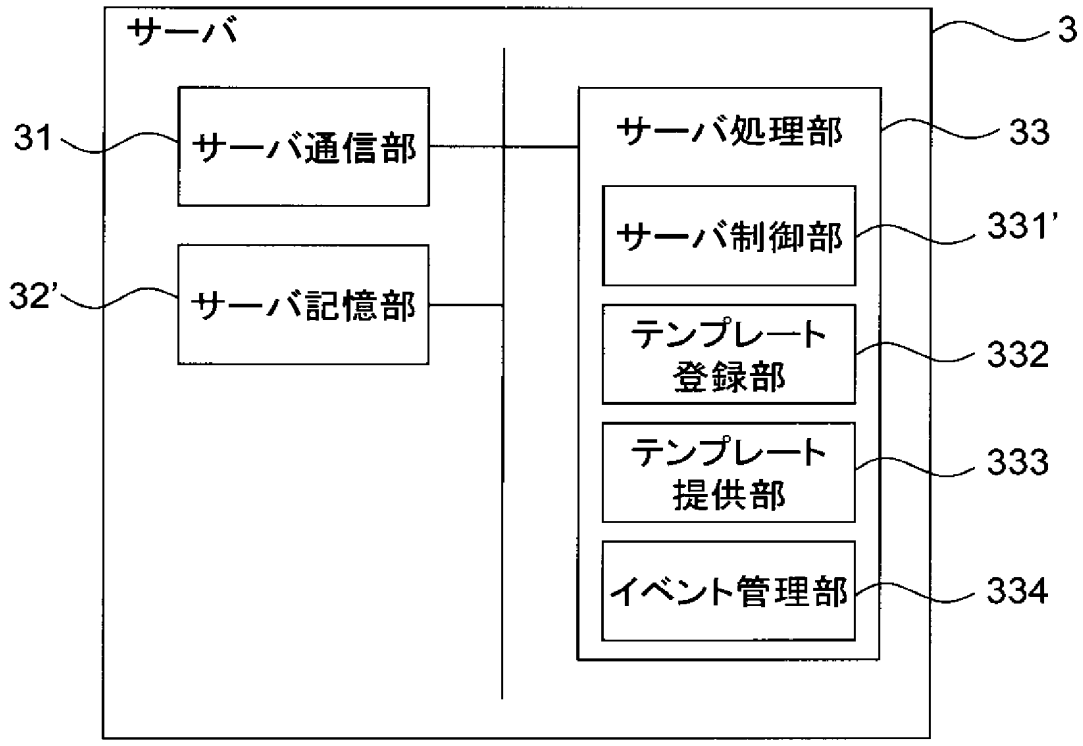
図12


携帯端末
2
21
端末通信部
22
端末記憶部
23
操作部
24
表示部
端末処理部
25
ゲーム進行部
251”
テンプレート作成部
252
テンプレート適用部
253
第3テンプレート適用部
255

【図１３】

図13

(a)

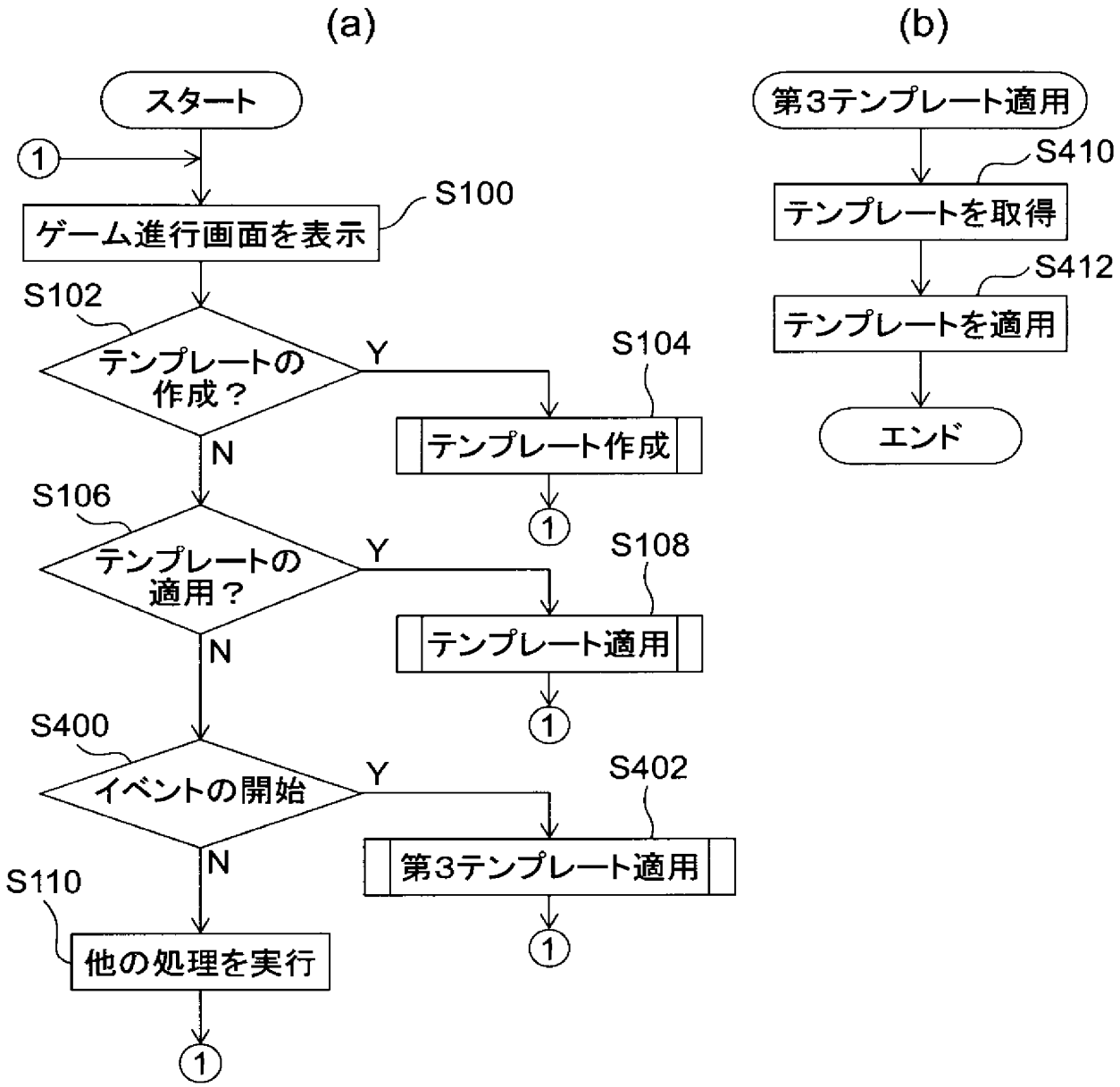


(b)

イベント	開始日時	テンプレート	プレイヤ	…
I_001	13/10/1,21:00:00	T_001	P_001,…	…
I_002	13/10/2,21:00:00	T_003		…
I_003	13/10/3,21:00:00	T_004		…
…	…	…	…	…

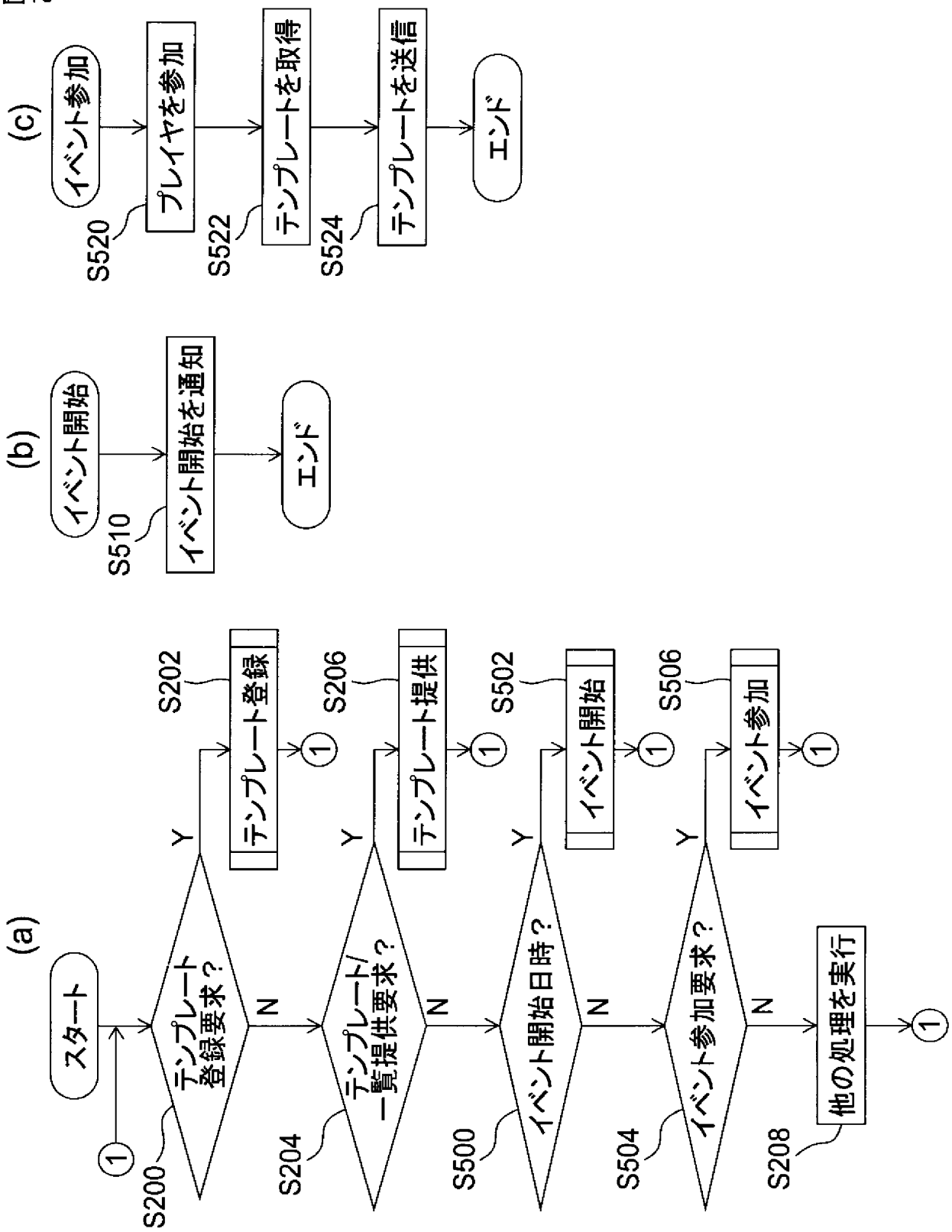
【図１４】

図14


(a)
(b)
スタート
①
S100
ゲーム進行画面を表示
S102
テンプレートの作成？
Y
S104
テンプレート作成
①
N
S106
テンプレートの適用？
Y
S108
テンプレート適用
①
N
S400
イベントの開始
Y
S402
第3テンプレート適用
①
N
S110
他の処理を実行
①
第3テンプレート適用
S410
テンプレートを取得
S412
テンプレートを適用
エンド

【図１５】

図15


(a)
スタート
テンプレート登録要求？
Y
N
S200
テンプレート登録
S202
テンプレート/一覧提供要求？
S204
テンプレート提供
S206
イベント開始日時？
S500
イベント開始
S502
イベント参加要求？
S504
イベント参加
S506
他の処理を実行
S208
(b)
イベント開始
S510
イベント開始を通知
エンド
(c)
イベント参加
S520
プレイヤを参加
S522
テンプレートを取得
S524
テンプレートを送信
エンド

【書類名】　手続補正書
【整理番号】　1134079
【提出日】　平成26年 1月17日
【あて先】　特許庁審査官殿
【事件の表示】
　【出願番号】　特願2013-202721
【補正をする者】
　【識別番号】　504437801
　【氏名又は名称】　グリー株式会社
【代理人】
　【識別番号】　100099759
　【弁理士】
　【氏名又は名称】　青木　篤
　【電話番号】　03-5470-1900
【発送番号】　771452
【手続補正1】
　【補正対象書類名】　特許請求の範囲
　【補正対象項目名】　全文
　【補正方法】　変更
　【補正の内容】
　　【書類名】特許請求の範囲
　　【請求項１】
　ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、
　前記ゲーム空間内に配置されたゲーム媒体を、前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
　ことを含むことを特徴とするコンピュータの制御方法。
　　【請求項２】
　前記記憶部は、他のプレイヤに係るテンプレートをさらに記憶し、
　プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、前記ゲーム空間内に配置されたゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項１に記載のコンピュータの制御方法。
　　【請求項３】
　前記記憶部は、ゲーム空間内に配置された他のプレイヤに係るゲーム媒体及び前記ゲーム媒体の配置位置をさらに記憶し、
　他のプレイヤからの指示に基づいて前記他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、前記ゲーム空間内に配置されたゲーム媒体のうちの前記他のプレイヤに係るゲーム媒体を、前記他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項２に記載のコンピュータの制御方法。
　　【請求項４】
　他のコンピュータからイベントの開始が通知された場合に、前記コンピュータが、前記他のコンピュータから前記イベントに係るテンプレートを取得し、前記ゲーム空間内に配置されたゲーム媒体を、前記他のコンピュータから取得した前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項１に記載のコンピュータの制御方法。

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【請求項５】
前記ゲーム空間内に配置されたゲーム媒体の数が前記テンプレートにより配置位置が規定された前記ゲーム媒体の数よりも少ない場合に、前記コンピュータが、前記ゲーム空間内に配置された前記ゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置のうちの移動距離が最小となる配置位置に移動させる、請求項１～４のいずれか一項に記載のコンピュータの制御方法。
【請求項６】
前記コンピュータが、前記テンプレートにより規定されたゲーム媒体の配置位置のうちの前記ゲーム媒体が配置されなかった配置位置及び前記ゲーム媒体を識別可能な態様で表示する、請求項５に記載のコンピュータの制御方法。
【請求項７】
前記ゲーム空間内に配置されたゲーム媒体の数が前記テンプレートにより配置位置が規定された前記ゲーム媒体の数よりも多い場合に、前記コンピュータが、前記ゲーム空間内に配置された前記ゲーム媒体のうちの前記テンプレートにより規定された前記ゲーム媒体の配置位置への移動距離が最小となるゲーム媒体を前記配置位置に移動させる、請求項１～６のいずれか一項に記載のコンピュータの制御方法。
【請求項８】
プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータが、前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～７のいずれか一項に記載のコンピュータの制御方法。
【請求項９】
プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～８のいずれか一項に記載のコンピュータの制御方法。
【請求項１０】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいて前記テンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータに、
前記ゲーム空間内に配置されたゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１１】
プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、
プレイヤからの指示に基づいて前記テンプレートをゲーム空間内のプレイヤに指示された範囲に適用するテンプレート適用部とを備え、
前記テンプレートが適用された場合に、前記テンプレート適用部は、前記ゲーム空間内に配置されたゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
ことを特徴とするコンピュータ。

出願人履歴

５０４４３７８０１

20101122

住所変更

東京都港区六本木六丁目１０番１号

グリー株式会社

日　本　国　特　許　庁
JAPAN PATENT OFFICE

別紙添付の書類に記載されている事項は下記の出願書類に記載されている事項と同一であることを証明する。

This is to certify that the annexed is a true copy of the following application as filed with this Office.

出願年月日 Date of Application:	２０１４年　４月　９日
出願番号 Application Number:	特願２０１４－０８０５５４
パリ条約による外国への出願に用いる優先権の主張の基礎となる出願の国コードと出願番号 The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is	ＪＰ２０１４－０８０５５４
出願人 Applicant(s):	グリー株式会社

２０１７年　２月　７日

特許庁長官
Commissioner,
Japan Patent Office

小宮義則

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Page 1003

【書類名】　特許願
【整理番号】　1143510
【特記事項】　特許法第４４条第１項の規定による特許出願
【提出日】　平成26年 4月 9日
【あて先】　特許庁長官殿
【原出願の表示】
　【出願番号】　特願2013-202721
　【出願日】　平成25年 9月27日
【国際特許分類】　A63F 13/00
【発明者】
　【住所又は居所】　東京都港区六本木六丁目１０番１号　グリー株式会社内
　【氏名】　江田　大輝
【特許出願人】
　【識別番号】　504437801
　【氏名又は名称】　グリー株式会社
【代理人】
　【識別番号】　100099759
　【弁理士】
　【氏名又は名称】　青木　篤
【選任した代理人】
　【識別番号】　100092624
　【弁理士】
　【氏名又は名称】　鶴田　準一
【選任した代理人】
　【識別番号】　100114018
　【弁理士】
　【氏名又は名称】　南山　知広
【選任した代理人】
　【識別番号】　100119987
　【弁理士】
　【氏名又は名称】　伊坪　公一
【選任した代理人】
　【識別番号】　100133835
　【弁理士】
　【氏名又は名称】　河野　努
【選任した代理人】
　【識別番号】　100180806
　【弁理士】
　【氏名又は名称】　三浦　剛
　【電話番号】　03-5470-1900
　【連絡先】　担当
【手数料の表示】
　【予納台帳番号】　209382
　【納付金額】　15,000円
【提出物件の目録】
　【物件名】　明細書　1
　【物件名】　特許請求の範囲　1
　【物件名】　要約書　1
　【物件名】　図面　1
　【包括委任状番号】　1305409

【書類名】明細書
【発明の名称】コンピュータ、その制御方法、及びその制御プログラム
【技術分野】
【０００１】
本発明は、コンピュータ、その制御方法、及びその制御プログラムに関する。
【背景技術】
【０００２】
近年、サーバから通信ネットワークを介して携帯端末にゲームプログラムをインストールしてプレイするゲームが普及している。このようなゲームには、複数のプレイヤが参加可能なもの（所謂「ソーシャルゲーム」）があり、プレイヤ同士が、対戦、協力のみならず、相互にコミュニケーション可能なものが知られている。
【０００３】
また、このようなゲームには、プレイヤがゲームプログラム上で用意された仮想的な空間（以下「ゲーム空間」と称する）内で街作りを行うもの（所謂「街作りゲーム」）も知られている（例えば、非特許文献１）。街作りゲームでは、プレイヤは、自分の好きな位置に様々な施設（例えば、家、道路、港、駅、空港、城、訓練所等）を建設し、自分好みの街を作り上げていく。
【先行技術文献】
【非特許文献】
【０００４】
【非特許文献１】”SimCity”, [online], 2013年8月27日, [2013年9月13日検索], インターネット<URL: http://en.wikipedia.org/wiki/SimCity>
【非特許文献２】”Clash of Clans”, [online], 2013年9月6日, [2013年9月13日検索], インターネット<URL: http://en.wikipedia.org/wiki/Clash_of_Clans>
【発明の概要】
【発明が解決しようとする課題】
【０００５】
従来の街作りゲームでは、自分好みの街を作ることが目的であり、一度作った街を大きく作り直す必要はなかった。一方、近年の街作りゲーム（例えば、非特許文献２）では、プレイヤが作った街並みに他のプレイヤが攻撃を加えるが、その勝敗や優劣においては、その街並み（防御の壁、攻撃対象となる建物、防御する兵士、武器等のアイテムの配置）が要素の一つとなっている。しかしながら、プレイヤにとっては、その街が発展するほど自分の街のアイテム（ゲーム媒体）が増えてしまうため、そのアイテムを個別にその配置、種類、レベル等を変更するのは非常に煩雑であった。また、その街並みを変更することが他のプレイヤからの攻撃に対してどのような効果があるかわかりづらかった。したがって、兵士や武器のように、配置、種類、レベル等の変更が容易な一部のアイテムのみを変更するにとどまってしまうプレイヤも少なくなかった。結果として、ゲームが進行するにつれてマンネリ化し、プレイヤに飽きられてしまうおそれがあった。
【０００６】
本発明は、このような課題を解決すべくなされたものであり、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることを可能とするコンピュータ、その制御方法、及びその制御プログラムを提供することを目的とする。
【課題を解決するための手段】
【０００７】
本発明に係るコンピュータの制御方法は、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体を、テンプレートにより規定されたゲー

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媒体の配置位置に移動させることを含む。
なお、コンピュータは、上記の手順を実行可能であればよく、例えば、携帯端末、据置端末、サーバ等である。
【０００８】
また、本発明に係るコンピュータの制御方法において、記憶部は、他のプレイヤに係るテンプレートをさらに記憶し、プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体を、他のプレイヤに係るテンプレートにより規定されたゲーム媒体の配置位置に移動させることが好ましい。
【０００９】
また、本発明に係るコンピュータの制御方法において、記憶部は、ゲーム空間内に配置された他のプレイヤに係るゲーム媒体及びゲーム媒体の配置位置をさらに記憶し、他のプレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体のうちの他のプレイヤに係るゲーム媒体を、他のプレイヤに係るテンプレートにより規定されたゲーム媒体の配置位置に移動させることが好ましい。
【００１０】
また、本発明に係るコンピュータの制御方法において、他のコンピュータからイベントの開始が通知された場合に、コンピュータが、他のコンピュータからイベントに係るテンプレートを取得し、ゲーム空間内に配置されたゲーム媒体を、他のコンピュータから取得したテンプレートにより規定されたゲーム媒体の配置位置に移動させることが好ましい。
【００１１】
また、本発明に係るコンピュータの制御方法において、ゲーム空間内に配置されたゲーム媒体の数がテンプレートにより配置位置が規定されたゲーム媒体の数よりも少ない場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体をテンプレートにより規定されたゲーム媒体の配置位置のうちの移動距離が最小となる配置位置に移動させることが好ましい。
【００１２】
また、本発明に係るコンピュータの制御方法において、コンピュータが、テンプレートにより規定されたゲーム媒体の配置位置のうちのゲーム媒体が配置されなかった配置位置及びゲーム媒体を識別可能な態様で表示することが好ましい。
【００１３】
また、本発明に係るコンピュータの制御方法において、ゲーム空間内に配置されたゲーム媒体の数がテンプレートにより配置位置が規定されたゲーム媒体の数よりも多い場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体のうちのテンプレートにより規定されたゲーム媒体の配置位置への移動距離が最小となるゲーム媒体を配置位置に移動させることが好ましい。
【００１４】
また、本発明に係るコンピュータの制御方法において、プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、コンピュータが、所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして記憶部に格納することが好ましい。
【００１５】
さらに、本発明に係るコンピュータの制御方法において、プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、コンピュータが、複数のテンプレートの各々により規定されたゲーム媒体の配置位置をテンプレートとして記憶部に格納することが好ましい。
【００１６】
本発明に係るコンピュータの制御プログラムは、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプ

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レートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいてテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータに、ゲーム空間内に配置されたゲーム媒体をテンプレートにより規定されたゲーム媒体の配置位置に移動させることを実行させる。

【００１７】

本発明に係るコンピュータは、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、プレイヤからの指示に基づいてテンプレートをゲーム空間内の所定の範囲に適用するテンプレート適用部とを備え、テンプレートが適用された場合に、テンプレート適用部は、ゲーム空間内に配置されたゲーム媒体をテンプレートにより規定されたゲーム媒体の配置位置に移動させる。

【発明の効果】

【００１８】

本発明に係るコンピュータ、その制御方法、及びその制御プログラムは、テンプレートを用いてゲーム媒体の変更やゲーム媒体の配置を変更可能にすることにより、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることを可能とする。

【図面の簡単な説明】

【００１９】

【図１】ゲームシステムの概略構成の一例を示す図である。
【図２】携帯端末の概略構成の一例を示す図である。
【図３】携帯端末の表示画面の一例を示す図である。
【図４】テンプレートの作成及び適用の概念を示す図である。
【図５】サーバの概略構成の一例を示す図である。
【図６】携帯端末の動作フローの一例を示す図である。
【図７】サーバの動作フローの一例を示す図である。
【図８】第２実施形態での携帯端末の概略構成の一例を示す図である。
【図９】マルチプレイヤ環境でのテンプレートの適用の概念を示す図である。
【図１０】携帯端末の動作フローの一例を示す図である。
【図１１】マルチプレイヤ環境でのテンプレートの組み合わせの概念を示す図である。
【図１２】第３実施形態での携帯端末の概略構成の一例を示す図である。
【図１３】サーバの概略構成の一例を示す図である。
【図１４】携帯端末の動作フローの一例を示す図である。
【図１５】サーバの動作フローの一例を示す図である。

【発明を実施するための形態】

【００２０】

以下、図面を参照しつつ、本発明の様々な実施形態について説明する。ただし、本発明の技術的範囲はそれらの実施形態に限定されず、特許請求の範囲に記載された発明とその均等物に及ぶ点に留意されたい。

【００２１】

（第１実施形態）

１．本実施形態の概略

本実施形態では、プレイヤは、ゲーム空間内で街作りを行う。プレイヤは、ゲーム空間内にゲーム媒体の一例である様々な施設を配置することができる。また、プレイヤは、ゲーム空間内の所定の範囲について、その範囲内に配置された施設の種類や施設の配置位置に基づいて、施設の種類や施設の配置位置を規定するテンプレートを作成することもできる。さらに、プレイヤは、作成したテンプレートを、ゲーム空間内の所定の範囲に適用することもできる。テンプレートが適用されると、ゲーム空間内に配置された施設は、テ

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プレートにより規定された当該施設に自動的に変更されたり、規定された配置位置に自動的に移動される。
なお、ゲーム媒体とは、ゲームに用いられるデジタルコンテンツのことをいい、施設以外に、例えば、キャラクタ、兵士、武器、カード、フィギア、アバター、アイテム等である。
【００２２】
２．ゲームシステム１の構成
図１は、ゲームシステム１の概略構成の一例を示す図である。
【００２３】
ゲームシステム１は、少なくとも一台の携帯端末２と、サーバ３とを備える。携帯端末２とサーバ３とは、通信ネットワークを介して相互に接続され、例えば、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介して相互に接続される。携帯端末２で実行されるプログラム（例えば、ゲームプログラム）と、サーバ３で実行されるプログラム（例えば、ゲーム管理プログラム）とは、ハイパーテキスト転送プロトコル（Hypertext Transfer Protocol，HTTP）等の通信プロトコルを用いて通信を行う。
【００２４】
２．１．携帯端末２の構成
図２（ａ）は、携帯端末２の概略構成の一例を示す図である。
【００２５】
携帯端末２は、プレイヤによる操作部２３の操作に応じてゲームを進行させる。また、携帯端末２は、必要に応じて、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介してサーバ３に接続し、サーバ３と通信を行う。そのために、携帯端末２は、端末通信部２１と、端末記憶部２２と、操作部２３と、表示部２４と、端末処理部２５とを備える。
【００２６】
なお、本実施形態では、携帯端末２として、多機能携帯電話（所謂「スマートフォン」）を想定するが、本発明はこれに限定されるものではない。携帯端末２は、本発明が適用可能であればよく、例えば、携帯電話（所謂「フィーチャーフォン」）、携帯情報端末（Personal Digital Assistant，PDA）、携帯ゲーム機、携帯音楽プレーヤ、タブレット端末、タブレットＰＣ、ノートＰＣ等でもよい。
【００２７】
端末通信部２１は、所定の周波数帯を感受帯域とするアンテナを含む、通信インターフェース回路を備え、携帯端末２を無線通信ネットワークに接続する。端末通信部２１は、基地局４により割り当てられるチャネルを介して、基地局４との間でＣＤＭＡ（Code Division Multiple Access）方式等による無線信号回線を確立し、基地局４との間で通信を行う。そして、端末通信部２１は、端末処理部２５から供給されたデータをサーバ３等に送信する。また、端末通信部２１は、サーバ３等から受信したデータを端末処理部２５に供給する。
【００２８】
端末記憶部２２は、例えば、半導体メモリ装置を備える。端末記憶部２２は、端末処理部２５での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、端末記憶部２２は、ドライバプログラムとして、操作部２３を制御する入力デバイスドライバプログラム、表示部２４を制御する出力デバイスドライバプログラム等を記憶する。また、端末記憶部２２は、アプリケーションプログラムとして、ゲームを進行させ、その結果を表示するゲームプログラム等を記憶する。また、端末記憶部２２は、データとして、プレイヤの識別番号（ＩＤ）、ゲーム空間内に配置された施設を管理する施設管理テーブル（図２（ｂ））、施設の種類を管理する施設種類管理テーブル（図２（ｃ））、テンプレートを管理するテンプレート管理テーブル（図２（ｄ））、施設、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、端末記憶部２２は、所定の処理に係る一時的なデータを一時

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的に記憶してもよい。
【００２９】
図２（ｂ）には、施設管理テーブルが示されている。施設管理テーブルには、各施設について、当該施設のＩＤ、種類ＩＤ、ゲーム空間内での配置位置等が記憶される。
なお、本実施形態では、ゲーム空間は格子状に構成されており、一の施設は一の格子に配置され、その位置は所定の格子（例えば、ゲーム空間左上）を原点とする格子の座標で表現されるものとするが、本発明はこれに限定されるものではない。ゲーム空間の構成等は、本発明が適用可能であれば、どのようなものでもよい。
【００３０】
図２（ｃ）には、施設種類管理テーブルが示されている。施設種類管理テーブルには、施設の各種類について、当該種類のＩＤ、名称、画像データのファイル名等が記憶される。
【００３１】
図２（ｄ）には、テンプレート管理テーブルが示されている。テンプレート管理テーブルには、各テンプレートについて、当該テンプレートのＩＤ、サムネイル画像データのファイル名、各施設の種類ＩＤ及びテンプレート内での配置位置等が記憶される。
なお、図２（ｂ）と同様に、施設の配置位置は、所定の格子（例えば、テンプレート左上）を原点とする格子の座標で表現されるものとするが、本発明はこれに限定されるものではない。配置位置の表現は、本発明が適用可能であれば、どのようなものでもよい。
【００３２】
操作部２３は、携帯端末２の操作が可能であればどのようなデバイスでもよく、例えば、タッチパネル、キーボタン等である。プレイヤは、操作部２３を用いて、文字、数字、記号等を入力することができる。操作部２３は、プレイヤにより操作されると、その操作に対応する信号を発生する。そして、発生した信号は、プレイヤの指示として、端末処理部２５に供給される。
【００３３】
表示部２４も、映像、画像等の表示が可能であればどのようなデバイスでもよく、例えば、液晶ディスプレイ、有機ＥＬ（Electro―Luminescence）ディスプレイ等である。表示部２４は、端末処理部２５から供給された画像データに応じた画像、映像データに応じた映像等を表示する。
【００３４】
端末処理部２５は、一又は複数個のプロセッサ及びその周辺回路を備える。端末処理部２５は、携帯端末２の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵ（Central Processing Unit）である。端末処理部２５は、携帯端末２の各種処理が端末記憶部２２に記憶されているプログラム、操作部２３の操作等に基づいて適切な手順で実行されるように、端末通信部２１、表示部２４等の動作を制御する。端末処理部２５は、端末記憶部２２に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、端末処理部２５は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【００３５】
２．１．１．端末処理部２５の機能
図３は、携帯端末２の表示画面の一例を示す図である。
【００３６】
図３（ａ）には、ゲームの開始を指示したときに表示されるゲーム進行画面３００が示されている。
ゲーム進行画面３００には、ゲーム空間３０１と、その空間内に配置された様々な施設３０２～３０６とが表示されている。
また、ゲーム進行画面３００下部には、複数のボタンが表示されている。「作成」ボタン３０７の押下によりテンプレートの作成が、「適用」ボタン３０８の押下によりテン

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レートの適用が、それぞれ指示される。
【００３７】
図３（ｂ）には、図３（ａ）に示されるゲーム進行画面３００でテンプレートの作成を指示したときに表示される範囲選択画面３１０が示されている。
範囲選択画面３１０にはゲーム空間３０１が表示されており、例えば、任意の二点のタップにより、当該二点を対頂点とする範囲３１１が選択される。
また、範囲選択画面３１０下部には「決定」ボタン３１２が表示されており、当該ボタンの押下により、選択された範囲３１１についてテンプレート作成の実行が指示される。
【００３８】
一方、図３（ｃ）には、図３（ａ）に示されるゲーム進行画面３００でテンプレートの適用を指示したときに表示されるテンプレート選択画面３２０が示されている。
テンプレート選択画面３２０には、各テンプレートについて、当該テンプレートのサムネイル画像３２１及び「選択」ボタン３２２が表示されている。「選択」ボタン３２２の押下により、対応するテンプレートが選択される。
【００３９】
図３（ｄ）には、図３（ｃ）に示されるテンプレート選択画面３２０でテンプレートを選択したときに表示されるテンプレート表示画面３３０が示されている。
テンプレート表示画面３３０左部には、テンプレートをゲーム空間内の所定の範囲（例えば、中央周辺）に適用したプレビュー画像３３１が表示されている。
また、テンプレート表示画面３３０右部には、テンプレートにより配置位置が規定された各施設の名称及び数３３２が一覧表示されている。
さらに、テンプレート表示画面３３０下部には「決定」ボタン３３３が表示されており、当該ボタンの押下により、テンプレートが決定される。
【００４０】
図３（ｅ）には、図３（ｄ）に示されるテンプレート表示画面３３０でテンプレートを決定したときに表示される範囲選択画面３４０が示されている。
範囲選択画面３４０にはゲーム空間３０１が表示されており、例えば、任意の二点のタップにより、当該二点を対頂点とする範囲３４１が選択される。
また、範囲選択画面３４０下部には「決定」ボタン３４２が表示されており、当該ボタンの押下により、選択された範囲３４１についてテンプレート適用の実行が指示される。
【００４１】
図４は、テンプレートの作成及び適用の概念を示す図である。
【００４２】
４００は、ゲーム空間を示している。ゲーム空間４００内には、九つの施設が配置されている。即ち、施設「●」が四つ、施設「▲」が三つ、及び施設「■」が二つ配置されている。
【００４３】
ゲーム空間４００内の範囲４０１について、テンプレートを作成したとする。４１０は、作成したテンプレートを示している。テンプレート４１０により、種類「○」の施設「●」が（１，１）及び（１，２）に、種類「△」の施設「▲」が（１，３）、（２，１）、及び（２，２）に、種類「□」の施設「■」が（２，３）に配置されることが規定されている。
【００４４】
４２０は、他のゲーム空間を示している。ゲーム空間４２０内には、六つの施設が配置されている。即ち、施設「●」が二つ、施設「▲」が三つ、及び施設「■」が一つ配置されている。
【００４５】
ゲーム空間４２０内の範囲４２１について、テンプレート４１０を適用したとする。ゲーム空間４２０内に配置された施設の各種類の数は、テンプレート４１０により配置位置が規定された施設の各種類の数と同じである。したがって、ゲーム空間４２０内に配置さ

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れたすべての施設が、テンプレート４１０により規定された当該施設の配置位置に移動される。実際には、範囲４２１外に配置された施設４２２～４２５が、範囲４２１内の当該施設の配置位置に移動される。４２０’は、施設４２２～４２５が移動された後のゲーム空間４２０を示している。

【００４６】

４３０は、さらに他のゲーム空間を示している。ゲーム空間４３０内には、九つの施設が配置されている。即ち、施設「●」が三つ、施設「▲」が五つ、及び施設「■」が一つ配置されている。

【００４７】

ゲーム空間４３０内の範囲４３１について、テンプレート４１０を適用したとする。ゲーム空間４３０内に配置された施設の各種類の数は、テンプレート４１０により配置位置が規定された施設の各種類の数と同じであるか、それよりも多い。したがって、ゲーム空間４２０内に配置された施設のうちのテンプレート４１０により規定された当該施設の配置位置への移動距離（例えば、マンハッタン距離）が最小となる施設が、当該施設の配置位置に移動される。実際には、範囲４３１外に配置された施設４３２～４３５が、範囲４３１内の当該施設の配置位置に移動される。４３０’は、施設４３２～４３５が移動された後のゲーム空間４３０を示している。

なお、移動距離が最小となる施設に限らず、移動対象となる施設や移動対象となる施設を含む範囲をプレイヤが指定してもよい。また、予め移動させない施設や移動させない施設を含む範囲をプレイヤが指定してもよい。

【００４８】

４４０は、さらに他のゲーム空間を示している。ゲーム空間４４０内には、四つの施設が配置されている。即ち、施設「●」が一つ、施設「▲」が二つ、及び施設「■」が一つ配置されている。

【００４９】

ゲーム空間４４０内の範囲４４１について、テンプレート４１０を適用したとする。ゲーム空間４４０内に配置された施設の各種類の数は、テンプレート４１０により配置位置が規定された施設の各種類の数と同じであるか、それよりも少ない。したがって、ゲーム空間４４０内に配置されたすべての施設が、テンプレート４１０により規定された当該施設の配置位置のうちの移動距離が最小となる配置位置に移動される。実際には、範囲４４１外に配置された施設４４２及び４４３が、範囲４４１内の当該施設の配置位置に移動される。４４０’は、施設４４２及び４４３が移動された後のゲーム空間４４０を示している。

なお、ゲーム空間４４０’には、テンプレート４１０により規定された施設の配置位置のうちの当該施設が配置されなかった配置位置に、当該施設の種類が識別可能な態様（例えば、「○」４４４及び「△」４４５）で示されている。

また、施設が配置されなかった場合に、プレイヤに対して、同種の施設や類似の施設を候補として提示することも可能である。

さらに、施設が配置されなかった配置位置に対応する施設をプレイヤが購入したり、後述するマルチプレイヤ環境では、他のプレイヤからトレード等により入手したりすることも可能である。さらに、テンプレートに規定された施設を、プレイヤがゲーム空間には配置してはいないが、倉庫に格納していたような場合、テンプレートに基づいてその施設を配置するようにし、逆にテンプレートに規定されていない施設を倉庫に格納するようにしてもよい。また、テンプレートはプレイヤが作成するようにしたが、サービス側のサーバ３から配布されたり、他のプレイヤから入手するようにしてもよい。その場合、テンプレートに規定されている施設をプレイヤが持っていないこともあり得るが、携帯端末２側もしくはサーバ３側で所持の有無を判断し、所持していないと判断した施設を購入する画面を携帯端末２上で表示することで自動的にプレイヤを購入画面に誘導するようにしてもよい。

【００５０】

２．１．２．端末処理部２５の構成
以上の機能を実現するために、端末処理部２５は、ゲーム進行部２５１と、テンプレート作成部２５２と、テンプレート適用部２５３とを備える。これらの各部は、端末処理部２５が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとして携帯端末２に実装されてもよい。
【００５１】
以下、ゲーム進行部２５１による処理について説明する。
【００５２】
ゲーム進行部２５１は、ゲームの開始及び進行を制御し、適宜テンプレート作成部２５２、テンプレート適用部２５３等に処理の実行を指示する。
【００５３】
具体的には、プレイヤにより操作部２３を介して、ゲームの開始が指示された場合に、ゲーム進行部２５１は、ゲーム進行画面３００を表示する。
即ち、ゲーム進行部２５１は、端末記憶部２２に記憶されている施設管理テーブルを参照し、各施設の種類ＩＤ及び配置位置を抽出する。また、ゲーム進行部２５１は、抽出した種類ＩＤをキーとして、端末記憶部２２に記憶されている施設種類管理テーブルを参照し、対応する種類の画像データのファイル名を抽出する。また、ゲーム進行部２５１は、抽出したファイル名に対応する画像データを端末記憶部２２から取得する。そして、ゲーム進行部２５１は、取得した画像データが示す画像を、抽出した配置位置に基づいて表示すると共に、テンプレート作成、テンプレート適用等の指示を受け付けるボタン等を所定のレイアウトで表示するゲーム進行画面３００を構成し、表示部２４に出力する。
【００５４】
プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、ゲーム進行部２５１は、テンプレート作成部２５２に処理の実行を指示する。
【００５５】
プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に、ゲーム進行部２５１は、テンプレート適用部２５３に処理の実行を指示する。
【００５６】
プレイヤにより操作部２３を介して、他の処理が指示された場合に、ゲーム進行部２５１は、当該他の処理を実行する。
【００５７】
以下、テンプレート作成部２５２による処理について説明する。
【００５８】
テンプレート作成部２５２は、テンプレートを作成して端末記憶部２２に格納すると共に、作成したテンプレートをサーバ３に登録する。
【００５９】
具体的には、テンプレート作成部２５２は、範囲選択画面３１０を表示する。
【００６０】
プレイヤにより操作部２３を介して、範囲が選択され、テンプレート作成の実行が指示された場合に、テンプレート作成部２５２は、テンプレートを作成する。
即ち、テンプレート作成部２５２は、選択された範囲を示す座標をキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、選択された範囲内に配置された各施設の種類ＩＤ及びゲーム空間内での配置位置を抽出する。また、テンプレート作成部２５２は、抽出したゲーム空間内での配置位置を、テンプレート内での配置位置に変換する。さらに、テンプレート作成部２５２は、選択された範囲について、サムネイル画像データを作成し、端末記憶部２２に格納する。そして、テンプレート作成部２５２は、格納したサムネイル画像データのファイル名、抽出した各施設の種類ＩＤ及びテンプレート内での配置位置等を、新たに採番したテンプレートＩＤを付与した上で、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。
【００６１】

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また、テンプレート作成部２５２は、作成したテンプレートをサーバ３に登録する。
即ち、テンプレート作成部２５２は、プレイヤのＩＤ、採番したテンプレートＩＤ、作成したサムネイル画像データ、並びに抽出した各施設の種類ＩＤ及びテンプレート内での配置位置をパラメータとして、テンプレート登録要求を、端末通信部２１を介してサーバ３に送信する。
【００６２】
そして、テンプレート作成部２５２は、処理を終了する。
【００６３】
以下、テンプレート適用部２５３による処理について説明する。
【００６４】
テンプレート適用部２５３は、端末記憶部２２又はサーバ３からテンプレートを取得し、取得したテンプレートを適用する。
【００６５】
具体的には、テンプレート適用部２５３は、テンプレート選択画面３２０を表示する。
即ち、テンプレート適用部２５３は、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、各テンプレートのＩＤ及びサムネイル画像データのファイル名を抽出する。また、テンプレート適用部２５３は、抽出したファイル名に対応するサムネイル画像データを端末記憶部２２から取得する。
必要に応じて、テンプレート適用部２５３は、プレイヤのＩＤをパラメータとして、テンプレート一覧提供要求を、端末通信部２１を介してサーバ３に送信する。また、テンプレート適用部２５３は、サーバ３から端末通信部２１を介して、各テンプレートのＩＤ及びサムネイル画像データを受信する。
そして、テンプレート適用部２５３は、取得等したサムネイル画像データが示すサムネイル画像、テンプレート選択の指示を受け付けるボタン等を所定のレイアウトで表示するテンプレート選択画面３２０を構成し、表示部２４に出力する。
【００６６】
プレイヤにより操作部２３を介して、テンプレートが選択された場合に、テンプレート適用部２５３は、テンプレート表示画面３３０を表示する。
即ち、選択されたテンプレートがサーバ３から提供されるものである場合に、テンプレート適用部２５３は、選択されたテンプレートのＩＤをパラメータとして、テンプレート提供要求を、端末通信部２１を介してサーバ３に送信する。また、テンプレート適用部２５３は、サーバ３から端末通信部２１を介して、対応するテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を受信する。そして、テンプレート適用部２５３は、受信したサムネイル画像データを端末記憶部２２に格納する。また、テンプレート適用部２５３は、選択されたテンプレートのＩＤ、格納したサムネイル画像データのファイル名、受信した各施設の種類ＩＤ及び配置位置等を、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。
選択されたテンプレートのＩＤをキーとして、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤを抽出する。また、テンプレート適用部２５３は、抽出した施設の各種類の数を計数する。また、テンプレート適用部２５３は、抽出した種類ＩＤをキーとして、端末記憶部２２に記憶されている施設種類管理テーブルを参照し、対応する種類の名称を抽出する。さらに、テンプレート適用部２５３は、選択されたテンプレートをゲーム空間内の所定の範囲に適用したプレビュー画像を作成する。そして、テンプレート適用部２５３は、抽出した各施設の名称及び数、作成したプレビュー画像、テンプレート決定の指示を受け付けるボタン等を所定のレイアウトで表示するテンプレート表示画面３３０を構成し、表示部２４に出力する。
なお、テンプレートを適用する手順については後述する。
【００６７】
プレイヤにより操作部２３を介して、テンプレートが決定された場合に、テンプレート適用部２５３は、範囲選択画面３４０を表示する。

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【００６８】
プレイヤにより操作部２３を介して、範囲が選択され、テンプレート適用の実行が指示された場合に、テンプレート適用部２５３は、テンプレートを適用する。
即ち、テンプレート適用部２５３は、端末記憶部２２に記憶されている施設管理テーブルを参照し、各施設のＩＤ、種類ＩＤ、及びゲーム空間内での配置位置を抽出する。また、テンプレート適用部２５３は、抽出した施設の各種類の数を計数する。同様に、テンプレート適用部２５３は、選択されたテンプレートのＩＤをキーとして、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤ及びテンプレート内での配置位置を抽出する。また、テンプレート適用部２５３は、抽出した施設の各種類の数を計数する。さらに、テンプレート適用部２５３は、抽出したテンプレート内での配置位置を、選択された範囲を示す座標に基づいて、ゲーム空間内での配置位置に変換する。そして、テンプレート適用部２５３は、施設の各種類について、ゲーム空間内の当該種類の施設の数と、テンプレート内の当該種類の施設の数とを比較する。
両者が同じである場合に、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置に移動させる。即ち、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設のＩＤをキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、対応する施設のゲーム空間内での配置位置として、テンプレート内の当該種類の施設の配置位置を格納する。
一方、前者が後者よりも多い場合に、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設のうちのテンプレート内の当該種類の施設の配置位置への移動距離が最小となる施設を、当該施設の配置位置に移動させる。即ち、テンプレート適用部２５３は、テンプレート内の当該種類の施設の各配置位置について、ゲーム空間内の当該種類の施設のうちの当該配置位置への移動距離が最小となる施設を特定する。そして、テンプレート適用部２５３は、特定した施設のＩＤをキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、対応する施設のゲーム空間内での配置位置として、当該配置位置を格納する。
一方、前者が後者よりも少ない場合に、テンプレート適用部２５３は、ゲーム空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置のうちの移動距離が最小となる配置位置に移動させる。即ち、テンプレート適用部２５３は、ゲーム空間内の当該種類の各施設について、テンプレート内の当該種類の施設の配置位置のうちの移動距離が最小となる配置位置を特定する。そして、テンプレート適用部２５３は、当該施設のＩＤをキーとして、端末記憶部２２に記憶されている施設管理テーブルを参照し、対応する施設のゲーム空間内での配置位置として、特定した配置位置を格納する。
なお、移動距離が最小となる施設に限らず、移動対象となる施設や移動対象となる施設を含む範囲をプレイヤが指定してもよい。また、予め移動させない施設や移動させない施設を含む範囲をプレイヤが指定してもよい。
【００６９】
そして、テンプレート適用部２５３は、処理を終了する。
【００７０】
２．２．サーバ３の構成
図５（ａ）は、サーバ３の概略構成の一例を示す図である。
【００７１】
サーバ３は、携帯端末２からの要求に応じてテンプレートの登録及び提供を行う。そのために、サーバ３は、サーバ通信部３１と、サーバ記憶部３２と、サーバ処理部３３とを備える。
【００７２】
サーバ通信部３１は、サーバ３をインターネット７に接続するための通信インターフェース回路を備え、インターネット７との間で通信を行う。そして、サーバ通信部３１は、携帯端末２等から受信したデータをサーバ処理部３３に供給する。また、サーバ通信部３

１は、サーバ処理部３３から供給されたデータを携帯端末２等に送信する。
【００７３】
サーバ記憶部３２は、例えば、磁気テープ装置、磁気ディスク装置、又は光ディスク装置のうちの少なくともいずれか一つを備える。サーバ記憶部３２は、サーバ処理部３３での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、サーバ記憶部３２は、アプリケーションプログラムとして、テンプレートの登録及び提供を行うゲーム管理プログラム等を記憶する。また、サーバ記憶部３２は、データとして、プレイヤを管理するプレイヤ管理テーブル（図５（ｂ））、テンプレートを管理するテンプレート管理テーブル（図５（ｃ））、プレイヤ、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、サーバ記憶部３２は、所定の処理に係る一時的なデータを一時的に記憶してもよい。
【００７４】
図５（ｂ）には、プレイヤ管理テーブルが示されている。プレイヤ管理テーブルには、各プレイヤについて、当該プレイヤのＩＤ、名前、画像データのファイル名、作成したテンプレートのＩＤ等が記憶される。
【００７５】
図５（ｃ）には、テンプレート管理テーブルが示されている。図２（ｄ）と同様に、テンプレート管理テーブルには、各テンプレートについて、当該テンプレートのＩＤ、サムネイル画像データのファイル名、各施設の種類ＩＤ及びテンプレート内での配置位置等が記憶される。
【００７６】
サーバ処理部３３は、一又は複数個のプロセッサ及びその周辺回路を備える。サーバ処理部３３は、サーバ３の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。サーバ処理部３３は、サーバ３の各種処理がサーバ記憶部３２に記憶されているプログラム等に基づいて適切な手順で実行されるように、サーバ通信部３１等の動作を制御する。サーバ処理部３３は、サーバ記憶部３２に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、サーバ処理部３３は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【００７７】
２．２．１．サーバ処理部３３の構成
サーバ処理部３３は、サーバ制御部３３１と、テンプレート登録部３３２と、テンプレート提供部３３３とを備える。これらの各部は、サーバ処理部３３が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとしてサーバ３に実装されてもよい。
【００７８】
以下、サーバ制御部３３１による処理について説明する。
【００７９】
サーバ制御部３３１は、サーバの動作を制御し、適宜テンプレート登録部３３２、テンプレート提供部３３３等に処理の実行を指示する。
【００８０】
具体的には、携帯端末２からサーバ通信部３１を介して、テンプレート登録要求を受信した場合に、サーバ制御部３３１は、受信したテンプレート登録要求をパラメータとして、テンプレート登録部３３２に処理の実行を指示する。
【００８１】
携帯端末２からサーバ通信部３１を介して、テンプレート一覧提供要求又はテンプレート提供要求を受信した場合に、サーバ制御部３３１は、受信したテンプレート一覧提供要求等をパラメータとして、テンプレート提供部３３３に処理の実行を指示する。
【００８２】
携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に、サーバ制御部

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３３１は、対応する他の処理を実行する。
【００８３】
以下、テンプレート登録部３３２による処理について説明する。
【００８４】
テンプレート登録部３３２は、テンプレートをサーバ記憶部３２に格納する。
即ち、テンプレート登録部３３２は、与えられたテンプレート登録要求を解析し、プレイヤのＩＤ、テンプレートのＩＤ、サムネイル画像データ、並びに各施設の種類ＩＤ及び配置位置を特定する。そして、テンプレート登録部３３２は、特定したサムネイル画像データをサーバ記憶部３２に格納する。また、テンプレート登録部３３２は、特定したプレイヤＩＤをキーとして、サーバ記憶部３２に記憶されているプレイヤ管理テーブルを参照し、対応するプレイヤが作成したテンプレートのＩＤとして、特定したテンプレートＩＤを格納する。さらに、テンプレート登録部３３２は、特定したテンプレートＩＤ、格納したサムネイル画像データのファイル名、特定した各施設の種類ＩＤ及び配置位置等を、サーバ記憶部３２に記憶されているテンプレート管理テーブルに格納する。
【００８５】
そして、テンプレート登録部３３２は、処理を終了する。
【００８６】
以下、テンプレート提供部３３３による処理について説明する。
【００８７】
テンプレート提供部３３３は、サーバ記憶部３２からテンプレート一覧又はテンプレートを取得し、取得したテンプレート一覧等を携帯端末２に送信する。
【００８８】
具体的には、テンプレート一覧提供要求が与えられた場合に、テンプレート提供部３３３は、サーバ記憶部３２からテンプレート一覧を取得する。
即ち、テンプレート提供部３３３は、与えられたテンプレート一覧提供要求を解析し、プレイヤのＩＤを特定する。そして、テンプレート提供部３３３は、特定したプレイヤＩＤをキーとして、サーバ記憶部３２に記憶されているプレイヤ管理テーブルを参照し、対応するプレイヤ以外のプレイヤが作成したテンプレートのＩＤを抽出する。また、テンプレート提供部３３３は、抽出したテンプレートＩＤをキーとして、サーバ記憶部３２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートのサムネイル画像データのファイル名を抽出する。さらに、テンプレート提供部３３３は、抽出したファイル名に対応するサムネイル画像データをサーバ記憶部３２から取得する。
【００８９】
一方、テンプレート提供要求が与えられた場合に、テンプレート提供部３３３は、サーバ記憶部３２からテンプレートを取得する。
即ち、テンプレート提供部３３３は、与えられたテンプレート提供要求を解析し、テンプレートのＩＤを特定する。そして、テンプレート提供部３３３は、特定したテンプレートＩＤをキーとして、サーバ記憶部３２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートのサムネイル画像データのファイル名並びに各施設の種類ＩＤ及び配置位置を抽出する。また、テンプレート提供部３３３は、抽出したファイル名に対応するサムネイル画像データをサーバ記憶部３２から取得する。
【００９０】
テンプレート提供部３３３は、取得したテンプレート一覧等を携帯端末２に送信する。
即ち、テンプレート提供部３３３は、抽出した各テンプレートのＩＤ及びサムネイル画像データ、又は取得等したテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を、サーバ通信部３１を介して携帯端末２に送信する。
【００９１】
そして、テンプレート提供部３３３は、処理を終了する。
【００９２】
３．ゲームシステム１の動作

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図６は、携帯端末２の動作フローの一例を示す図である。
なお、以下に説明する動作フローは、予め端末記憶部２２に記憶されているプログラムに基づいて、主に端末処理部２５により、携帯端末２の各要素と協働して実行される。
【００９３】
図６（ａ）は、ゲーム進行部２５１の動作フローの一例を示す図である。
【００９４】
プレイヤは、操作部２３を介して端末処理部２５に、ゲームの開始を指示する。端末処理部２５は、ゲームプログラムに基づいて処理を開始する。即ち、ゲームプログラムにより実現されるゲーム進行部２５１は、ゲーム進行画面３００を表示する（ステップＳ１００）。
【００９５】
プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に（ステップＳ１０２―Ｙｅｓ）、ゲーム進行部２５１は、テンプレート作成部２５２に処理の実行を指示する（ステップＳ１０４）。
【００９６】
図６（ｂ）は、テンプレート作成部２５２の動作フローの一例を示す図である。
【００９７】
テンプレート作成部２５２は、範囲選択画面３１０を表示する（ステップＳ１２０）。
【００９８】
プレイヤにより操作部２３を介して、範囲が選択され（ステップＳ１２２）、テンプレート作成の実行が指示された場合に、テンプレート作成部２５２は、テンプレートを作成する（ステップＳ１２４）。
【００９９】
テンプレート作成部２５２は、作成したテンプレートをサーバ３に登録する（ステップＳ１２６）。そして、テンプレート作成部２５２は、処理を終了する。
【０１００】
一方、プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に（ステップＳ１０６―Ｙｅｓ）、ゲーム進行部２５１は、テンプレート適用部２５３に処理の実行を指示する（ステップＳ１０８）。
【０１０１】
図６（ｃ）は、テンプレート適用部２５３の動作フローの一例を示す図である。
【０１０２】
テンプレート適用部２５３は、テンプレート選択画面３２０を表示する（ステップＳ１３０）。
【０１０３】
プレイヤにより操作部２３を介して、テンプレートが選択された場合に（ステップＳ１３２）、テンプレート適用部２５３は、テンプレート表示画面３３０を表示する。
【０１０４】
プレイヤにより操作部２３を介して、テンプレートが決定された場合に（ステップＳ１３４）、テンプレート適用部２５３は、範囲選択画面３４０を表示する。
【０１０５】
プレイヤにより操作部２３を介して、範囲が選択され（ステップＳ１３６）、テンプレート適用の実行が指示された場合に、テンプレート適用部２５３は、テンプレートを適用する（ステップＳ１３８）。そして、テンプレート適用部２５３は、処理を終了する。
【０１０６】
一方、プレイヤにより操作部２３を介して、他の処理が指示された場合に（ステップＳ１０６―Ｎｏ）、ゲーム進行部２５１は、当該他の処理を実行する（ステップＳ１１０）。
【０１０７】
図７は、サーバ３の動作フローの一例を示す図である。

なお、以下に説明する動作フローは、予めサーバ記憶部３２に記憶されているプログラムに基づいて、主にサーバ処理部３３により、サーバ３の各要素と協働して実行される。

【０１０８】

図７（ａ）は、サーバ制御部３３１の動作フローの一例を示す図である。

【０１０９】

携帯端末２からサーバ通信部３１を介して、テンプレート登録要求を受信した場合に（ステップＳ２００―Ｙｅｓ）、サーバ制御部３３１は、受信したテンプレート登録要求をパラメータとして、テンプレート登録部３３２に処理の実行を指示する（ステップＳ２０２）。

【０１１０】

図７（ｂ）は、テンプレート登録部３３２の動作フローの一例を示す図である。

【０１１１】

テンプレート登録部３３２は、与えられたテンプレート登録要求内のテンプレートをサーバ記憶部３２に格納する（ステップＳ２２０）。そして、テンプレート登録部３３２は、処理を終了する。

【０１１２】

一方、携帯端末２からサーバ通信部３１を介して、テンプレート一覧提供要求又はテンプレート提供要求を受信した場合に（ステップＳ２０４―Ｙｅｓ）、サーバ制御部３３１は、受信したテンプレート一覧提供要求等をパラメータとして、テンプレート提供部３３３に処理の実行を指示する（ステップＳ２０６）。

【０１１３】

図７（ｃ）は、テンプレート提供部３３３の動作フローの一例を示す図である。

【０１１４】

テンプレート一覧提供要求が与えられた場合に（ステップＳ２３０―Ｙｅｓ）、テンプレート提供部３３３は、与えられたテンプレート一覧提供要求内のプレイヤＩＤに対応するプレイヤ以外のプレイヤに係るテンプレート一覧を、サーバ記憶部３２から取得する（ステップＳ２３２）。

【０１１５】

一方、テンプレート提供要求が与えられた場合に（ステップＳ２３０―Ｎｏ）、テンプレート提供部３３３は、与えられたテンプレート提供要求内のテンプレートＩＤに対応するテンプレートを、サーバ記憶部３２から取得する（ステップＳ２３４）。

【０１１６】

テンプレート提供部３３３は、取得したテンプレート一覧等を携帯端末２に送信する（ステップＳ２３６）。そして、テンプレート提供部３３３は、処理を終了する。

【０１１７】

一方、携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に（ステップＳ２０４―Ｎｏ）、サーバ制御部３３１は、対応する他の処理を実行する（ステップＳ２０８）。

【０１１８】

以上説明してきたように、テンプレートを用いて施設の配置を変更可能にすることにより、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることが可能となる。

【０１１９】

なお、上記実施形態においては、テンプレートを適用するとそのテンプレートの規定にもとづいて自動的に施設がゲーム空間に配置される例について説明を行ったが、テンプレートを適用する場合、目安となる表示がゲーム空間上に表示され、プレイヤは、その表示を目安にして、自ら施設の種類や、施設の配置を変更することにしてもよい。

また、例えば、建物や壁・柵といったような施設のみならず、他のプレイヤからの攻撃に対して応戦する兵士や武器の種類、数量といった情報であってもよい。

また、テンプレートには、その目的に応じて複数用意されており、目的に応じてプレ

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ヤが選択可能にしてもよい。具体例としては、他のプレイヤの攻撃してくる兵士の種類には複数あり、弓矢を用いた兵士への防御に強い街並みを実現するテンプレート、巨人を用いる攻撃への防御に力を発揮する街並みを実現するテンプレート、空からの攻撃への防御に強いテンプレート等である。

【０１２０】

（第２実施形態）

１．本実施形態の概略

第１実施形態では、プレイヤが一人でゲームを進行させるシングルプレイヤ環境を想定していた。しかしながら、本発明は、プレイヤが複数人でゲームを進行させるマルチプレイヤ環境にも適用することができる。本実施形態では、複数人のプレイヤが一のゲーム空間内で街作りを行うものとし、各プレイヤがゲーム空間内の所定の範囲にテンプレートを適用するものとする。プレイヤによりテンプレートが適用されると、ゲーム空間内に配置された施設のうちの当該プレイヤに係る施設が、テンプレートにより規定された当該施設の配置位置に移動される。

【０１２１】

２．ゲームシステム１の構成

ゲームシステム１の概略構成は、図１に示されるものと同一であるので、以下では説明を省略する。

【０１２２】

２．１．携帯端末２の構成

図８（ａ）は、携帯端末２の概略構成の一例を示す図である。

【０１２３】

携帯端末２は、プレイヤによる操作部２３の操作又は他の携帯端末２からの指示に応じてゲームを進行させる。また、携帯端末２は、必要に応じて、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介してサーバ３に接続し、サーバ３と通信を行う。そのために、携帯端末２は、端末通信部２１と、端末記憶部２２’と、操作部２３と、表示部２４と、端末処理部２５とを備える。

なお、これらの構成のうち、端末通信部２１、操作部２３、及び表示部２４については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０１２４】

端末記憶部２２’は、例えば、半導体メモリ装置を備える。端末記憶部２２’は、端末処理部２５での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、端末記憶部２２’は、ドライバプログラムとして、操作部２３を制御する入力デバイスドライバプログラム、表示部２４を制御する出力デバイスドライバプログラム等を記憶する。また、端末記憶部２２’は、アプリケーションプログラムとして、ゲームを進行させ、その結果を表示するゲームプログラム等を記憶する。また、端末記憶部２２’は、データとして、プレイヤのＩＤ、ゲーム空間内に配置された施設を管理する施設管理テーブル（図８（ｂ））、施設の種類を管理する施設種類管理テーブル（図２（ｃ））、テンプレートを管理するテンプレート管理テーブル（図２（ｄ））、施設、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、端末記憶部２２’は、所定の処理に係る一時的なデータを一時的に記憶してもよい。

【０１２５】

図８（ｂ）には、施設管理テーブルが示されている。施設管理テーブルには、各プレイヤについて、当該プレイヤがゲーム空間内に配置した各施設のＩＤ、種類ＩＤ、ゲーム空間内での配置位置等が記憶される。

【０１２６】

端末処理部２５は、一又は複数個のプロセッサ及びその周辺回路を備える。端末処理部２５は、携帯端末２の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。端末処理部２５は、携帯端末２の各種処理が端末記憶部２２’に記憶されているプ

グラム、操作部２３の操作等に基づいて適切な手順で実行されるように、端末通信部２１、表示部２４等の動作を制御する。端末処理部２５は、端末記憶部２２’に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、端末処理部２５は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。

【０１２７】

２．１．１．端末処理部２５の機能

図９は、マルチプレイヤ環境でのテンプレートの適用の概念を示す図である。

【０１２８】

９００は、ゲーム空間を示している。ゲーム空間９００内には、十二の施設が配置されている。即ち、施設「●」が四つ、施設「▲」が四つ、及び施設「■」が四つ配置されている。これらの施設のうち、右上の３×３マスに配置されている一つの施設「●」及び二つの施設「▲」は、プレイヤ$_1$に係るものであるとする。同様に、右下の３×３マスに配置されている三つの施設「■」はプレイヤ$_2$に係るものであり、左下の３×３マスに配置されている二つの施設「▲」及び一つの施設「■」はプレイヤ$_3$に係るものであり、左上の３×３マスに配置されている三つの施設「●」はプレイヤ$_4$に係るものであるとする。

【０１２９】

プレイヤ$_1$が、ゲーム空間９００内の範囲９０１について、テンプレート９１０を適用したとする。同様に、プレイヤ$_2$～プレイヤ$_4$が、範囲９０２～９０４について、テンプレート９２０～９４０をそれぞれ適用したとする。ゲーム空間９００内に配置された施設のうちのプレイヤ$_1$に係るものの各種類の数は、テンプレート９１０により配置位置が規定された施設の各種類の数と同じである。したがって、プレイヤ$_1$に係るすべての施設が、テンプレート９１０により規定された当該施設の配置位置に移動される。同様に、プレイヤ$_2$～プレイヤ$_4$に係るすべての施設が、テンプレート９２０～９４０により規定された当該施設の配置位置に移動される。９００’は、すべての施設が移動された後のゲーム空間９００を示している。

【０１３０】

２．１．２．端末処理部２５の構成

以上の機能を実現するために、端末処理部２５は、ゲーム進行部２５１’と、テンプレート作成部２５２と、テンプレート適用部２５３と、第２テンプレート適用部２５４とを備える。これらの各部は、端末処理部２５が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとして携帯端末２に実装されてもよい。

なお、これらの構成のうち、テンプレート作成部２５２及びテンプレート適用部２５３については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０１３１】

以下、ゲーム進行部２５１’による処理について説明する。

【０１３２】

ゲーム進行部２５１’は、ゲームの開始及び進行を制御し、適宜テンプレート作成部２５２、テンプレート適用部２５３、第２テンプレート適用部２５４等に処理の実行を指示する。

【０１３３】

具体的には、プレイヤにより操作部２３を介して、ゲームの開始が指示された場合に、ゲーム進行部２５１’は、ゲーム進行画面３００を表示する。

【０１３４】

プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、ゲーム進行部２５１’は、テンプレート作成部２５２に処理の実行を指示する。

【０１３５】

プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に、ゲーム進行部２５１’は、テンプレート適用部２５３に処理の実行を指示する。

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【０１３６】
他の携帯端末２から端末通信部２１を介して、テンプレート適用指示を受信した場合に、ゲーム進行部２５１’は、受信したテンプレート適用指示をパラメータとして、第２テンプレート適用部２５４に処理の実行を指示する。
【０１３７】
プレイヤにより操作部２３を介して、他の処理が指示された場合に、ゲーム進行部２５１’は、当該他の処理を実行する。
【０１３８】
以下、第２テンプレート適用部２５４による処理について説明する。
【０１３９】
第２テンプレート適用部２５４は、サーバ３からテンプレートを取得し、取得したテンプレートを適用する。
【０１４０】
具体的には、第２テンプレート適用部２５４は、サーバ３からテンプレートを取得する。
即ち、第２テンプレート適用部２５４は、与えられたテンプレート適用指示を解析し、プレイヤのＩＤ、テンプレートのＩＤ、及びテンプレートが適用される範囲を示す座標を特定する。また、第２テンプレート適用部２５４は、特定したテンプレートＩＤをパラメータとして、テンプレート提供要求を、端末通信部２１を介してサーバ３に送信する。また、第２テンプレート適用部２５４は、サーバ３から端末通信部２１を介して、対応するテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を受信する。そして、第２テンプレート適用部２５４は、受信したサムネイル画像データを端末記憶部２２’に格納する。また、第２テンプレート適用部２５４は、特定したテンプレートＩＤ、格納したサムネイル画像データのファイル名、受信した各施設の種類ＩＤ及び配置位置等を、端末記憶部２２’に記憶されているテンプレート管理テーブルに格納する。
【０１４１】
第２テンプレート適用部２５４は、取得したテンプレートを適用する。
即ち、第２テンプレート適用部２５４は、特定したプレイヤＩＤをキーとして、端末記憶部２２’に記憶されている施設管理テーブルを参照し、対応するプレイヤに係る各施設のＩＤ、種類ＩＤ、及びゲーム空間内での配置位置を抽出する。また、第２テンプレート適用部２５４は、抽出した施設の各種類の数を計数する。同様に、第２テンプレート適用部２５４は、特定したテンプレートＩＤをキーとして、端末記憶部２２’に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤ及びテンプレート内での配置位置を抽出する。また、第２テンプレート適用部２５４は、抽出した施設の各種類の数を計数する。さらに、第２テンプレート適用部２５４は、抽出したテンプレート内での配置位置を、特定した範囲を示す座標に基づいて、ゲーム空間内での配置位置に変換する。そして、第２テンプレート適用部２５４は、施設の各種類について、ゲーム空間内の当該種類の施設の数と、テンプレート内の当該種類の施設の数とを比較し、その結果に応じて、ゲーム空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置に移動させる。
【０１４２】
そして、第２テンプレート適用部２５４は、処理を終了する。
【０１４３】
２．２．サーバ３の構成
サーバ３の概略構成は、図５（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１４４】
３．ゲームシステム１の動作
図１０は、携帯端末２の動作フローの一例を示す図である。
なお、以下に説明する動作フローは、予め端末記憶部２２’に記憶されているプログラ

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ムに基づいて、主に端末処理部２５により、携帯端末２の各要素と協働して実行される。
【０１４５】
図１０（ａ）は、ゲーム進行部２５１’の動作フローの一例を示す図である。
なお、これらのステップのうち、ステップＳ１００～Ｓ１０８については、図６（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１４６】
他の携帯端末２から端末通信部２１を介して、テンプレート適用指示を受信した場合に（ステップＳ３００―Ｙｅｓ）、ゲーム進行部２５１’は、受信したテンプレート適用指示をパラメータとして、第２テンプレート適用部２５４に処理の実行を指示する（ステップＳ３０２）。
【０１４７】
図１０（ｂ）は、第２テンプレート適用部２５４の動作フローの一例を示す図である。
【０１４８】
第２テンプレート適用部２５４は、与えられたテンプレート適用指示内のテンプレートＩＤに対応するテンプレートをサーバ３から取得する（ステップＳ３１０）。
【０１４９】
第２テンプレート適用部２５４は、取得したテンプレートを適用する（ステップＳ３１２）。そして、第２テンプレート適用部２５４は、処理を終了する。
【０１５０】
一方、プレイヤにより操作部２３を介して、他の処理が指示された場合に（ステップＳ３００―Ｎｏ）、ゲーム進行部２５１’は、当該他の処理を実行する（ステップＳ１１０）。
【０１５１】
以上説明してきたように、マルチプレイヤ環境において各プレイヤがテンプレートを用いて施設の配置を変更可能にすることにより、街作りゲームのユーザビリティを向上させ、プレイヤをゲームに惹きつけ続けることが可能となる。
【０１５２】
なお、本発明は、上記実施形態に限定されるものではない。例えば、上記実施形態では、複数のテンプレートを組み合わせて一のテンプレートを作成するには、プレイヤが複数のテンプレートをそれぞれゲーム空間内の所定の領域に適用するか、複数人のプレイヤがそれぞれテンプレートをゲーム空間内の所定の領域に適用した上で、それらの領域を包含する所定の領域についてテンプレートを作成するものとした。しかしながら、プレイヤが複数のテンプレートを指定するか、複数人のプレイヤがそれぞれテンプレートを指定した上で、それらを直接組み合わせて一のテンプレートを作成してもよい。
図１１は、マルチプレイヤ環境でのテンプレートの組み合わせの概念を示す図である。
プレイヤ$_1$が、範囲１１００について、テンプレート１１１０を指定したとする。同様に、プレイヤ$_2$～プレイヤ$_4$が、範囲１１０１～１１０３について、テンプレート１１２０～１１４０をそれぞれ指定したとする。１１５０は、テンプレート１１１０～１１４０が組み合されたテンプレートを示している。
以上の機能を実現するために、携帯端末２は、以下のような処理を行えばよい。
プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、携帯端末２は、所定の画面を表示し、テンプレート及び範囲の指定を受け付ける。同様に、携帯端末２は、他の携帯端末２からテンプレート及び範囲の指定を受け付ける。そして、携帯端末２は、指定されたテンプレートを端末記憶部２２又はサーバ３から取得し、取得したテンプレートを指定された範囲に配置することにより、新たなテンプレートを作成する。
即ち、携帯端末２は、取得したテンプレートにより規定された各施設の配置位置を、指定された範囲が示す座標に基づいて補正する。そして、携帯端末２は、取得したテンプレートにより規定された各施設の種類ＩＤ及び補正配置位置等を、新たに採番したテンプレートＩＤを付与した上で、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。

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【０１５３】
（第３実施形態）
１．本実施形態の概略
上記実施形態では、テンプレートは、プレイヤが作成するものとした。しかしながら、サーバ等が既成のテンプレートを配布することもできる。本実施形態では、街作りゲームでのイベント（例えば、敵キャラクタから街を防御する）の開催に応じてサーバが既成のテンプレートを配布するものとし、プレイヤは配布されたテンプレートを自身のゲーム空間内の所定の範囲に適用し、必要に応じて施設を移動したり、追加したりして、イベントの実行に備えるものとする。所定の時間が経過した後にイベントが実行され、その結果に応じてプレイヤには様々な特典（例えば、テンプレート、施設等）が付与される。ここでいうテンプレートは、イベントにおけるプレイヤに与えられた課題のようなものともいえる。
【０１５４】
２．ゲームシステム１の構成
ゲームシステム１の概略構成は、図１に示されるものと同一であるので、以下では説明を省略する。
【０１５５】
２．１．携帯端末２の構成
図１２は、携帯端末２の概略構成の一例を示す図である。
【０１５６】
携帯端末２は、プレイヤによる操作部２３の操作に応じてゲームを進行させる。また、携帯端末２は、必要に応じて、基地局４、移動体通信網５、ゲートウェイ６、及びインターネット７を介してサーバ３に接続し、サーバ３と通信を行う。そのために、携帯端末２は、端末通信部２１と、端末記憶部２２と、操作部２３と、表示部２４と、端末処理部２５とを備える。
なお、これらの構成のうち、端末通信部２１、端末記憶部２２、操作部２３、及び表示部２４については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１５７】
端末処理部２５は、一又は複数個のプロセッサ及びその周辺回路を備える。端末処理部２５は、携帯端末２の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。端末処理部２５は、携帯端末２の各種処理が端末記憶部２２に記憶されているプログラム、操作部２３の操作等に基づいて適切な手順で実行されるように、端末通信部２１、表示部２４等の動作を制御する。端末処理部２５は、端末記憶部２２に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、端末処理部２５は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【０１５８】
２．１．１．端末処理部２５の構成
端末処理部２５は、ゲーム進行部２５１’’と、テンプレート作成部２５２と、テンプレート適用部２５３と、第３テンプレート適用部２５５とを備える。これらの各部は、端末処理部２５が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとして携帯端末２に実装されてもよい。
なお、これらの構成のうち、テンプレート作成部２５２及びテンプレート適用部２５３については、図２（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１５９】
以下、ゲーム進行部２５１’’による処理について説明する。
【０１６０】
ゲーム進行部２５１’’は、ゲームの開始及び進行を制御し、適宜テンプレート作成部

２５２、テンプレート適用部２５３、第３テンプレート適用部２５５等に処理の実行を指示する。

【０１６１】

具体的には、プレイヤにより操作部２３を介して、ゲームの開始が指示された場合に、ゲーム進行部２５１’’は、ゲーム進行画面３００を表示する。

【０１６２】

プレイヤにより操作部２３を介して、テンプレートの作成が指示された場合に、ゲーム進行部２５１’’は、テンプレート作成部２５２に処理の実行を指示する。

【０１６３】

プレイヤにより操作部２３を介して、テンプレートの適用が指示された場合に、ゲーム進行部２５１’’は、テンプレート適用部２５３に処理の実行を指示する。

【０１６４】

サーバ３から端末通信部２１を介して、イベント開始通知を受信した場合に、ゲーム進行部２５１’’は、受信したイベント開始通知をパラメータとして、第３テンプレート適用部２５５に処理の実行を指示する。

【０１６５】

プレイヤにより操作部２３を介して、他の処理が指示された場合に、ゲーム進行部２５１’’は、当該他の処理を実行する。

【０１６６】

以下、第３テンプレート適用部２５５による処理について説明する。

【０１６７】

第３テンプレート適用部２５５は、イベントに係るテンプレートをサーバ３から取得し、取得したテンプレートを適用する。

【０１６８】

具体的には、第３テンプレート適用部２５５は、イベントに係るテンプレートをサーバ３から取得する。

即ち、第３テンプレート適用部２５５は、与えられたイベント開始通知を解析し、イベントのＩＤを特定する。また、プレイヤにより操作部２３を介して、イベントへの参加が指示された場合に、第３テンプレート適用部２５５は、プレイヤのＩＤ及び特定したイベントＩＤをパラメータとして、イベント参加要求を、端末通信部２１を介してサーバ３に送信する。また、第３テンプレート適用部２５５は、サーバ３から端末通信部２１を介して、対応するイベントに係るテンプレートのＩＤ、サムネイル画像データ、並びに各施設の種類ＩＤ及び配置位置を受信する。そして、第３テンプレート適用部２５５は、受信したサムネイル画像データを端末記憶部２２に格納する。また、第３テンプレート適用部２５５は、受信したテンプレートＩＤ、格納したサムネイル画像データのファイル名、受信した各施設の種類ＩＤ及び配置位置等を、端末記憶部２２に記憶されているテンプレート管理テーブルに格納する。

【０１６９】

第３テンプレート適用部２５５は、取得したテンプレートを適用する。

即ち、第３テンプレート適用部２５５は、端末記憶部２２に記憶されている施設管理テーブルを参照し、各施設のＩＤ、種類ＩＤ、及びゲーム空間内での配置位置を抽出する。また、第３テンプレート適用部２５５は、抽出した施設の各種類の数を計数する。同様に、第３テンプレート適用部２５５は、受信したテンプレートＩＤをキーとして、端末記憶部２２に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートの各施設の種類ＩＤ及びテンプレート内での配置位置を抽出する。また、第３テンプレート適用部２５５は、抽出した施設の各種類の数を計数する。さらに、第３テンプレート適用部２５５は、抽出したテンプレート内での配置位置を、プレイヤにより操作部２３を介して選択された範囲を示す座標に基づいて、ゲーム空間内での配置位置に変換する。そして、第３テンプレート適用部２５５は、施設の各種類について、ゲーム空間内の当該種類の施設の数と、テンプレート内の当該種類の施設の数とを比較し、その結果に応じて、ゲーム

空間内の当該種類の施設を、テンプレート内の当該種類の施設の配置位置に移動させる。
【０１７０】
そして、第３テンプレート適用部２５５は、処理を終了する。
【０１７１】
２．２．サーバ３の構成
図１３（ａ）は、サーバ３の概略構成の一例を示す図である。
【０１７２】
サーバ３は、携帯端末２からの要求に応じてテンプレートの登録及び提供を行う。また、イベントの管理及びテンプレートの提供を行う。そのために、サーバ３は、サーバ通信部３１と、サーバ記憶部３２’と、サーバ処理部３３とを備える。
なお、これらの構成のうち、サーバ通信部３１については、図５（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１７３】
サーバ記憶部３２’は、例えば、磁気テープ装置、磁気ディスク装置、又は光ディスク装置のうちの少なくともいずれか一つを備える。サーバ記憶部３２’は、サーバ処理部３３での処理に用いられるオペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム、データ等を記憶する。例えば、サーバ記憶部３２’は、アプリケーションプログラムとして、テンプレートの登録及び提供並びにイベントの管理を行うゲーム管理プログラム等を記憶する。また、サーバ記憶部３２’は、データとして、プレイヤを管理するプレイヤ管理テーブル（図５（ｂ））、テンプレートを管理するテンプレート管理テーブル（図５（ｃ））、イベントを管理するイベント管理テーブル（図１３（ｂ））、プレイヤ、テンプレート等に係る画像データ、映像データ等を記憶する。さらに、サーバ記憶部３２’は、所定の処理に係る一時的なデータを一時的に記憶してもよい。
【０１７４】
図１３（ｂ）には、イベント管理テーブルが示されている。イベント管理テーブルには、各イベントについて、当該イベントのＩＤ、開始日時、用いられるテンプレートのＩＤ、参加しているプレイヤのＩＤ等が記憶される。
【０１７５】
サーバ処理部３３は、一又は複数個のプロセッサ及びその周辺回路を備える。サーバ処理部３３は、サーバ３の全体的な動作を統括的に制御するものであり、例えば、ＣＰＵである。サーバ処理部３３は、サーバ３の各種処理がサーバ記憶部３２’に記憶されているプログラム等に基づいて適切な手順で実行されるように、サーバ通信部３１等の動作を制御する。サーバ処理部３３は、サーバ記憶部３２’に記憶されているプログラム（オペレーティングシステムプログラム、ドライバプログラム、アプリケーションプログラム等）に基づいて処理を実行する。また、サーバ処理部３３は、複数のプログラム（アプリケーションプログラム等）を並列に実行することができる。
【０１７６】
２．２．１．サーバ処理部３３の構成
サーバ処理部３３は、サーバ制御部３３１’と、テンプレート登録部３３２と、テンプレート提供部３３３と、イベント管理部３３４とを備える。これらの各部は、サーバ処理部３３が備えるプロセッサで実行されるプログラムにより実現される機能モジュールである。あるいは、これらの各部は、ファームウェアとしてサーバ３に実装されてもよい。
なお、これらの構成のうち、テンプレート登録部３３２及びテンプレート提供部３３３については、図５（ａ）に示されるものと同一であるので、以下では説明を省略する。
【０１７７】
以下、サーバ制御部３３１’による処理について説明する。
【０１７８】
サーバ制御部３３１’は、サーバの動作を制御し、適宜テンプレート登録部３３２、テンプレート提供部３３３、イベント管理部３３４等に処理の実行を指示する。

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【０１７９】
具体的には、携帯端末２からサーバ通信部３１を介して、テンプレート登録要求を受信した場合に、サーバ制御部３３１’は、受信したテンプレート登録要求をパラメータとして、テンプレート登録部３３２に処理の実行を指示する。
【０１８０】
携帯端末２からサーバ通信部３１を介して、テンプレート一覧提供要求又はテンプレート提供要求を受信した場合に、サーバ制御部３３１’は、受信したテンプレート一覧提供要求等をパラメータとして、テンプレート提供部３３３に処理の実行を指示する。
【０１８１】
開始日時を経過したイベントが存在する場合に、サーバ制御部３３１’は、当該イベントのＩＤをパラメータとして、イベント管理部３３４に処理の実行を指示する。
即ち、サーバ制御部３３１’は、サーバ記憶部３２’に記憶されているイベント管理テーブルを参照し、各イベントのＩＤ及び開始日時を抽出する。また、サーバ制御部３３１’は、不図示の時計から現在日時を取得する。そして、取得した現在日時が開始日時を経過したイベントが存在する場合に、サーバ制御部３３１’は、当該イベントのＩＤをパラメータとして、イベント管理部３３４に処理の実行を指示する。
【０１８２】
携帯端末２からサーバ通信部３１を介して、イベント参加要求を受信した場合に、サーバ制御部３３１’は、受信したイベント参加要求をパラメータとして、イベント管理部３３４に処理の実行を指示する。
【０１８３】
携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に、サーバ制御部３３１’は、対応する他の処理を実行する。
【０１８４】
以下、イベント管理部３３４による処理について説明する。
【０１８５】
イベント管理部３３４は、イベントの開始通知を携帯端末２に送信する。また、イベント管理部３３４は、イベントに係るテンプレートをサーバ記憶部３２’から取得し、取得したテンプレートを携帯端末２に送信する。
【０１８６】
具体的には、イベントのＩＤが与えられた場合に、イベント管理部３３４は、イベントの開始通知を携帯端末２に送信する。
即ち、イベント管理部３３４は、サーバ記憶部３２’に記憶されているプレイヤ管理テーブルを参照し、各プレイヤを特定する。そして、イベント管理部３３４は、サーバ通信部３１を介して特定した各プレイヤの携帯端末２に、与えられたイベントＩＤをパラメータとして、イベント開始通知を送信する。
【０１８７】
そして、イベント管理部３３４は、処理を終了する。
【０１８８】
一方、イベント参加要求が与えられた場合に、イベント管理部３３４は、対応するイベントにプレイヤを参加させる。
即ち、イベント管理部３３４は、与えられたイベント参加要求を解析し、イベントのＩＤ及びプレイヤのＩＤを特定する。そして、イベント管理部３３４は、特定したイベントＩＤをキーとして、サーバ記憶部３２’に記憶されているイベント管理テーブルを参照し、対応するイベントに参加しているプレイヤとして、特定したプレイヤＩＤを格納する。
【０１８９】
イベント管理部３３４は、対応するイベントに係るテンプレートをサーバ記憶部３２’から取得する。
即ち、イベント管理部３３４は、特定したイベントＩＤをキーとして、サーバ記憶部３２’に記憶されているイベント管理テーブルを参照し、対応するイベントに係るテンプ

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ートのＩＤを抽出する。そして、イベント管理部３３４は、抽出したテンプレートＩＤをキーとして、サーバ記憶部３２’に記憶されているテンプレート管理テーブルを参照し、対応するテンプレートのサムネイル画像データのファイル名並びに各施設の種類ＩＤ及び配置位置を抽出する。また、イベント管理部３３４は、抽出したファイル名に対応するサムネイル画像データをサーバ記憶部３２’から取得する。

【０１９０】

イベント管理部３３４は、取得したテンプレートを携帯端末２に送信する。

即ち、イベント管理部３３４は、取得等したテンプレートのサムネイル画像データ並びに各施設の種類ＩＤ及び配置位置を、サーバ通信部３１を介して携帯端末２に送信する。

【０１９１】

そして、イベント管理部３３４は、処理を終了する。

【０１９２】

３．ゲームシステム１の動作

図１４は、携帯端末２の動作フローの一例を示す図である。

なお、以下に説明する動作フローは、予め端末記憶部２２に記憶されているプログラムに基づいて、主に端末処理部２５により、携帯端末２の各要素と協働して実行される。

【０１９３】

図１４（ａ）は、ゲーム進行部２５１’’の動作フローの一例を示す図である。

なお、これらのステップのうち、ステップＳ１００～Ｓ１０８については、図６（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０１９４】

サーバ３から端末通信部２１を介して、イベント開始通知を受信した場合に（ステップＳ４００―Ｙｅｓ）、ゲーム進行部２５１’’は、受信したイベント開始通知をパラメータとして、第３テンプレート適用部２５５に処理の実行を指示する（ステップＳ４０２）。

【０１９５】

図１４（ｂ）は、第３テンプレート適用部２５５の動作フローの一例を示す図である。

【０１９６】

第３テンプレート適用部２５５は、イベントに係るテンプレートをサーバ３から取得する（ステップＳ４１０）。

【０１９７】

第３テンプレート適用部２５５は、取得したテンプレートを適用する（ステップＳ４１２）。そして、第３テンプレート適用部２５５は、処理を終了する。

【０１９８】

一方、プレイヤにより操作部２３を介して、他の処理が指示された場合に（ステップＳ４００―Ｎｏ）、ゲーム進行部２５１’’は、当該他の処理を実行する（ステップＳ１１０）。

【０１９９】

図１５は、サーバ３の動作フローの一例を示す図である。

なお、以下に説明する動作フローは、予めサーバ記憶部３２’に記憶されているプログラムに基づいて、主にサーバ処理部３３により、サーバ３の各要素と協働して実行される。

【０２００】

図１５（ａ）は、サーバ制御部３３１’の動作フローの一例を示す図である。

なお、これらのステップのうち、ステップＳ２００～Ｓ２０６については、図７（ａ）に示されるものと同一であるので、以下では説明を省略する。

【０２０１】

開始日時を経過したイベントが存在する場合に（ステップＳ５００―Ｙｅｓ）、サーバ制御部３３１’は、当該イベントのＩＤをパラメータとして、イベント管理部３３４に処理の実行を指示する（ステップＳ５０２）。

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【０２０２】
図１５（ｂ）は、イベント管理部３３４の動作フローの一例を示す図である。
【０２０３】
イベントのＩＤが与えられた場合に、イベント管理部３３４は、イベントの開始通知を携帯端末２に送信する（ステップＳ５１０）。そして、イベント管理部３３４は、処理を終了する。
【０２０４】
一方、携帯端末２からサーバ通信部３１を介して、イベント参加要求を受信した場合に（ステップＳ５０４―Ｙｅｓ）、サーバ制御部３３１’は、受信したイベント参加要求をパラメータとして、イベント管理部３３４に処理の実行を指示する（ステップＳ５０６）。
【０２０５】
図１５（ｃ）は、イベント管理部３３４の動作フローの他の一例を示す図である。
【０２０６】
イベント参加要求が与えられた場合に、イベント管理部３３４は、対応するイベントにプレイヤを参加させる（ステップＳ５２０）。
【０２０７】
イベント管理部３３４は、対応するイベントに係るテンプレートをサーバ記憶部３２’から取得する（ステップＳ５２２）。
【０２０８】
イベント管理部３３４は、取得したテンプレートを携帯端末２に送信する（ステップＳ５２４）。そして、イベント管理部３３４は、処理を終了する。
【０２０９】
一方、携帯端末２からサーバ通信部３１を介して、他の要求を受信した場合に（ステップＳ５０４―Ｎｏ）、サーバ制御部３３１’は、対応する他の処理を実行する（ステップＳ２０８）。
【０２１０】
以上説明してきたように、既成のテンプレートを配布可能にすることにより、施設の配置に応じたイベントの開催等が可能となり、街作りゲームの興趣を向上させ、プレイヤをゲームに惹きつけ続けることが可能となる。
【０２１１】
なお、本発明は、上記実施形態に限定されるものではない。例えば、上記実施形態では、イベントの開催に応じて既成のテンプレートを配布するものとしたが、イベントが実行される際にテンプレートを利用するだけでなく、種々の施設をどのように配置して遊ぶべきものかを分り易く覚えてもらうことを目的とした所謂チュートリアルの際に、バランス型やリソース保護型等、用途の異なる配置のテンプレートを提供してもよい。
【０２１２】
また、上記実施形態では、テンプレートの作成及び適用は、携帯端末２で行うものとしたが、サーバ３で行ってもよい。その場合に、サーバ３は、各プレイヤについて、ゲーム空間内に配置された施設を記憶し、プレイヤからの指示に応じて、当該プレイヤに係るゲーム空間内の所定の範囲について、テンプレートの作成及び／又は適用を行えばよい。
【０２１３】
また、上記実施形態では、テンプレートの規定に基づいて施設の配置を変更する例で説明を行ったが、施設の種類を変更する例であってもよい。
また、いわゆる建物、壁、柵といったようなものに限られず、他のプレイヤの攻撃に対して応戦可能な兵士、武器等、どのようなゲームアイテムであってもよい。
【０２１４】
また、端末処理部２５及びサーバ処理部３３が備える各機能をコンピュータに実現させるためのコンピュータプログラムは、半導体記録媒体、磁気記録媒体、光記録媒体等のコンピュータにより読み取り可能な記録媒体に記録された形で提供され、当該記録媒体から

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公知のセットアッププログラム等を用いて端末記憶部２２及びサーバ記憶部３２にインストールされてもよい。

【０２１５】

当業者は、本発明の精神及び範囲から外れることなく、様々な変更、置換、及び修正をこれに加えることが可能であることを理解されたい。

【符号の説明】

【０２１６】

１　ゲームシステム
２　携帯端末
２１　端末通信部
２２　端末記憶部
２３　操作部
２４　表示部
２５　端末処理部
２５１　ゲーム進行部
２５２　テンプレート作成部
２５３　テンプレート適用部
２５４　第２テンプレート適用部
２５５　第３テンプレート適用部
３　サーバ
３１　サーバ通信部
３２　サーバ記憶部
３３　サーバ処理部
３３１　サーバ制御部
３３２　テンプレート登録部
３３３　テンプレート提供部
３３４　イベント管理部
４　基地局
５　移動体通信網
６　ゲートウェイ
７　インターネット

【書類名】特許請求の範囲
【請求項１】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、
前記ゲーム空間内に配置されたゲーム媒体を、前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
ことを含むことを特徴とするコンピュータの制御方法。
【請求項２】
前記記憶部は、他のプレイヤに係るテンプレートをさらに記憶し、
プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、前記ゲーム空間内に配置されたゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項１に記載のコンピュータの制御方法。
【請求項３】
前記記憶部は、ゲーム空間内に配置された他のプレイヤに係るゲーム媒体及び前記ゲーム媒体の配置位置をさらに記憶し、
他のプレイヤからの指示に基づいて前記他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、前記ゲーム空間内に配置されたゲーム媒体のうちの前記他のプレイヤに係るゲーム媒体を、前記他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項２に記載のコンピュータの制御方法。
【請求項４】
他のコンピュータからイベントの開始が通知された場合に、前記コンピュータが、前記他のコンピュータから前記イベントに係るテンプレートを取得し、前記ゲーム空間内に配置されたゲーム媒体を、前記他のコンピュータから取得した前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、請求項１に記載のコンピュータの制御方法。
【請求項５】
前記ゲーム空間内に配置されたゲーム媒体の数が前記テンプレートにより配置位置が規定された前記ゲーム媒体の数よりも少ない場合に、前記コンピュータが、前記ゲーム空間内に配置された前記ゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置のうちの移動距離が最小となる配置位置に移動させる、請求項１～４のいずれか一項に記載のコンピュータの制御方法。
【請求項６】
前記コンピュータが、前記テンプレートにより規定されたゲーム媒体の配置位置のうちの前記ゲーム媒体が配置されなかった配置位置及び前記ゲーム媒体を識別可能な態様で表示する、請求項５に記載のコンピュータの制御方法。
【請求項７】
前記ゲーム空間内に配置されたゲーム媒体の数が前記テンプレートにより配置位置が規定された前記ゲーム媒体の数よりも多い場合に、前記コンピュータが、前記ゲーム空間内に配置された前記ゲーム媒体のうちの前記テンプレートにより規定された前記ゲーム媒体の配置位置への移動距離が最小となるゲーム媒体を前記配置位置に移動させる、請求項１～６のいずれか一項に記載のコンピュータの制御方法。
【請求項８】
プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータが、前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～７のいずれか一項に記載の

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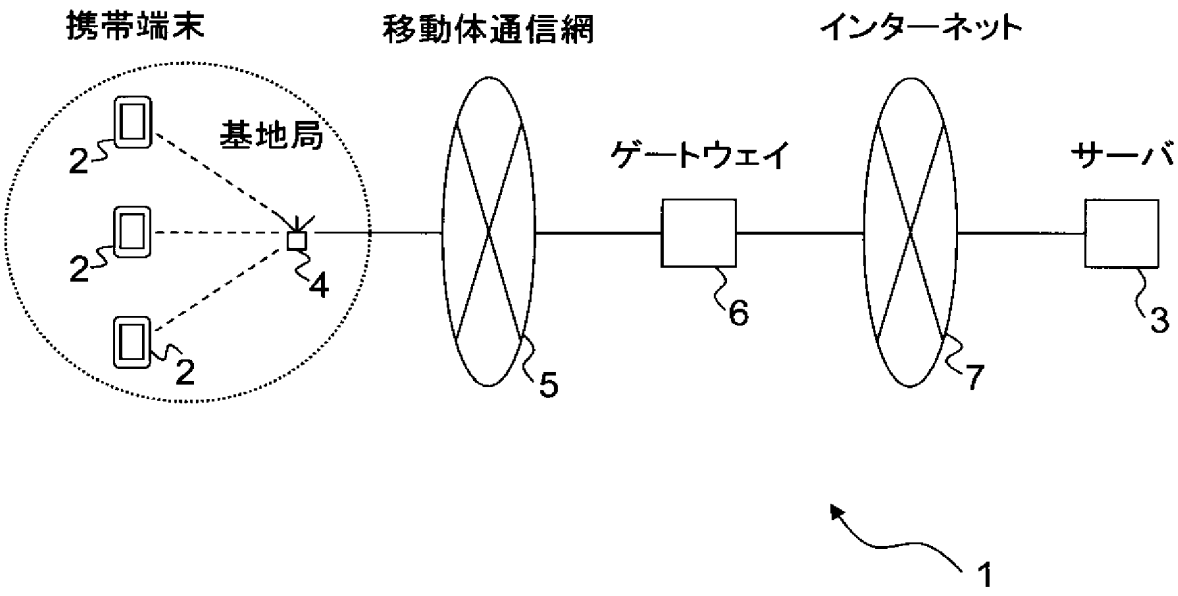
ンピュータの制御方法。
【請求項９】
　プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～８のいずれか一項に記載のコンピュータの制御方法。
【請求項１０】
　ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいて前記テンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータに、
　前記ゲーム空間内に配置されたゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
　ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１１】
　プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、
　ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、
　プレイヤからの指示に基づいて前記テンプレートをゲーム空間内のプレイヤに指示された範囲に適用するテンプレート適用部とを備え、
　前記テンプレートが適用された場合に、前記テンプレート適用部は、前記ゲーム空間内に配置されたゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
　ことを特徴とするコンピュータ。

【書類名】要約書
【要約】
【課題】本発明は、街作りゲームのユーザビリティを向上させることを可能とするコンピュータの制御方法等を提供することを目的とする。
【解決手段】本発明に係るコンピュータの制御方法は、ゲーム空間内に配置されたゲーム媒体及びゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部（２２）を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータ（２）の制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内の所定の範囲に適用された場合に、コンピュータが、ゲーム空間内に配置されたゲーム媒体を、テンプレートにより規定されたゲーム媒体の配置位置に移動させることを含む。
【選択図】図６

【書類名】図面
【図１】

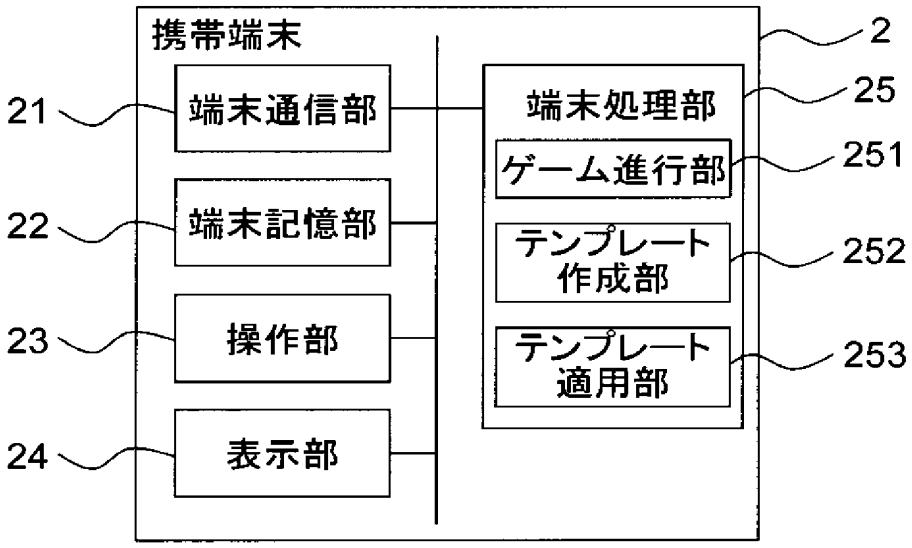
図1



【図２】

図2

(a)



(b)

施設	種類	配置位置	…
F_001	S_001	(3, 2)	…
F_002	S_001	(3, 3)	…
F_003	S_002	(4, 2)	…
…	…	…	…

(c)

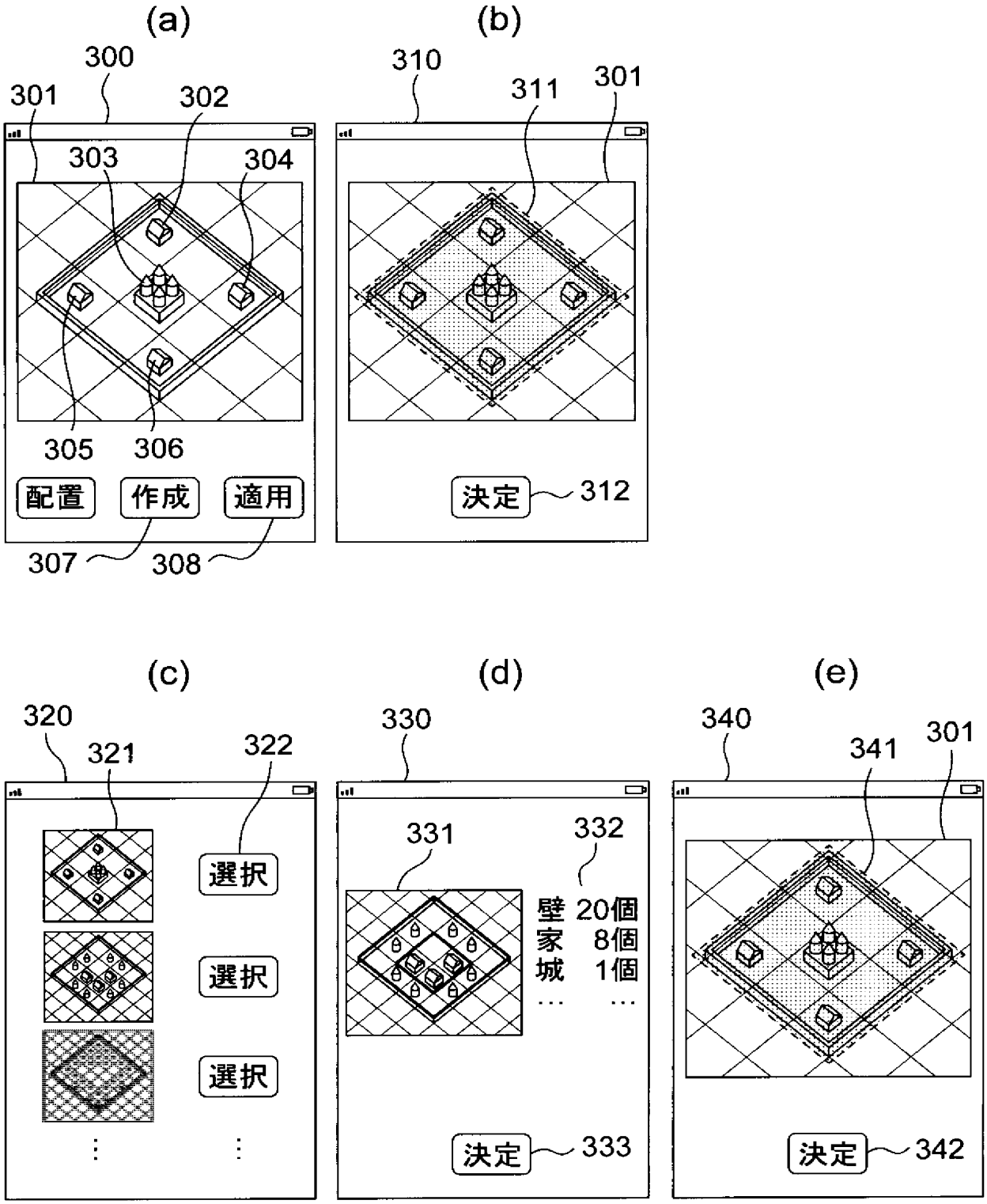
種類	名称	画像	…
S_001	壁	S_001.jpg	…
S_002	家	S_002.jpg	…
S_003	城	S_003.jpg	…
…	…	…	…

(d)

テンプレート	画像	種類	配置位置	…
T_001	T_001.jpg	S_001	(1, 1)	…
		S_001	(1, 2)	…
		S_002	(2, 1)	…
…		…	…	…

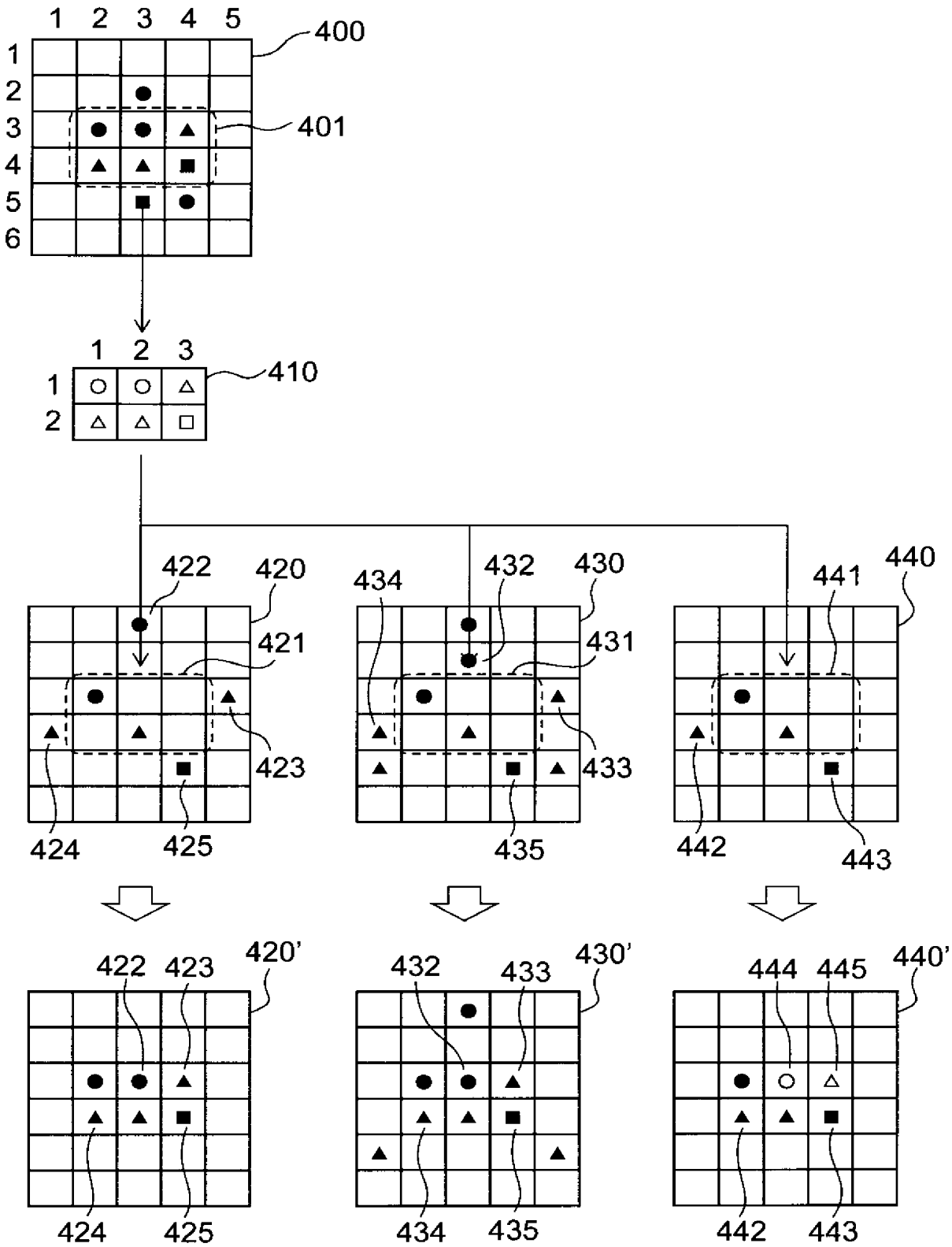
【図３】

図3


(a)
300
301
302
303
304
305
306
配置
作成
適用
307
308
(b)
310
311
301
決定
312
(c)
320
321
322
選択
選択
選択
(d)
330
331
332
壁 20個
家 8個
城 1個
決定
333
(e)
340
341
301
決定
342

【図４】

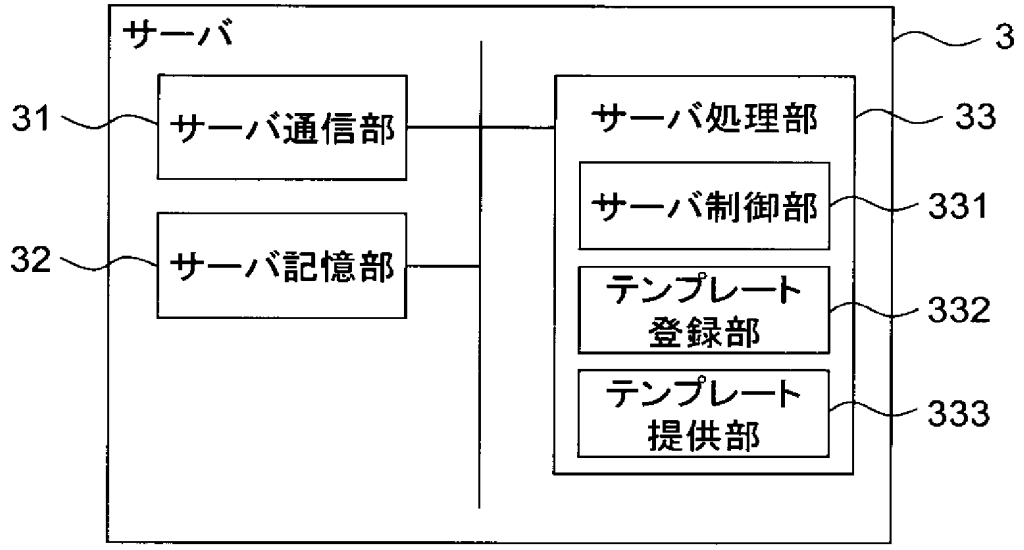
図4


1 2 3 4 5
400
401
1 2 3 4 5 6
1 2 3
410
1 2
422
420
421
423
424
425
434
432
430
431
433
435
441
440
442
443
420'
422 423
424
425
430'
432 433
434
435
440'
444 445
442
443

【図５】

図5

(a)



(b)

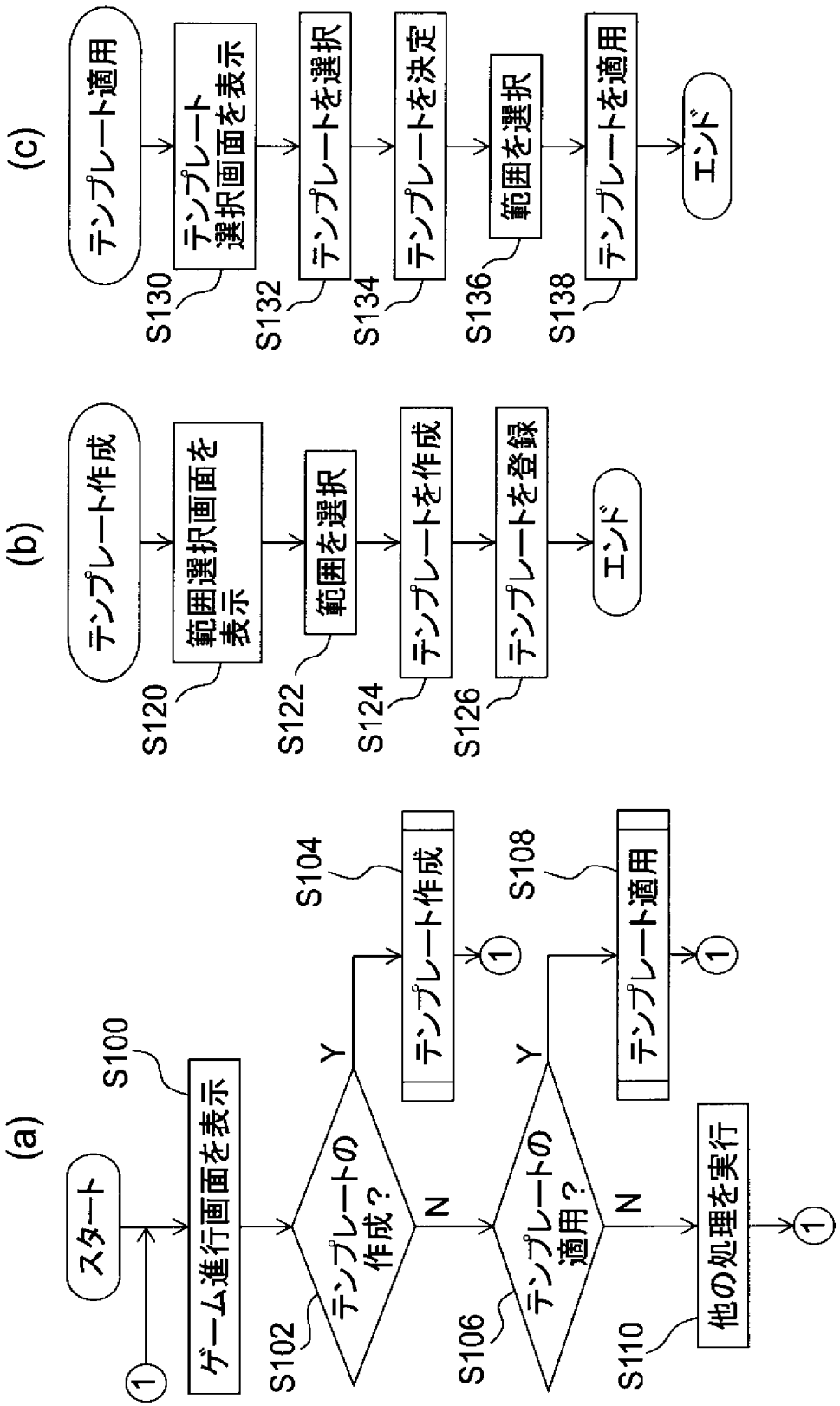
プレイヤ	名前	画像	テンプレート	…
P_001	プレイヤ$_1$	P_001.jpg	T_001,…	…
P_002	プレイヤ$_2$	P_002.jpg	T_003,…	…
P_003	プレイヤ$_3$	P_003.jpg	T_004,…	…
…	…	…	…	…

(c)

テンプレート	画像	種類	配置位置	…
T_001	T_001.jpg	S_001	(1, 1)	…
		S_001	(1, 2)	…
		S_002	(2, 1)	…
…		…	…	…

【図６】

図6



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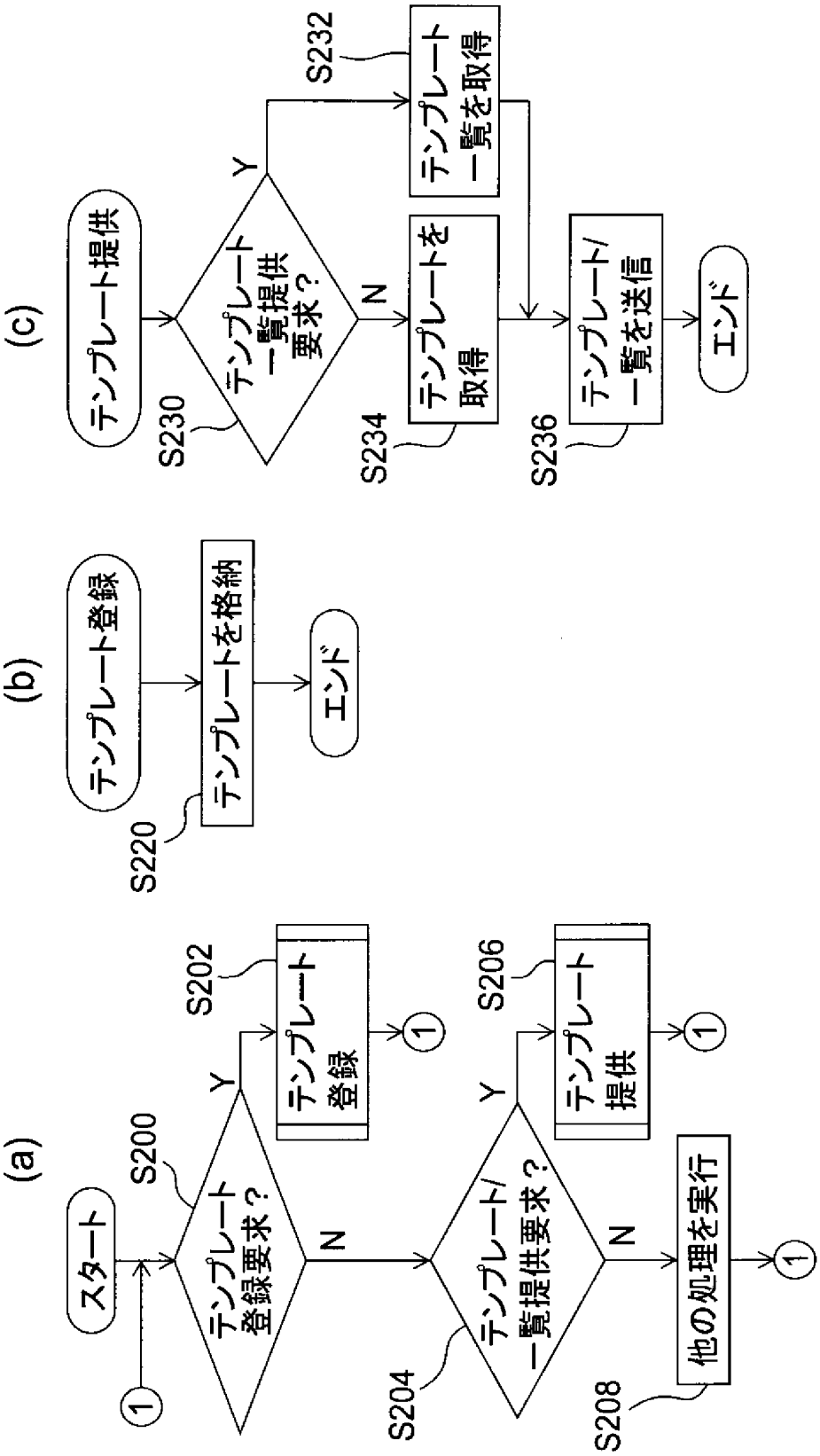
【図７】

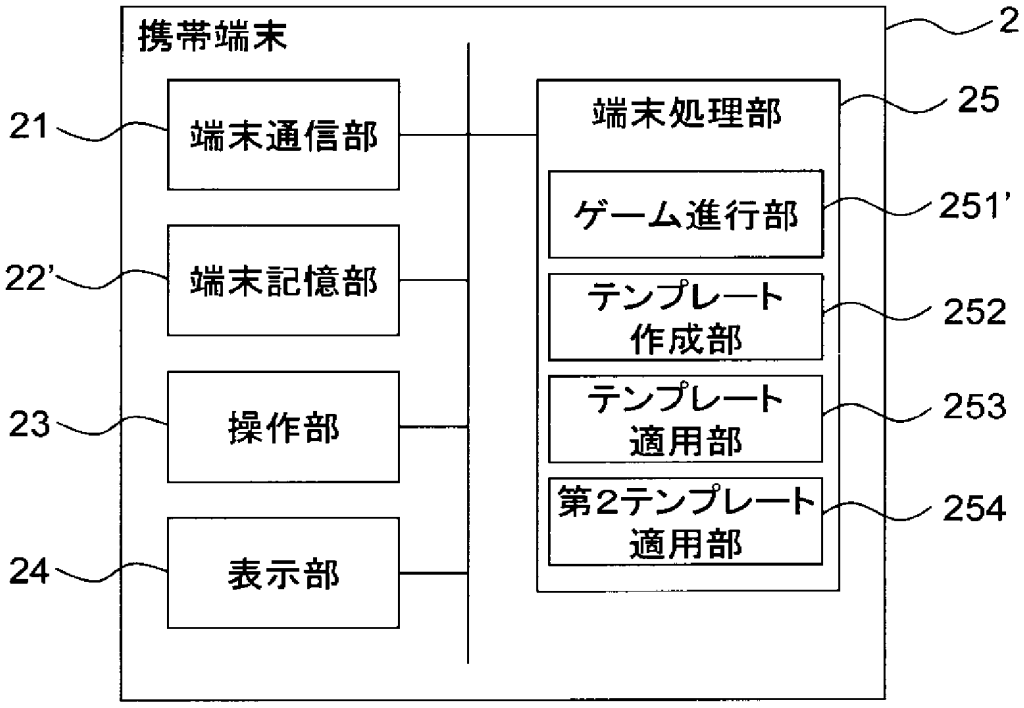
図7


(a)
スタート
①
S200
テンプレート登録要求？
Y
S202
テンプレート登録
①
N
S204
テンプレート/一覧提供要求？
Y
S206
テンプレート提供
①
N
S208
他の処理を実行
①
(b)
テンプレート登録
S220
テンプレートを格納
エンド
(c)
テンプレート提供
S230
テンプレート一覧提供要求？
Y
S232
テンプレート一覧を取得
N
S234
テンプレートを取得
S236
テンプレート/一覧を送信
エンド

【図８】

図8

(a)

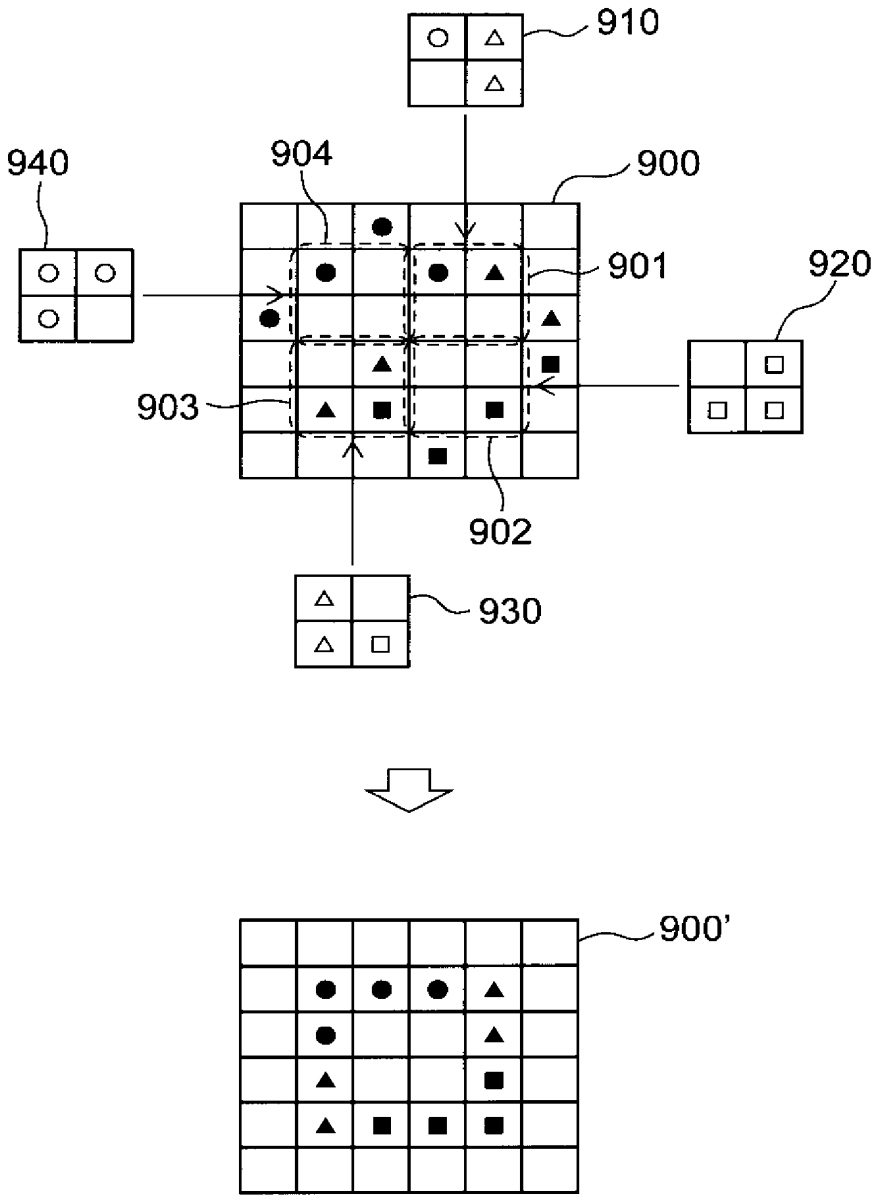


(b)

プレイヤ	施設	種類	配置位置	…
P_001	F_001	S_001	(3, 2)	…
	F_002	S_002	(3, 3)	…
	F_003	S_003	(4, 2)	…
…	…	…	…	…

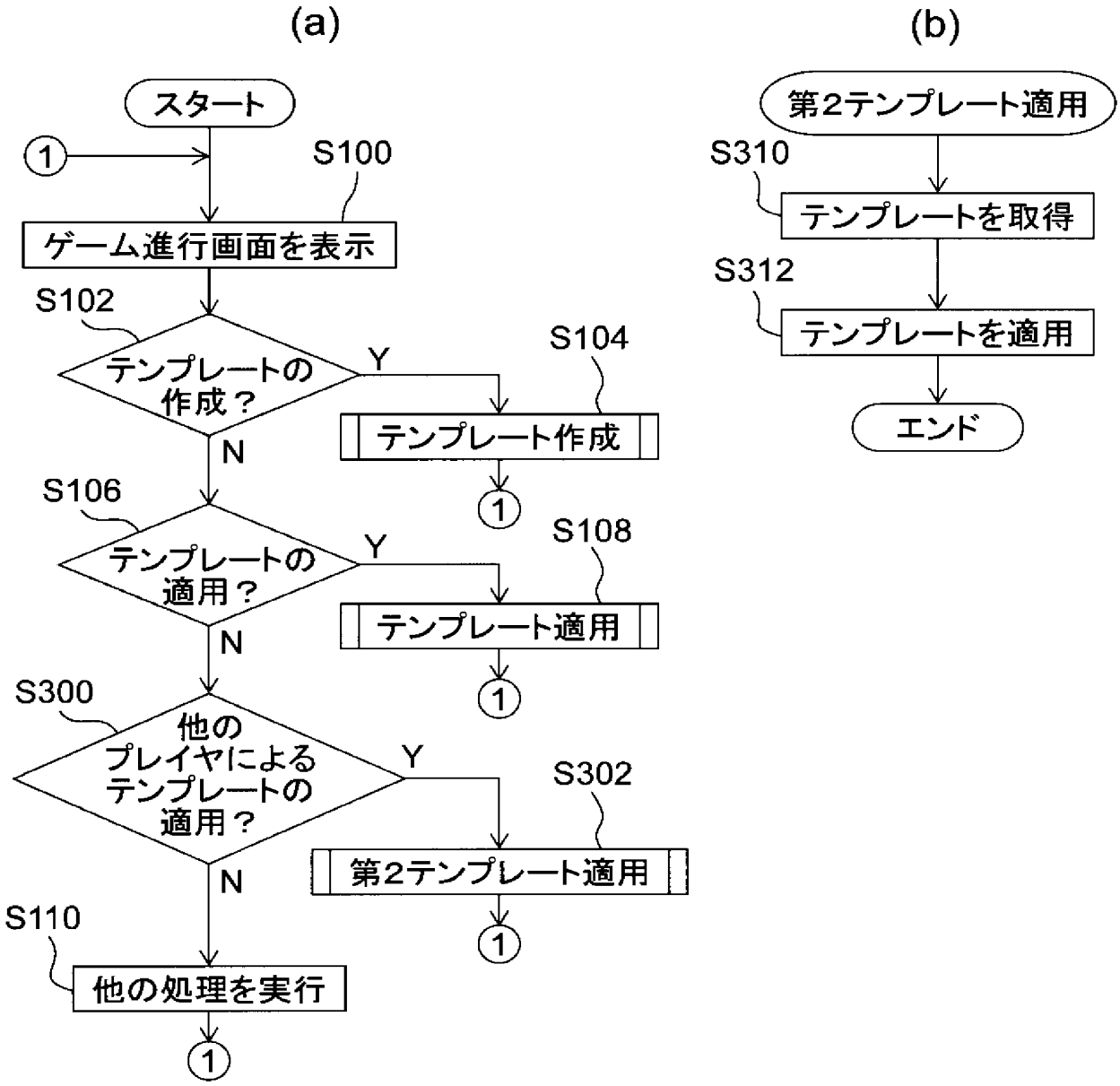
【図９】

図9



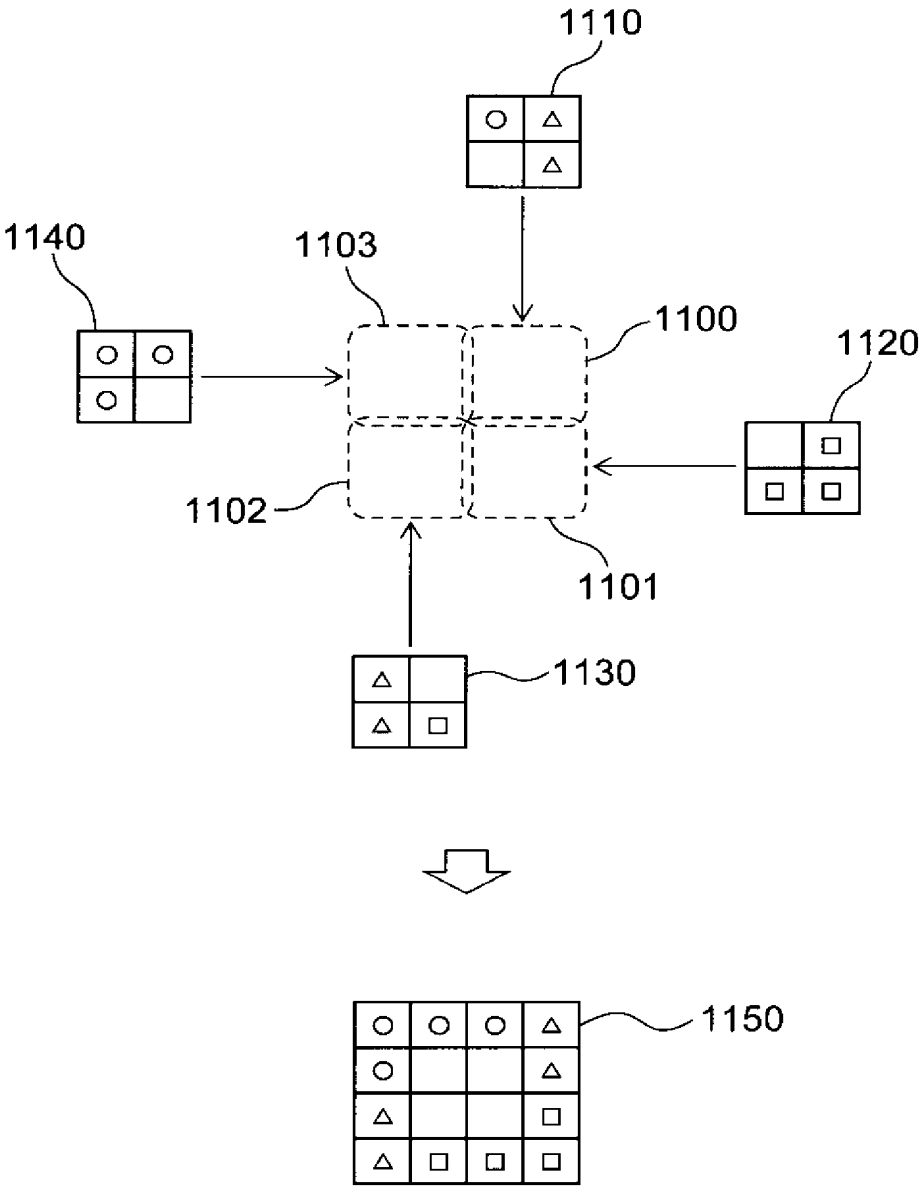
【図１０】

図10


(a)
スタート
①
S100
ゲーム進行画面を表示
S102
テンプレートの作成？
Y
S104
テンプレート作成
①
N
S106
テンプレートの適用？
Y
S108
テンプレート適用
①
N
S300
他のプレイヤによるテンプレートの適用？
Y
S302
第2テンプレート適用
①
N
S110
他の処理を実行
①
(b)
第2テンプレート適用
S310
テンプレートを取得
S312
テンプレートを適用
エンド

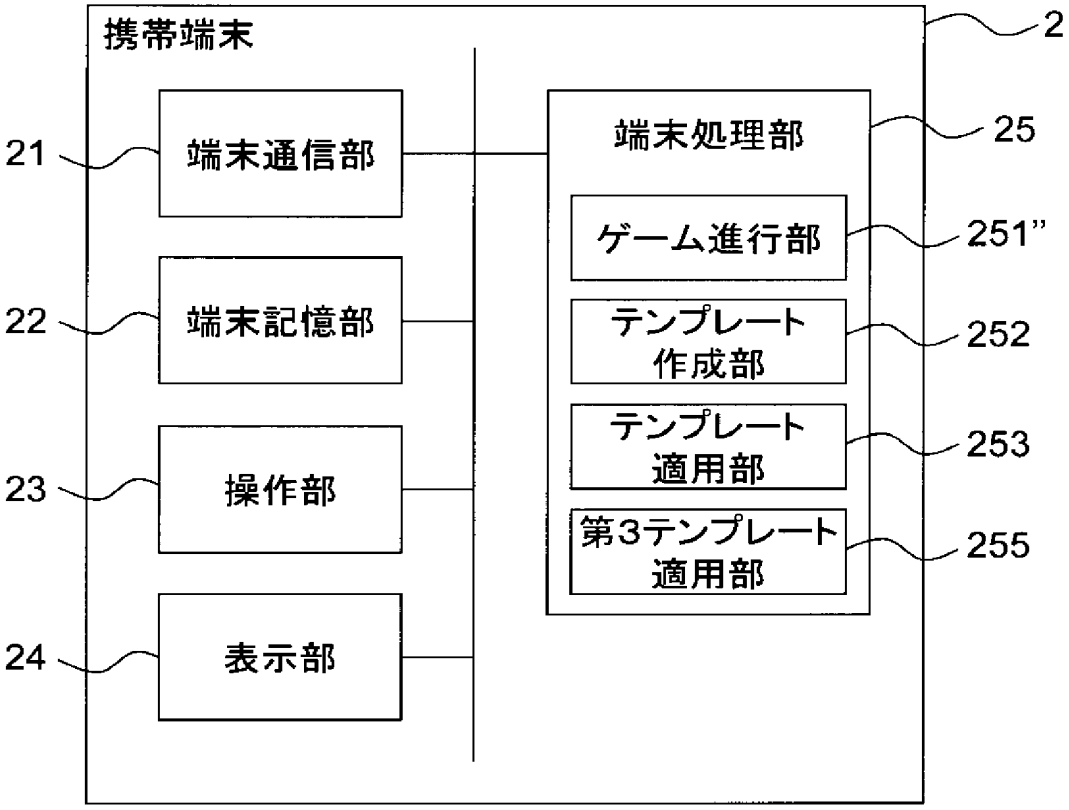
【図１１】

図11



【図１２】

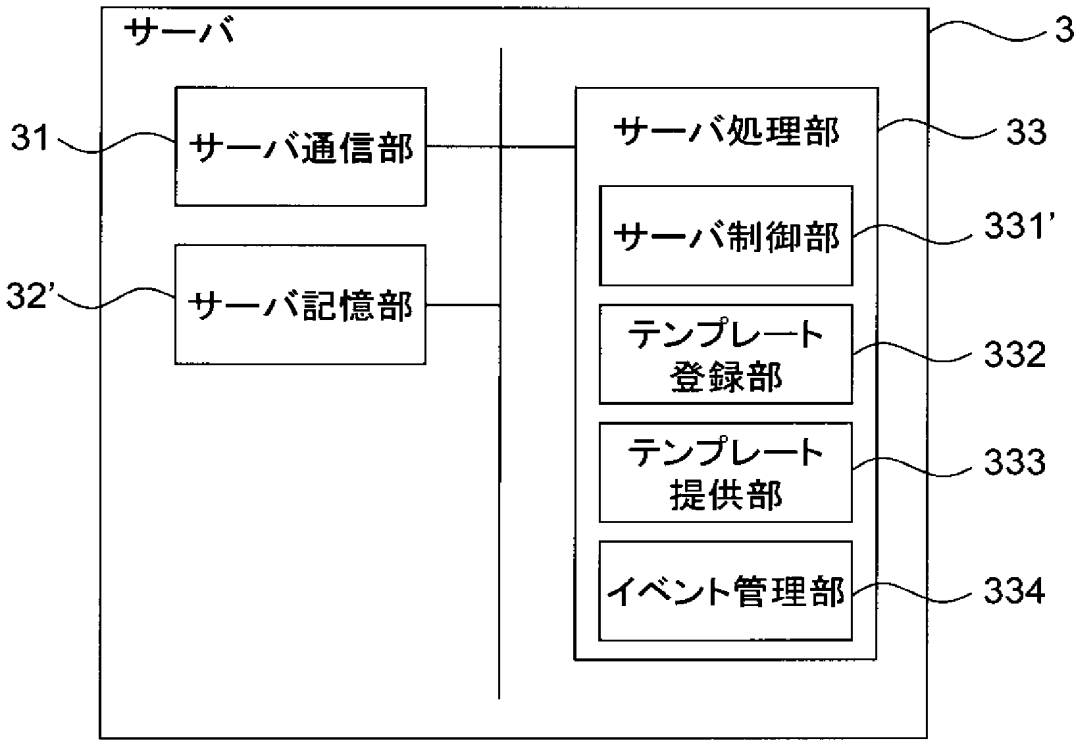
図12


携帯端末
2
21
端末通信部
22
端末記憶部
23
操作部
24
表示部
端末処理部
25
ゲーム進行部
251”
テンプレート作成部
252
テンプレート適用部
253
第3テンプレート適用部
255

【図１３】

図13

(a)

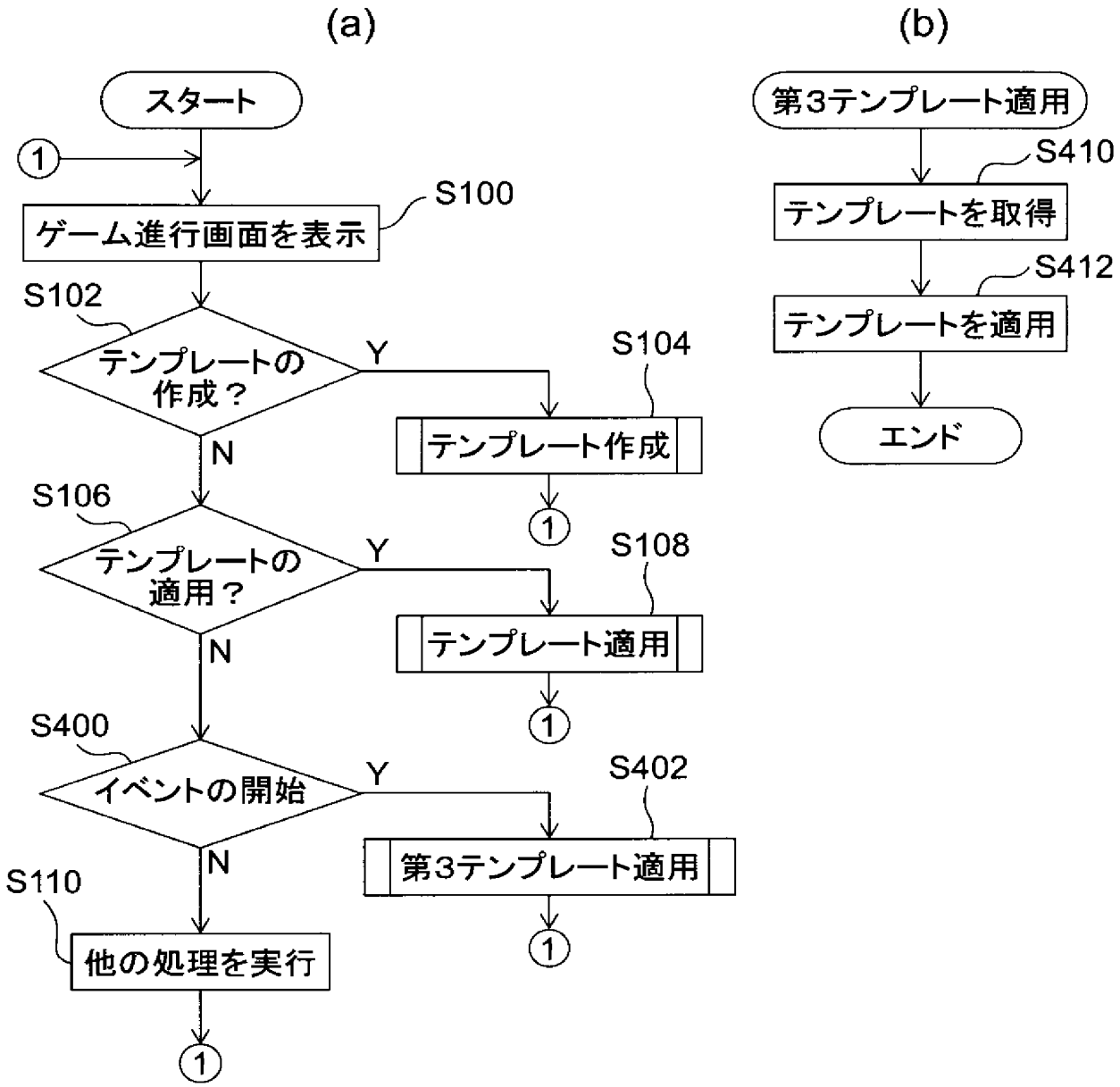


(b)

イベント	開始日時	テンプレート	プレイヤ	…
I_001	13/10/1,21:00:00	T_001	P_001,…	…
I_002	13/10/2,21:00:00	T_003		…
I_003	13/10/3,21:00:00	T_004		…
…	…	…	…	…

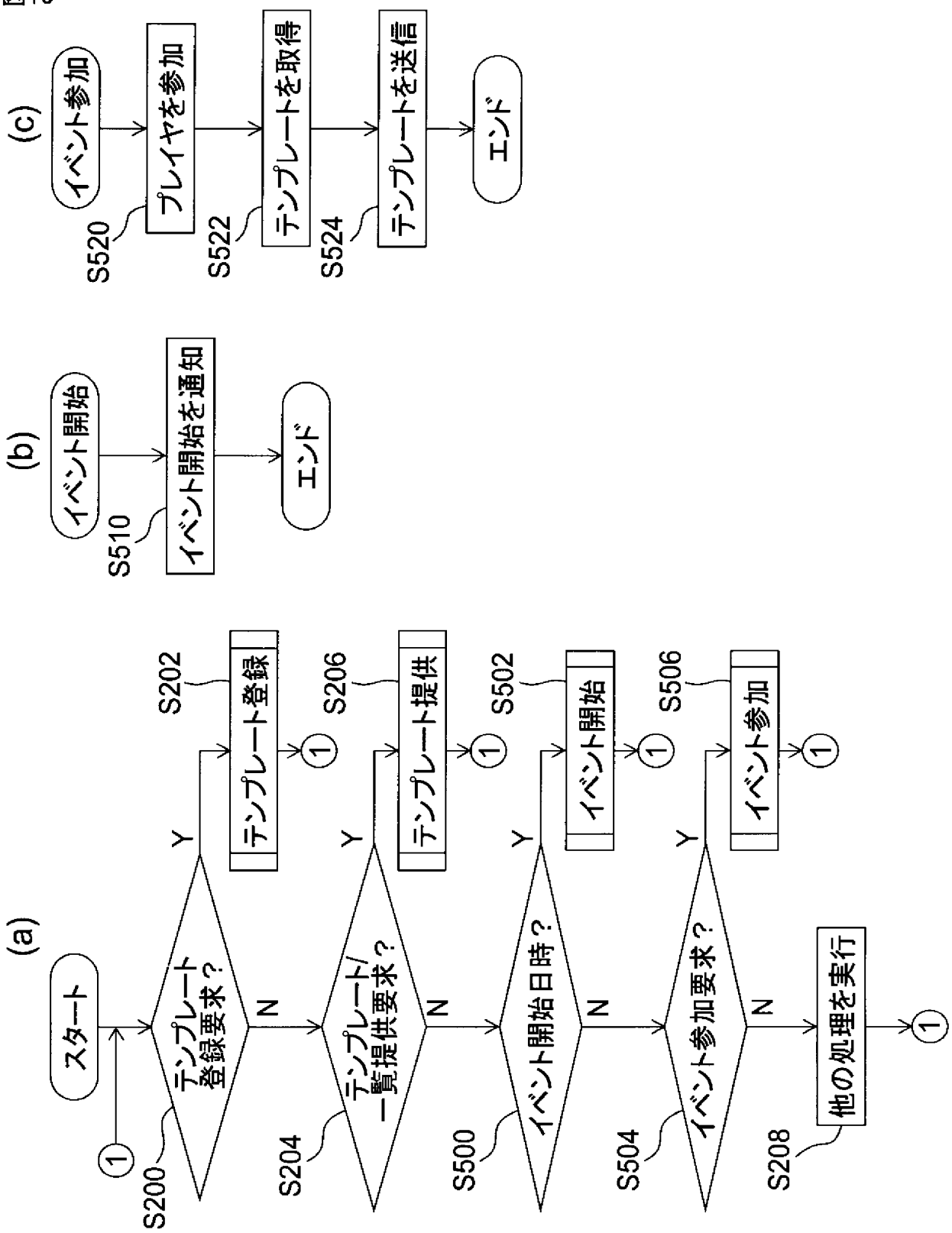
【図１４】

図14


(a)
(b)
スタート
①
S100
ゲーム進行画面を表示
S102
テンプレートの作成？
Y
S104
テンプレート作成
①
N
S106
テンプレートの適用？
Y
S108
テンプレート適用
①
N
S400
イベントの開始
Y
S402
第3テンプレート適用
①
N
S110
他の処理を実行
①
第3テンプレート適用
S410
テンプレートを取得
S412
テンプレートを適用
エンド

【図１５】

図15


(a)
スタート
テンプレート登録要求？
Y
N
S200
テンプレート登録
S202
テンプレート/一覧提供要求？
S204
テンプレート提供
S206
イベント開始日時？
S500
イベント開始
S502
イベント参加要求？
S504
イベント参加
S506
他の処理を実行
S208
①
(b)
イベント開始
S510
イベント開始を通知
エンド
(c)
イベント参加
S520
プレイヤを参加
S522
テンプレートを取得
S524
テンプレートを送信
エンド

【書類名】　手続補正書
【整理番号】　1143510
【提出日】　平成26年 4月 9日
【あて先】　特許庁審査官殿
【事件の表示】
　【出願番号】　特願2014- 80554
【補正をする者】
　【識別番号】　504437801
　【氏名又は名称】　グリー株式会社
【代理人】
　【識別番号】　100099759
　【弁理士】
　【氏名又は名称】　青木　篤
　【電話番号】　03-5470-1900
【手続補正1】
　【補正対象書類名】　特許請求の範囲
　【補正対象項目名】　全文
　【補正方法】　変更
　【補正の内容】
　【書類名】特許請求の範囲
　【請求項１】
　プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、
　プレイヤが所持するゲーム媒体を、前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、
　ことを含むことを特徴とするコンピュータの制御方法。
　【請求項２】
　前記コンピュータが、前記配置させることにおいて、プレイヤが所持するゲーム媒体のうち、前記ゲーム空間内に配置されていないゲーム媒体を配置させる、請求項１に記載のコンピュータの制御方法。
　【請求項３】
　プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、前記テンプレートにより規定されたゲーム媒体をプレイヤが所持しているか否かを判定し、判定結果に基づいてゲームを進行させる、請求項１または２に記載のコンピュータの制御方法。
　【請求項４】
　前記コンピュータが、前記テンプレートにより規定されたゲーム媒体をプレイヤが所持していないと判定した場合、当該ゲーム媒体を購入するための表示データを出力する、請求項３に記載のコンピュータの制御方法。
　【請求項５】
　プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、プレイヤが所持するゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～４の何れか一項に記載のコンピュータの制御方法。
　【請求項６】
　他のプレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、他のプレイヤが所持するゲーム媒

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体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～５の何れか一項に記載のコンピュータの制御方法。
【請求項７】
他のコンピュータからイベントの開始が通知された場合に、前記コンピュータが、前記他のコンピュータから前記イベントに係るテンプレートを取得し、プレイヤが所持するゲーム媒体を、前記他のコンピュータから取得した前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～４の何れか一項に記載のコンピュータの制御方法。
【請求項８】
前記コンピュータが、前記テンプレートにより規定されたゲーム媒体の配置位置のうちの前記ゲーム媒体が配置されなかった配置位置及び前記ゲーム媒体を識別可能な態様で表示する、請求項１～７の何れか一項に記載のコンピュータの制御方法。
【請求項９】
プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータが、前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～８のいずれか一項に記載のコンピュータの制御方法。
【請求項１０】
プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～９のいずれか一項に記載のコンピュータの制御方法。
【請求項１１】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータが、
前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、
ことを含むことを特徴とするコンピュータの制御方法。
【請求項１２】
前記所定の範囲は、プレイヤにより指定された二点を対頂点とする範囲である、請求項１１に記載のコンピュータの制御方法。
【請求項１３】
プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１１または１２に記載のコンピュータの制御方法。
【請求項１４】
プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいて前記テンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータに、
プレイヤが所持するゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、
ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１５】

ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータに、
前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、
ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１６】
プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、
プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、
プレイヤからの指示に基づいて前記テンプレートをゲーム空間内のプレイヤに指示された範囲に適用するテンプレート適用部とを備え、
前記テンプレートが適用された場合に、前記テンプレート適用部は、プレイヤが所持するゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に移動させる、
ことを特徴とするコンピュータ。
【請求項１７】
プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、
プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納するテンプレート作成部と、
を備えることを特徴とするコンピュータ。

【書類名】　　手続補正書
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【提出日】　　平成26年 8月28日
【あて先】　　特許庁審査官殿
【事件の表示】
　【出願番号】　　特願2014- 80554
【補正をする者】
　【識別番号】　　504437801
　【氏名又は名称】　グリー株式会社
【代理人】
　【識別番号】　　100099759
　【弁理士】
　【氏名又は名称】　青木　篤
　【電話番号】　　03-5470-1900
【発送番号】　　345222
【手続補正1】
　【補正対象書類名】　特許請求の範囲
　【補正対象項目名】　全文
　【補正方法】　　変更
　【補正の内容】
　　【書類名】特許請求の範囲
　　【請求項１】
　プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、
　プレイヤが所持するゲーム媒体を、前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、
　ことを含むことを特徴とするコンピュータの制御方法。
　　【請求項２】
　前記コンピュータが、前記配置させることにおいて、プレイヤが所持するゲーム媒体のうち、前記ゲーム空間内に配置されていないゲーム媒体を配置させる、請求項１に記載のコンピュータの制御方法。
　　【請求項３】
　プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、前記テンプレートにより規定されたゲーム媒体をプレイヤが所持しているか否かを判定し、前記テンプレートにより規定されたゲーム媒体をプレイヤが所持していないと判定した場合、当該ゲーム媒体を購入するための表示データを出力する、請求項１または２に記載のコンピュータの制御方法。
　　【請求項４】
　プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、プレイヤが所持するゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～３の何れか一項に記載のコンピュータの制御方法。
　　【請求項５】
　他のプレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、他のプレイヤが所持するゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～４の何れか一項に記載のコンピュータの制御方法。

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【請求項６】
他のコンピュータからイベントの開始が通知された場合に、前記コンピュータが、前記他のコンピュータから前記イベントに係るテンプレートを取得し、プレイヤが所持するゲーム媒体を、前記他のコンピュータから取得した前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～３の何れか一項に記載のコンピュータの制御方法。
【請求項７】
前記コンピュータが、前記テンプレートにより規定されたゲーム媒体の配置位置のうちの前記ゲーム媒体が配置されなかった配置位置及び前記ゲーム媒体を識別可能な態様で表示する、請求項１～６の何れか一項に記載のコンピュータの制御方法。
【請求項８】
プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータが、前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～７のいずれか一項に記載のコンピュータの制御方法。
【請求項９】
プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～８のいずれか一項に記載のコンピュータの制御方法。
【請求項１０】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてゲーム空間内のプレイヤに指示された範囲についてテンプレートが作成される場合に、前記コンピュータが、
前記範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、
ことを含むことを特徴とするコンピュータの制御方法。
【請求項１１】
前記所定の範囲は、プレイヤにより指定された二点を対頂点とする範囲である、請求項１０に記載のコンピュータの制御方法。
【請求項１２】
プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１０または１１に記載のコンピュータの制御方法。
【請求項１３】
プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいて前記テンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータに、
プレイヤが所持するゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、
ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１４】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤか

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らの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいてゲーム空間内のプレイヤに指示された範囲についてテンプレートが作成される場合に、前記コンピュータに、

前記範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、

ことを実行させることを特徴とするコンピュータの制御プログラム。

【請求項１５】

プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、

プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、

プレイヤからの指示に基づいて前記テンプレートをゲーム空間内のプレイヤに指示された範囲に適用するテンプレート適用部とを備え、

前記テンプレートが適用された場合に、前記テンプレート適用部は、プレイヤが所持するゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、

ことを特徴とするコンピュータ。

【請求項１６】

プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、

ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、

プレイヤからの指示に基づいてゲーム空間内のプレイヤに指示された範囲についてテンプレートが作成される場合に、前記範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納するテンプレート作成部と、

を備えることを特徴とするコンピュータ。

【書類名】　　手続補正書
【整理番号】　　1143510
【提出日】　　平成26年11月 6日
【あて先】　　特許庁審査官殿
【事件の表示】
　【出願番号】　　特願2014- 80554
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　【識別番号】　　504437801
　【氏名又は名称】　グリー株式会社
【代理人】
　【識別番号】　　100099759
　【弁理士】
　【氏名又は名称】　青木　篤
　【電話番号】　　03-5470-1900
【発送番号】　　491325
【手続補正1】
　【補正対象書類名】　特許請求の範囲
　【補正対象項目名】　全文
　【補正方法】　　変更
　【補正の内容】
　　【書類名】特許請求の範囲
　　【請求項１】
　プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、
　プレイヤが所持するゲーム媒体を、前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、
　ことを含むことを特徴とするコンピュータの制御方法。
　　【請求項２】
　前記コンピュータが、前記配置させることにおいて、プレイヤが所持するゲーム媒体のうち、前記ゲーム空間内に配置されていないゲーム媒体を配置させる、請求項１に記載のコンピュータの制御方法。
　　【請求項３】
　プレイヤからの指示に基づいてテンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータが、前記テンプレートにより規定されたゲーム媒体をプレイヤが所持しているか否かを判定し、前記テンプレートにより規定されたゲーム媒体をプレイヤが所持していないと判定した場合、当該ゲーム媒体を購入するための表示データを出力する、請求項１または２に記載のコンピュータの制御方法。
　　【請求項４】
　プレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、プレイヤが所持するゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～３の何れか一項に記載のコンピュータの制御方法。
　　【請求項５】
　他のプレイヤからの指示に基づいて他のプレイヤに係るテンプレートがゲーム空間内の所定の範囲に適用された場合に、前記コンピュータが、他のプレイヤが所持するゲーム媒体を、他のプレイヤに係る前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～４の何れか一項に記載のコンピュータの制御方法。

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【請求項６】
他のコンピュータからイベントの開始が通知された場合に、前記コンピュータが、前記他のコンピュータから前記イベントに係るテンプレートを取得し、プレイヤが所持するゲーム媒体を、前記他のコンピュータから取得した前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、請求項１～３の何れか一項に記載のコンピュータの制御方法。
【請求項７】
前記コンピュータが、前記テンプレートにより規定されたゲーム媒体の配置位置のうちの前記ゲーム媒体が配置されなかった配置位置及び前記ゲーム媒体を識別可能な態様で表示する、請求項１～６の何れか一項に記載のコンピュータの制御方法。
【請求項８】
プレイヤからの指示に基づいてゲーム空間内の所定の範囲についてテンプレートが作成される場合に、前記コンピュータが、前記所定の範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～７のいずれか一項に記載のコンピュータの制御方法。
【請求項９】
プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１～８のいずれか一項に記載のコンピュータの制御方法。
【請求項１０】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御方法であって、プレイヤからの指示に基づいてゲーム空間内のプレイヤに指示された範囲についてテンプレートが作成される場合に、前記コンピュータが、
前記範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、
ことを含むことを特徴とするコンピュータの制御方法。
【請求項１１】
前記範囲は、プレイヤにより指定された二点を対頂点とする範囲である、請求項１０に記載のコンピュータの制御方法。
【請求項１２】
プレイヤ、他のプレイヤ、又はプレイヤ及び他のプレイヤからの指示に基づいて複数のテンプレートを組み合わせてテンプレートが作成される場合に、前記コンピュータが、前記複数のテンプレートの各々により規定された前記ゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、請求項１０または１１に記載のコンピュータの制御方法。
【請求項１３】
プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいて前記テンプレートがゲーム空間内のプレイヤに指示された範囲に適用された場合に、前記コンピュータに、
プレイヤが所持するゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、
ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１４】
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部を備え、プレイヤか

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らの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータの制御プログラムであって、プレイヤからの指示に基づいてゲーム空間内のプレイヤに指示された範囲についてテンプレートが作成される場合に、前記コンピュータに、
前記範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納する、
ことを実行させることを特徴とするコンピュータの制御プログラム。
【請求項１５】
プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、
プレイヤ毎の一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、
プレイヤからの指示に基づいて前記テンプレートをゲーム空間内のプレイヤに指示された範囲に適用するテンプレート適用部とを備え、
前記テンプレートが適用された場合に、前記テンプレート適用部は、プレイヤが所持するゲーム媒体を前記テンプレートにより規定された前記ゲーム媒体の配置位置に配置させる、
ことを特徴とするコンピュータ。
【請求項１６】
プレイヤからの指示に基づいてゲーム空間内にゲーム媒体を配置することによりゲームを進行させるコンピュータであって、
ゲーム空間内に配置されたゲーム媒体及び前記ゲーム媒体の配置位置、並びに一又は複数のゲーム媒体の配置位置を規定するテンプレートを記憶する記憶部と、
プレイヤからの指示に基づいてゲーム空間内のプレイヤに指示された範囲についてテンプレートが作成される場合に、前記範囲内に配置されたゲーム媒体の配置位置をテンプレートとして前記記憶部に格納するテンプレート作成部と、
を備えることを特徴とするコンピュータ。

出願人履歴

５０４４３７８０１

20101122

住所変更

東京都港区六本木六丁目１０番１号

グリー株式会社

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OBLON, MCCLELLAND,
MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA VA 22314

MAILED
JAN 17 2017
OFFICE OF PETITIONS

Doc Code: TRACK1.GRANT

Decision Granting Request for Prioritized Examination (Track I or After RCE)	Application No.: 15/393,646

1. THE REQUEST FILED December 29, 2016 IS **GRANTED.**

The above-identified application has met the requirements for prioritized examination

A. ☒ for an original nonprovisional application (Track I).
B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination.** The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;
B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims**, or a multiple dependent claim;
C. filing a **request for continued examination**;
D. filing a notice of appeal;
E. filing a request for suspension of action;
F. mailing of a notice of allowance;
G. mailing of a final Office action;
H. completion of examination as defined in 37 CFR 41.102; or
I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to Brian W. Brown at 571-272-5338.

/Brian W. Brown/
[*Signature*]

Petitions Examiner, Office of Petitions
(**T**itle)

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/393,646	12/29/2016	3714	2740	481331US	29	4

CONFIRMATION NO. 3602

22850
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

FILING RECEIPT

Date Mailed: 01/11/2017

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)
Taiki EDA, Tokyo, JAPAN;

Applicant(s)
Gree, Inc., Minato-ku, JAPAN;

Assignment For Published Patent Application
Gree, Inc., Minato-ku, JAPAN

Power of Attorney: The patent practitioners associated with Customer Number 22850

Domestic Priority data as claimed by applicant
This application is a CON of 14/983,984 12/30/2015
which is a CON of PCT/JP2014/075673 09/26/2014

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
JAPAN 2014-080554 04/09/2014
JAPAN 2013-202721 09/27/2013

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

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Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 01/10/2017

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/393,646**

Projected Publication Date: 04/20/2017

Non-Publication Request: No

Early Publication Request: No

Title

COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

Preliminary Class

463

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

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countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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Page 1062

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/393,646

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(i))	29 minus 20 =	* 9			OR	x 80 =	720
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1				x 420 =	420
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	2740

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5. If the Power of Attorney by Applicant form is not accompanied by this transmittal form or an equivalent, the Power of Attorney will not be recognized in the application.

Application Number	New Application
Patent Number	
Filing Date	Herewith
Issue Date	
First Named Inventor	Taiki EDA
Title	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
Art Unit	
Examiner Name	
Attorney Docket Number	481331US

SIGNATURE of Applicant or Patent Practitioner

Signature	/Andrew T. Harry/	Date	12/29/2016
Name	Andrew T. Harry	Telephone	703-413-3000
Registration Number	56,959		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications.

■ *Total of 1 forms are submitted.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

■ Practitioners associated with the Customer Number: 22850

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO), in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

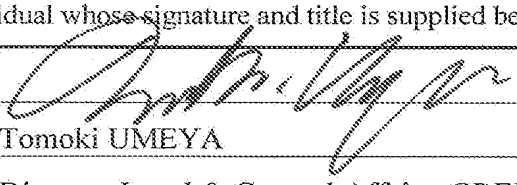
■ The address associated with Customer Number: 22850

Assignee Name and Address:
GREE, INC.
Roppongi Hills Mori Tower
6-10-1 Roppongi
Minato-ku
Tokyo 106-6112
Japan

A copy of this form, together with a statement under 37 CFR 3.73(c) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date
Name	Tomoki UMEYA	Telephone 81-3-5770-9104
Title	Director, Legal & General Affairs, GREE, Inc.	

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Taiki EDA		
SERIAL NO:	New Application	GAU:	Unassigned
FILED:	Herewith	EXAMINER:	Unassigned
FOR:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:
Applicant(s) wish to disclose the following information.

REFERENCES

■ The applicant(s) wish to make of record the reference(s) listed on the attached form PTO-1449 and/or accompanying documents from a corresponding foreign application Copies of the listed references were made of record in parent application 14/983,984, filed on December 30, 2015, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language reference(s).

☐ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount required under 37 CFR §1.17(p).

CERTIFICATION

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

■ Please charge any additional fees for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to deposit account number **15-0030**.

Respectfully submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Taiki Eda	Nonprovisional Application Number (if known):	
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ **Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)**

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ **Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)**

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Andrew T. Harry/	Date December 29, 2016
Name (Print/Typed) Andrew T. Harry	Practitioner Registration Number 56,959

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☑ *Total of 1 forms are submitted.

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. New Application
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE Herewith	GROUP Unassigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	6454653 B1	09-24-2002	Kawazu			
	AB	2013/0217489 A1	08-2013	Bronstein Bendayan; Manuel Uris			
	AC	8,764,534 B1	07-2014	Desanti; Brian			
	AD	8,821,260 B1	09-2014	Desanti; Brian			
	AE	8,845,423 B1	09-2014	Monahan; Jay			
	AF	2015/0005051 A 1	01-2015	SMALLEY; Kellen Christopher			
	AG	9,022,869 B1	05-2015	Desanti; Brian			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AH	JP 2013-165747	08-29-2013	Japan	X	
	AI	JP 5525096	04-18-2014	Japan	X	
	AJ	JP 2010-125023	06-10-2010	Japan	X	
	AK	JP 2007-215757A	08-30-2007	Japan	X	
	AL	JP 2009-207624A	09-17-2009	Japan	X	
	AM	JP 2010-125023A	06-10-2010	Japan	X	
	AN	JP 2011-000170A	01-06-2011	Japan	X	
	AO	JP 2007-296199A	11-15-2007	Japan	X	
	AP	JP 2011-161042A	08-25-2011	Japan	X	
	AQ	JP 2009-233098A	10-15-2009	Japan	X	
	AR	JP 2015-066141A	04-13-2015	Japan	X	
	AS	JP 5676032B	01-09-2015	Japan	X	
	AT	JP 2000-279637A	10-10-2000	Japan (with English Abstract)		X
	AU	JP 2002-052249A	02-19-2002	Japan (with English Abstract)		X
	AV	JP 2009-207624A	09-17-2009	Japan (with English Abstract)		X

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	Office Action for corresponding JP Application No. 2015-022433 dated 02/23/2016 (3 pages) (with English Translation)
	AX	Monster Hunter Frontier Online, Frontier Communication Forward. 3, ENTERBRAIN, INC., 02-15-2012 page 126 (with partial English translation)
	AY	The Convenience Store 2 – Chain Store Development Throughout Japan – Game Winning Method Futabasha Publishers LTD., 04-15-1998, pages 11-14, Sections for "Read Interior" and "Save Interior" (with partial English translation)
	AZ	The Convenience Store DS, 1st Edition, SHINKIGENSHA CO., LTD.,12-04-2008, pages 14-35 (with partial English translation)

■ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO.	SERIAL NO.
LIST OF REFERENCES CITED BY APPLICANT	481331US	New Application
	APPLICANT: Taiki EDA	
	FILING DATE: Herewith	GROUP: Unassigned

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	Dengeki Play Station, Phantasy Star Online 2, Vol. 19, ASCII Media Works Corporation, number 21, 06-27-2013, pages 116-119, section "My Room Function, Layout Pattern Switching". (with partial English translation)
	AAB	Decision of Admiral, Super Guide book, Fifth Edition, Koei Co., Ltd, 03-25-1993, pages 8-9, section "Scenario Selection Screen" (with partial English translation)
	AAC	Office Action for corresponding JP Application No. 2015-123316, dated 10-07-2016 (2 pages) (with English translation)
	AAD	NOBUNYAGA NO YABOU, NEKOBUKAN, KOEI TECMO GAMES CO., LTD., 1/27/2012, Second printing, pages 111 and 126.
	AAE	Office Action for corresponding JP Application No. 2015-160034 dated 03/1/2016 (4 pages). (with English translation)
	AAF	Office Action for corresponding JP Application No. 2015-160035 dated 03/01/2016 (6 pages). (with English translation)
	AAG	Office Action for corresponding JP Application No. 2015-160035 dated 05/17/2016 (6 pages). (with English translation)
	AAH	Office Action for corresponding JP Application No. 2015-160036 dated 03/01/2016 (9 pages). (with English translation)
	AAI	Office Action for corresponding JP Application No. 2015-160038 dated 03/01/2016 (6 pages). (with English translation)
	AAJ	Office Action for corresponding JP Application No. 2015-160038 dated 05/17/2016 (2 pages). (with English translation)
	AAK	NOBUNYAGA NO YABOU, NEKOBUKAN, KOEI TECMO GAMES CO., LTD., 1/27/2012, Second printing, pages 112 and 113.
	AAL	NOBUNAGA NO YABOU/TENDOU Handbook The second volume, Koei Co., Ltd., 11/1/2009, First printing, Pages 60 and 61.
	AAM	International Search Report for corresponding international application no. PCT/JP2014/075673; mailed October 21, 2014 (3 pages) (with English translation)
	AAN	Final Rejection for corresponding JP Application No. 2015-123316 dated 09/30/2015 (5 pages) (with English translation)
	AAO	Office Action for corresponding JP Application No. 2015-123331 dated 07/06/2015 (5 pages). (with English Translation)
	AAP	Office Action for corresponding JP Application No. 2015-160032 dated 09/30/2015 (13 pages). (with English Translation)
	AAQ	Office Action for corresponding JP Application No. 2015-160033 dated 10/05/2015 (15 pages). (with English Translation)

Examiner	Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. New Application
LIST OF REFERENCES CITED BY APPLICANT	APPLICANT Taiki EDA	
	FILING DATE Herewith	GROUP Unassigned

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AAA	Office Action for corresponding JP Application No. 2015-160034 dated 10/05/2015 (13 pages). (with English Translation)
	AAB	Office Action for corresponding JP Application No. 2015-160035 dated 09/30/2015 (15 pages). (with English Translation)
	AAC	Office Action for corresponding JP Application No. 2015-160036 dated 09/30/2015 (15 pages). (with English Translation)
	AAD	Office Action for corresponding JP Application No. 2015-160037 dated 09/30/2015 (16 pages). (with English Translation)
	AAE	Office Action for corresponding JP Application No. 2015-160038 dated 09/30/2015 (15 pages). (with English Translation)
	AAF	Office Action for corresponding JP Application No. 2015-123316 dated 07/06/2015 (10 pages). (with English Translation)
	AAG	Office Action for corresponding JP Application No. 2014-080554 dated 09/09/2015 (4 pages). (with English Translation)
	AAH	Office Action for corresponding JP Application No. 2014-080554 dated 06/19/2014 (9 pages). (with English Translation)
	AAI	Office Action for corresponding JP Application No. 2013-202721 dated 11/21/2013 (7 pages). (with English Translation)
	AAJ	Office Action for corresponding JP Application No. 2014-259251 dated 03/06/2015 (7 pages). (with English Translation)
	AAK	KONAMI OFFICIAL GUIDE for WORLD SOCCER Winning Eleven 2000 U-23, Konami Co., Ltd., on Dec. 8, 2000, Second Printing, P.019.
	AAL	Capcom, 2007 June 19, Monster Hunter Frontier G, PC version, online manual, [June 9, 2014 search], interface Netto <URL: http: //cog-members.mhf-g.jp/sp/manual/page164.html # bf2e27ce883c8ca097adc4a41 f114562>
	AAM	A - Train7 Official Expert Guidebook - Simulation Game, Railroad Management, Urban Development, published March 22, 2006 (with English translation)
	AAN	A - Train9 Version 2.0 Professional Edition - Official Guidebook, published December 19, 2012. (with English translation)
	AAO	Frontier communication - Monster Hunter Frontier Online Forward. 3, published February 15, 2012.
	AAP	https://en.wikipedia.org/w/index.php?title=SimCity&oldid=572690969.
	AAQ	https://en.wikipedia.org/w/index.php?title=Clash of Clans&oldid=572472971.

Examiner	Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO. 481331US	SERIAL NO. New Application
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT Taiki EDA	
		FILING DATE Herewith	GROUP Unassigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	TRANSLATION NO
	AO	JP 2010-125023A	06-10-2010	Japan (with English Abstract)		X
	AP	EP 1040855A2	10-04-2000	Europe	X	
	AQ	DE 60035382T2	10-31-2007	Germany (with English Abstract)		X
	AR					
	AS					
	AT					
	AU					
	AV					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	PC Game Review of Medieval Lords, August 2005. URL: http://game.watch.impress.co.jp/docs/20050801/medieval.htm (with English Translation)
	AX	
	AY	
	AZ	☐ Additional References sheet(s) attached

Examiner		Date considered	

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Filer:	Bradley Davis Lytle/Sandra Miles
Attorney Docket Number:	481331US

Filed as Large Entity

Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	280	280
UTILITY SEARCH FEE	1111	1	600	600
UTILITY EXAMINATION FEE	1311	1	720	720
REQUEST FOR PRIORITIZED EXAMINATION	1817	1	4000	4000
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	9	80	720
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	420	420

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous-Filing:				
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**6880**

Electronic Acknowledgement Receipt

EFS ID:	27927773
Application Number:	15393646
International Application Number:	
Confirmation Number:	3602
Title of Invention:	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER
First Named Inventor/Applicant Name:	Taiki EDA
Customer Number:	22850
Filer:	Bradley Davis Lytle/Sandra Miles
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	481331US
Receipt Date:	29-DEC-2016
Filing Date:	
Time Stamp:	13:26:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$6880
RAM confirmation Number	122916INTEFSW13285100
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		481331US_New_Application.pdf	17014744 28420fa14a5c0c367bf739cd20d76951c223c01c	yes	91

Multipart Description/PDF files in .zip description

Document Description	Start	End
TrackOne Request	1	1
Transmittal of New Application	2	2
Miscellaneous Incoming Letter	3	3
Application Data Sheet	4	9
Specification	10	59
Claims	60	67
Abstract	68	68
Drawings-only black and white line drawings	69	83
Oath or Declaration filed	84	84
Power of Attorney	85	86
Transmittal Letter	87	87
Information Disclosure Statement (IDS) Form (SB08)	88	91

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	41406 2cef3ae68a8bf4d0ccc7abb29434c173c30a9501	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	17056150

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) Taiki EDA

SERIAL NO: New Application ART UNIT: Unassigned

FILING DATE: Herewith EXAMINER: Unassigned

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

FEE TRANSMITTAL

☐ No additional fee is required

☐ Small entity status of this application under 37 C.F.R. §1.9 and §1.27 is claimed.

■ Track 1 Prioritized Examination

The Fee has been calculated as shown below:

FOR	NUMBER FILED	NUMBER EXTRA	RATE	CALCULATIONS
TOTAL CLAIMS	29 - 20 =	9	x $80 =	$ 720.00
INDEPENDENT CLAIMS	4 - 3 =	1	x $420 =	$ 420.00
UTILITY APPLICATION SIZE FEE	56* - 100 = (* 74 x .75)	0 (each addtl. 50 sheets over 100)	x $400 =	$0.00
☐ MULTIPLE DEPENDENT CLAIMS (If applicable)			+ $780 =	$0.00
■ TRACK 1 PRIORITIZED EXAMINATION Including Processing Fee ($140)			+ $4140 =	$4,140.00
☐ LATE FILING OF DECLARATION			+ $140 =	$0.00
☐ NON-ELECTRONIC FILING FEE			+ $400 =	$0.00
■ FILING FEE ($280.00) ■ SEARCH FEE ($600.00) ■ EXAMINATION FEE ($720.00)			BASIC FEES	$1,600.00
			TOTAL OF ABOVE CALCULATIONS	$6,880.00
☐ REDUCTION BY 50% FOR FILING BY SMALL ENTITY				$0.00
☐ FILING FEE REDUCED IF E-FILED – SMALL ENTITY			+ $-70 =	$0.00
☐ FILING IN NON-ENGLISH LANGUAGE			+ $140 =	$0.00
			TOTAL	$6,880.00

☐ Please charge Deposit Account No. **15-0030** in the amount of **$0.00**

■ Credit card payment is being made online (if electronically filed), or is attached hereto (if paper filed), in the amount of **$6,880.00**.

■ The Director is hereby authorized to charge any additional fees which may be required for the papers being filed herewith and for which no payment is enclosed herewith, or credit any overpayment to Deposit Account No. **15-0030**, with the **EXCEPTION** of deficiencies in fees for multiple dependent claims in new applications.

Submitted by: /Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 02/12)

Docket No. 481331US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Taiki EDA GAU: Unassigned

SERIAL NO: New Application EXAMINER: Unassigned

FILED: Herewith

FOR: COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

SUBMISSION NOTICE REGARDING PRIORITY DOCUMENT(S)

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Commissioner:

Certified copies of the Convention Application(s) corresponding to the above-captioned matter:

- ☐ are submitted herewith
- ■ were retrieved by the USPTO in prior application Serial No. 14/983,984 filed December 30, 2015
- ☐ were submitted to the International Bureau in PCT Application Number _____
  Receipt of the certified copies by the International Bureau in a timely manner under PCT Rule 17.1(a) has been acknowledged as evidenced by the attached PCT/IB/304.

Respectfully Submitted,

OBLON, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

/Andrew T. Harry/

Andrew T. Harry
Registration No. 56,959

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OMMN 07/09)

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	481331US
	Application Number	New Application
Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Taiki		Eda	

Residence Information	Non US Residency		
City	Tokyo	Country of Residence	Japan

Mailing Address of Inventor:

Address 1	c/o Gree, Inc.		
Address 2	6-10-1 Roppongi		
City	Minato-ku	State/Province	Tokyo
Postal Code	106-6112	Country	Japan

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	22850
Email Address	oblonpat@oblon.com

Application Information:

Title of the Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		
Attorney Docket Number	481331US	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	15	Suggested Figure for Publication (if any)	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	481331US
	Application Number	New Application
Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	■ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	22850		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the application number blank.

Prior Application Status	Allowed		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	14/983,984	2015-12-30
Prior Application Status	Pending		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
14/983,984	Continuation of	PCT/JP2014/075673	2014-09-26

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	481331US
		Application Number	New Application
Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country	Filing Date (YYYY-MM-DD)	Access Code (if applicable)
2014-080554	Japan	2014-04-09	
Application Number	Country	Filing Date (YYYY-MM-DD)	Access Code (if applicable)
2013-202721	Japan	2013-09-27	

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78 this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant must opt-out of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	481331US
	Application Number	New Application
Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

■ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	481331US
	Application Number	New Application
Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER	

Name of the Deceased or Legally Incapacitated Inventor :			
If the Applicant is an Organization check here. ■			
Organization Name	Gree, Inc.		
Mailing Address Information For Applicant:			
Address 1	Roppongi Hills Mori Tower		
Address 2	6-10-1 Roppongi		
City	Minato-ku	**State/Province**	Tokyo
Country Japan		Postal Code	106-6112
Phone Number		Fax Number	
Email Address			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ■			
Organization Name	Gree, Inc.		
Mailing Address Information For Assignee including Non-Applicant Assignee:			
Address 1	Roppongi Hills Mori Tower		
Address 2	6-10-1 Roppongi		
City	Minato-ku	**State/Province**	Tokyo
Country Japan		Postal Code	106-6112
Phone Number		Fax Number	
Email Address			

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then**

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	481331US
		Application Number	New Application
Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER		

this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Andrew T. Harry/			Date (YYYY-MM-DD)	2016-12-29
First Name	Andrew	Last Name	Harry	Registration Number	56,959

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METHOD FOR CONTROLLING COMPUTER, RECORDING MEDIUM AND COMPUTER

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application is a new U.S. patent application that claims the benefit of priority from JP 2013-202721, filed on September 27, 2013, JP 2014-080554, filed on April 9, 2014, and PCT International Application No. PCT/JP2014/075673, the entire content of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] This invention relates to a method for controlling a computer, a recording medium and a computer.

BACKGROUND

[0003] In recent years, games which are played by installing a game program on a portable device from a server via a communication network have become common. Such games include games in which multiple players can participate (so-called “social games”). There are games wherein players can not only fight against or help each other, but are also enabled to communicate with each other.

[0004] Such known games include, for example, games (so-called “city building games”) wherein a player builds a city within a virtual space (hereinafter referred to as “game space”) provided in the game program. In city building games, players can build various facilities (such as houses, streets, ports, train stations, airports, castles, training facilities, etc.) on desired positions and create a city after their liking.

SUMMARY

[0005] In conventional city building games, it is the object of the game to build a desired city, and it is

unnecessary to completely rebuild a city after it has been built once. On the other hand, in recent city building games, a city built by one player is attacked by a different player, and the city (arrangement of items such as protective walls, buildings that are subject to an attack, protecting soldiers, weapons, etc.) is one of factors for deciding the winning and losing, or superiority and inferiority. However, since the items (game contents) of a city of a player increase as the city develops, it is very complicated for a player to change positions, types, levels, etc., of individual items. Further, it is hard to understand what kind of effect changing a city would have against an attack from a different player. Therefore, many players have limited themselves to change only certain kinds of items, such as soldiers and weapons, for which changing positions, types, levels, etc., is easy. As a result, as the game progresses, it becomes monotonous, and players might become bored with it.

[0006] The present invention has been devised to address the above problem, and an object of the invention is to provide a method for controlling a computer, a recording medium and a computer that improve the usability of city building games and continuously attract players to the game.

[0007] Provided is a method for controlling a computer that is provided with a storage unit configured to store game contents arranged within a game space, positions of the game contents, and a template defining positions of one or more of game contents, and that progresses a game by arranging the game contents within the game space based on a command by a player. The method includes when the template is applied to a predetermined area within the game space based on the command by the player, moving, by the computer, the game contents arranged within the game space to the positions of the game contents defined by the template.

[0008] The computer may be, for example, a portable device, a desktop device, a server, etc., as long as it can execute the above procedure.

[0009] In one embodiment, in the above method, the storage unit further stores a template related to a different player, and when the template related to the different player is applied to a predetermined area within the game space based on the command by the player, the computer moves the game contents arranged within the game space to the positions of the game contents defined by the template related to the different player.

[0010] In another embodiment, in the above method, the storage unit further stores game contents which are arranged within the game space and are related to the different player, and positions of the game contents, and when the template related to the different player is applied to a predetermined area within the game space based on a command by the different player, the computer moves, out of the game contents arranged within the game space, game contents related to the different player to the positions of the game contents defined by the template related to the different player.

[0011] In another embodiment, in the above method, when a start of an event is reported by a different computer, the computer obtains a template for the event from the different computer and moves the game contents arranged within the game space to the positions of the game contents defined by the template obtained from the different computer.

[0012] Yet in another embodiment, in the above method, when the number of game contents arranged within the game space is smaller than the number of game contents for which positions are defined by the template, the computer moves the game contents arranged within the game space to the positions of the game contents defined by the template to which the moving distance is the smallest.

[0013] Still in another embodiment, in the above

method, out of the positions of the game contents defined by the template, the computer displays positions on which no game contents are arranged and the game contents, in a discernible condition.

[0014] In another embodiment, in the above method, when the number of game contents arranged within the game space is larger than the number of game contents for which position are defined by the template, the computer moves the game contents arranged within the game space for which the moving distance to the positions of the game contents defined by the template is the smallest, to the positions.

[0015] In another embodiment, in the above method, when a template is created for a predetermined area within the game space based on a command from the player, the computer stores positions of game contents arranged within the predetermined area, as the template, in the storage unit.

[0016] Yet in another embodiment, in the above method, when a template is created by combining a plurality of templates based on a command from the player or a different player, or commands from the player and the different player, the computer stores the positions of the game contents defined by the plurality of templates, as the template, in the storage unit.

[0017] Provided is a non-transitory computer-readable recording medium having recorded thereon a program for a computer that is provided with a storage unit configured to store game contents arranged within a game space, positions of the game contents, and a template defining positions of one or more of game contents, and that progresses a game by arranging the game contents within the game space based on a command by a player. The program causes the computer to execute a process. The process includes when the template is applied to a predetermined area within the game space based on the command by the player, moving, by the computer, the game

contents arranged within the game space to the positions of the game contents defined by the template.

[0018] Provided is a computer that progresses a game by arranging game contents within a game space based on a command by a player. The computer includes a storage unit configured to store game contents arranged within a game space, positions of the game contents, and a template defining positions of one or more of game contents, and a processing unit configured to apply the template to a predetermined area within the game space based on the command by the player. When the template is applied, the processing unit moves the game contents arranged within the game space to the positions of the game contents defined by the template.

[0019] The above method, recording medium and computer make it possible to improve the usability of city building games and continuously attract players to the game by making game contents and the arrangement of the game contents changeable by using templates.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] Other features and advantages of the present invention will be apparent from the ensuing description, taken in conjunction with the accompanying drawings, in which:

[0021] FIG. 1 illustrates an example of a schematic configuration of a game system;

[0022] FIG. 2A illustrates an example of a schematic configuration of the portable device;

[0023] FIGS. 2B to 2D illustrate examples of data structures of the various types of tables;

[0024] FIGS. 3A to 3E illustrate examples of a display screen of the portable device;

[0025] FIG. 4 illustrates a concept of creating and applying a template;

[0026] FIG. 5A illustrates one possible schematic configuration of the server;

[0027] FIGS. 5B and 5C illustrate examples of data structures of the various types of tables;

[0028] FIGS. 6A to 6C illustrate examples of the operational flow of the portable device;

[0029] FIGS. 7A to 7C illustrate examples of the operational flow of the server;

[0030] FIG. 8A illustrates an example of a schematic configuration of the portable device according to the second embodiment;

[0031] FIG. 8B illustrates an example of a data structure of the facility table;

[0032] FIG. 9 illustrates a concept of applying a template in a multi-player environment;

[0033] FIGS. 10A and 10B illustrate examples of the operational flow of the portable device;

[0034] FIG. 11 illustrates a concept of combining templates in a multi-player environment;

[0035] FIG. 12 illustrates an example of a schematic configuration of the portable device according to the third embodiment;

[0036] FIG. 13A illustrates one possible schematic configuration of the server;

[0037] FIG. 13B illustrates an example of a data structure of the event table;

[0038] FIGS. 14A and 14B illustrate examples of the operational flow of the portable device; and

[0039] FIGS. 15A to 15C illustrate examples of the operational flow of the server.

DESCRIPTION

[0040] Hereinafter, with reference to the drawings, a method for controlling a computer, a recording medium, and a computer will be described. It should be noted that the technical scope of the present invention is not limited to the described embodiments, but covers the invention described in the claims and its equivalent.

[0041] (First embodiment)

In the present embodiment, a player builds a city within a game space. The player can arrange various facilities which are one example of game contents, within the game space. Further, for a predetermined area within the game space, the player can also create a template stipulating types and positions of facilities based on the types and positions of facilities arranged within the area. Moreover, the player can also apply the created template to a given area within the game space. When a template is applied, facilities arranged within the game space are automatically changed to the facilities defined in the template, and they are automatically moved to the defined positions.

[0042] Game contents refer to digital contents used in a game, and include, besides facilities, characters, soldiers, weapons, cards, figures, avatars, items, etc.

[0043] FIG. 1 illustrates an example of a schematic configuration of a game system 1.

[0044] The game system 1 includes at least one portable device 2 and a server 3. The portable device 2 and the server 3 are connected to each other via a communication network, and are connected to each other, for example, via a base station 4, a mobile communication network 5, a gateway 6, and the Internet 7. A program to be executed by the portable device 2 (e.g., a game program) and a program to be executed by the server 3 (e.g., a game control program) communicate with each other by using a communication protocol such as a Hypertext Transfer Protocol (HTTP).

[0045] FIG. 2A illustrates an example of a schematic configuration of the portable device 2.

[0046] The portable device 2 progresses the game in response to an operation of an operation unit 23 by a player. When necessary, the portable device 2 is connected to the server 3 via the base station 4, the mobile communication network 5, the gateway 6, and the Internet 7, to communicate with the server 3. In order

to implement the foregoing functions, the portable device 2 includes a device communication unit 21, a device storage unit 22, the operation unit 23, a display unit 24, and a device processing unit 25.

[0047] While a multifunctional mobile phone (a so-called “smartphone”) may be assumed as the portable device 2, the present invention is not limited to this. The portable device 2 may be, for example, a mobile phone (a so-called “feature phone”), a personal digital assistant (PDA), a portable game machine, a portable music player, a tablet device, a tablet personal computer (PC), a notebook PC, etc., as long as the present invention is applicable thereto.

[0048] The device communication unit 21 includes a communication interface circuit including an antenna having a sensitivity band in a predetermined frequency band, and connects the portable device 2 to a wireless communication network. The device communication unit 21 establishes a wireless signal link with the base station 4 by a Code Division Multiple Access (CDMA) system or the like via a channel to be assigned by the base station 4, and communicates with the base station 4. The device communication unit 21 sends data supplied from the device processing unit 25 to the server 3 or the like. The device communication unit 21 supplies the data received from the server 3 or the like to the device processing unit 25.

[0049] The device storage unit 22 includes a semiconductor memory, for example. The device storage unit 22 stores an operating system program, a driver program, an application program, data, etc., used for processing in the device processing unit 25. For example, the device storage unit 22 stores an input device driver program for controlling the operation unit 23 and an output device driver program for controlling the display unit 24, as the driver program. The device storage unit 22 stores a game program, etc., for progressing the game

and displaying the result thereof, as the application program. The device storage unit 22 stores identification numbers (IDs) of the players, a facility table (FIG. 2B) for managing facilities arranged within the game space, a facility-type table (FIG. 2C) for managing types of the facilities, a template table (FIG. 2D) for managing templates, and image data, video data, etc., relating to the facilities, templates, etc., as the data. Further, the device storage unit 22 may store temporary data relating to predetermined processing.

[0050] FIG. 2B depicts a facility table. In the facility table, a facility ID, a type ID, a position within the game space, etc., are recorded for each facility.

[0051] In the present embodiment, the game space is configured in grid form, wherein one facility is arranged on one grid, and the position of the facility is represented with the help of grid coordinates that have their origin in a predetermined grid (e.g., upper left of the game space). However, the present invention is not limited to this configuration. Any configuration of the game space, etc., is possible as long as the present invention can be applied to the configuration.

[0052] FIG. 2C depicts a facility-type table. In the facility-type table, a type ID, name, file name of image data, etc., are recorded for each type of facility.

[0053] FIG. 2D depicts a template table. In the template table, for each template, a template ID, a file name of thumbnail image data, a type ID and a position within the template of each facility, etc., are recorded.

[0054] Similarly to FIG. 2B, a position of a facility is represented with the help of the grid coordinates that have their origin in a predetermined grid (e.g., upper left of the template). However, the present invention is not limited to this configuration. Any representation of a position is possible as long as the present invention can be applied with the representation.

[0055] The operation unit 23 may be any device capable of operating the portable device 2, for example, a touch panel, a key button or the like. The player can input letters, numbers, symbols, etc., by using the operation unit 23. When operated by the player, the operation unit 23 generates a signal corresponding to the operation. The generated signal is supplied to the device processing unit 25 as a command from the player.

[0056] The display unit 24 may be any device capable of displaying a video, an image, etc., for example, a liquid crystal display, an organic electro-luminescence (EL) display, etc. The display unit 24 displays a video, an image, etc., corresponding to video data and image data supplied from the device processing unit 25.

[0057] The device processing unit 25 includes one or more processors and their peripheral circuits. The device processing unit 25 is, for example, a central processing unit (CPU), and integrally controls an overall operation of the portable device 2. The device processing unit 25 controls operations of the device communication unit 21, the display unit 24, etc., so that various types of processing of the portable device 2 are executed in an appropriate order in accordance with the programs stored in the device storage unit 22, the operation of the operation unit 23, etc. The device processing unit 25 executes processing based on the programs (the operating system program, the driver program, the application program, etc.) stored in the device storage unit 22. The device processing unit 25 can execute multiple programs (application programs, etc.) in parallel.

[0058] FIGS. 3A to 3E illustrate examples of a display screen of the portable device 2.

[0059] FIG. 3A depicts a game progression screen 300 that is displayed when a command has been given to start the game.

[0060] The game progression screen 300 displays a game

space 301 and various facilities 302 to 306 arranged within the game space.

[0061] Further, multiple buttons are displayed in the lower portion of the game progression screen 300. By pushing buttons, commands are given: pushing a “Create” button 307 creates a template, pushing an “Apply” button 308 applies a template.

[0062] FIG. 3B depicts an area selection screen 310 that is displayed when a command to create a template has been given on the game progression screen 300 depicted in FIG. 3A.

[0063] The area selection screen 310 displays the game space 301, in which, for example, by tapping on two arbitrary points, an area 311 with the two points as opposite apexes is selected.

[0064] Further, a “Confirm” button 312 is displayed in the lower portion of the area selection screen 310, and by pushing this button, a command is given to create a template for the selected area 311.

[0065] FIG. 3C depicts a template selection screen 320 that is displayed when a command to apply a template has been given on the game progression screen 300 depicted in FIG. 3A.

[0066] On the template selection screen 320, a thumbnail image 321 and a “Select” button 322 are displayed for each template. By pushing the “Select” button 322, the corresponding template is selected.

[0067] FIG. 3D depicts a template display screen 330 that is displayed when a template has been selected on the template selection screen 320 depicted in FIG. 3C.

[0068] A preview image 3310 for when the template is applied to a predetermined area (e.g., around the center) within the game space is displayed in the left portion of the template display screen 330.

[0069] Further, names and quantities 3320 of facilities for which positions are defined by the template, are listed in the right portion of the template

display screen 330.

[0070] Further, a “Confirm” button 333 is displayed in the lower portion of the template display screen 330, and by pushing this button, a template is confirmed.

[0071] FIG. 3E depicts an area selection screen 340 that is displayed when a template has been confirmed on the template display screen 330 depicted in FIG. 3D.

[0072] The area selection screen 340 displays the game space 301, in which, for example, by tapping on two arbitrary points, an area 341 with the two points as opposite apexes is selected.

[0073] Further, a “Confirm” button 342 is displayed in the lower portion of the area selection screen 340, and by pushing this button, a command is given to apply the template to the selected area 341.

[0074] FIG. 4 illustrates a concept of creating and applying a template.

[0075] 400 illustrates a game space. Nine facilities are arranged within the game space 400. Specifically, four facilities illustrated as “black circle”, three facilities illustrated as “black triangle”, and two facilities illustrated as “black square” are arranged therein.

[0076] Assume that a template has been created for an area 401 within the game space 400. 410 illustrates the created template. The template 410 defines that facilities illustrated as “black circle” of a type illustrated as “white circle” are arranged at (1,1) and (1,2), facilities illustrated as “black triangle” of a type illustrated as “white triangle” are arranged at (1,3), (2,1) and (2,2), and a facility illustrated as “black square” of a type illustrated as “white square” is arranged at (2,3).

[0077] 420 illustrates another game space. Six facilities are arranged within the game space 420. Specifically, two facilities illustrated as “black circle”, three facilities illustrated as “black

triangle", and one facility illustrated as "black square" are arranged therein.

[0078] Assume that the template 410 has been applied to an area 421 within the game space 420. The number of types of facilities and the number of facilities in each type arranged within the game space 420 are equal to the number of types of facilities and the number of facilities in each type, respectively, positions of the facilities being defined by the template 410. Thus, all facilities arranged within the game space 420 are moved to positions of facilities as defined by the template 410. Actually, facilities 422 to 425 arranged outside of the area 421 are moved to positions of these facilities within the area 421. 420' illustrates the game space 420 after the facilities 422 to 425 have been moved.

[0079] 430 illustrates yet another game space. Nine facilities are arranged within the game space 430. Specifically, three facilities illustrated as "black circle", five facilities illustrated as "black triangle", and one facility illustrated as "black square" are arranged therein.

[0080] Assume that the template 410 has been applied to an area 431 within the game space 430. The number of types of facilities and the number of facilities in each type arranged within the game space 430 is equal to or larger than the number of types of facilities and the number of facilities in each type, respectively, positions of the facilities being defined by the template 410. Thus, of the facilities arranged within the game space 420, those facilities with the smallest moving distance (e.g., Manhattan distance) to positions of facilities defined by the template 410, are moved to the positions of facilities. Actually, facilities 432 to 435 arranged outside of the area 431 are moved to positions of these facilities within the area 431. 430' illustrates the game space 430 after the facilities 432 to 435 have been moved.

[0081] The facilities to be moved are not limited to those with the smallest moving distance. The player may also designate facilities which are to be moved, or an area containing facilities which are to be moved. Further, the player may also in advance designate facilities which are not to be moved, or an area containing facilities which are not to be moved.

[0082] 440 illustrates still another game space. Four facilities are arranged within the game space 440. Specifically, one facility illustrated as “black circle”, two facilities illustrated as “black triangle”, and one facility illustrated as “black square” are arranged therein.

[0083] Assume that the template 410 has been applied to an area 441 within the game space 440. The number of types of facilities and the number of facilities in each type arranged within the game space 440 is equal to or smaller than the number of types of facilities and the number of facilities in each type, respectively, positions of the facilities being defined by the template 410. Thus, all facilities arranged within the game space 440 are moved to positions of facilities defined by the template 410, to which the moving distance is the smallest. Actually, facilities 442 and 443 arranged outside the area 441 are moved to positions of these facilities within the area 441. 440' illustrates the game space 440 after the facilities 442 and 443 have been moved.

[0084] In the game space 440', positions on which no facilities are arranged among the positions of facilities defined by the template 410, are illustrated in a condition where the facility type is discernible (e.g., “white circle” 444 and “white triangle” 445).

[0085] Further, when no facility has been arranged, it is also possible to present the player with facilities of the same type or with facilities of a similar type as proposals.

[0086] Moreover, it is also possible for the player to purchase facilities for positions where no facility has been arranged, or to acquire the facilities, for example, by trading with a different player in a multi-player environment as described below. Moreover, when the player has not arranged a facility defined by a template within the game space but has stored the facility in storage, the player may arrange this facility based on the template, or conversely, the player may store a facility that is not defined by the template, in the storage. Although in the above description, a player creates templates himself/herself, templates may also be distributed from a service-side server 3, or may be acquired from other players. In such cases, a player may not possess a facility defined by a template in some cases. However, whether the player possesses a facility defined by a template may be judged on a portable device 2 side or on a server 3 side, and a screen for purchasing the facility which has been judged not to be in the player's possession may be displayed on the portable device 2, so that the player is automatically guided to a purchase screen.

[0087] Further, templates may also be automatically created based on an operation by the player. For example, the server 3 may automatically create templates based on facilities the player possesses, facilities selected by the player, an area and/or an objective of a template. The objective of a template is, for instance, to realize a city that offers strong protection against soldiers with bows and arrows, to realize a city that work effectively for protection against attacks by giants, to strengthen the protection against air attacks, etc. In doing so, it becomes easy for the player to create templates consistent with objectives.

[0088] In order to achieve the above-described functions, the device processing unit 25 includes a game progression unit 251, a template creation unit 252, and a

template application unit 253. All of these units are functional modules implemented by a program executed on a processor provided in the device processing unit 25. Alternatively, these units may also be provided as firmware on the portable device 2.

[0089] In the following, processing by the game progression unit 251 will be described.

[0090] The game progression unit 251 controls the start and progression of the game, and appropriately gives commands to execute processing to the template creation unit 252, template application unit 253, etc.

[0091] Specifically, when a command to start the game is given by the player via the operation unit 23, the game progression unit 251 displays the game progression screen 300.

[0092] In other words, the game progression unit 251 refers to the facility table stored in the device storage unit 22, and extracts a type ID and a position of each facility. Further, the game progression unit 251 refers to the facility-type table stored in the device storage unit 22 by using the extracted type IDs as key, and extracts file names of image data for corresponding types. Further, the game progression unit 251 obtains image data corresponding to the extracted file names, from the device storage unit 22. Then, the game progression unit 251 configures a game progression screen 300 that displays images arising from the obtained image data according to the extracted positions, and that simultaneously displays buttons for receiving commands such as template creation, template application, etc., in a predetermined layout; and outputs the game progression screen 300 to the display unit 24.

[0093] When a command to create a template is given by the player via the operation unit 23, the game progression unit 251 gives a command to execute processing to the template creation unit 252.

[0094] When a command to apply a template is given by

the player via the operation unit 23, the game progression unit 251 gives a command to execute processing to the template application unit 253.

[0095] When a command to execute different processing is given by the player via the operation unit 23, the game progression unit 251 executes the different processing.

[0096] In the following, processing by the template creation unit 252 will be described.

[0097] The template creation unit 252 creates templates, stores the templates in the device storage unit 22, and registers the created templates on the server 3.

[0098] Specifically, the template creation unit 252 displays the area selection screen 310.

[0099] When an area has been selected and a command to create a template is given by the player via the operation unit 23, the template creation unit 252 creates a template.

[0100] In other words, the template creation unit 252 refers to the facility table stored in the device storage unit 22 by using the coordinates of the selected area as key, and extracts a type ID and a position within the game space of each facility arranged within the selected area. The template creation unit 252 further converts the extracted positions within the game space to positions within the template. Moreover, the template creation unit 252 creates thumbnail image data for the selected area, and stores the data in the device storage unit 22. The template creation unit 252 then stores the file name of the stored thumbnail image data, the extracted type ID and position within the template of each facility, etc., in the template table stored in the device storage unit 22 under a newly assigned template ID.

[0101] Further, the template creation unit 252 registers the created template on the server 3.

[0102] In other words, the template creation unit 252 sends a template registration request via the device communication unit 21 to the server 3 by using the player ID, the assigned template ID, the created thumbnail image data, and the extracted type ID and position within the template of each facility, as parameters.

[0103] Then, the template creation unit 252 terminates the processing.

[0104] In the following, processing by the template application unit 253 will be described.

[0105] The template application unit 253 obtains a template from the device storage unit 22 or the server 3, and applies the obtained template.

[0106] Specifically, the template application unit 253 displays the template selection screen 320.

[0107] In other words, the template application unit 253 refers to the template table stored in the device storage unit 22, and extracts an ID and a file name of thumbnail image data of each template. Further, the template application unit 253 obtains thumbnail image data corresponding to the extracted file name, from the device storage unit 22.

[0108] When necessary, the template application unit 253 sends a request for providing a template list via the device communication unit 21 to the server 3 by using the player ID as a parameter. Further, the template application unit 253 receives an ID and thumbnail image data of each template from the server 3 via the device communication unit 21.

[0109] Then, the template application unit 253 configures the template selection screen 320 that displays thumbnail images arising from the obtained thumbnail image data, buttons for receiving commands such as template selection, etc., in a predetermined layout; and outputs the template selection screen 320 to the display unit 24.

[0110] When a template is selected by the player via

the operation unit 23, the template application unit 253 displays the template display screen 330.

[0111] In other words, when the selected template is a template provided by the server 3, the template application unit 253 sends a request for providing the template via the device communication unit 21 to the server 3 by using the ID of the selected template as a parameter. Further, the template application unit 253 receives thumbnail image data of a corresponding template and the type ID and position of each facility from the server 3 via the device communication unit 21. The template application unit 253 then stores the received thumbnail image data in the device storage unit 22. Further, the template application unit 253 stores the ID of the selected template, the file name of the stored thumbnail image data, the received type ID and position of each facility, etc., in the template table stored in the device storage unit 22.

[0112] The template application unit 253 refers to the template table stored in the device storage unit 22 by using the ID of the selected template as key, and extracts a type ID of each facility in the corresponding template. The template application unit 253 counts the number of extracted types of facilities. Further, the template application unit 253 refers to the facility-type table stored in the device storage unit 22 by using the extracted type IDs as key, and extracts corresponding names of the types. Moreover, the template application unit 253 creates a preview image for when the selected template is applied to a predetermined area within the game space. Then, the template application unit 253 configures the template display screen 330 that displays the extracted names and the number of facilities, the created preview image, buttons for receiving commands such as template confirmation, etc., in a predetermined layout; and outputs the template display screen 330 to the display unit 24.

[0113] In the following, a process of applying a template will be described.

[0114] When a template is confirmed by the player via the operation unit 23, the template application unit 253 displays the area selection screen 340.

[0115] When an area has been selected and a command to apply a template has been given by the player via the operation unit 23, the template application unit 253 applies the template.

[0116] In other words, the template application unit 253 refers to the facility table stored in the device storage unit 22, and extracts an ID, a type ID and a position within the game space of each facility. The template application unit 253 counts the number of extracted types of facilities and the number of facilities in each type. The template application unit 253 further refers to the template table stored in the device storage unit 22 by using the ID of the selected template as key, and extracts a type ID and a position within the template of each facility in the corresponding template. The template application unit 253 counts the number of extracted types of facilities and the number of facilities in each type. Moreover, the template application unit 253 converts the extracted positions within the template to positions within the game space based on coordinates of the selected area. For each type of facility, the template application unit 253 compares the number of facilities of this type within the game space and the number of facilities of this type within the template.

[0117] When the former and the latter are equal, the template application unit 253 moves the facilities of this type within the game space to the positions of the facilities of this type within the template. In other words, the template application unit 253 refers to the facility table stored in the device storage unit 22 by using the IDs of the facilities of each type within the

game space as key, and stores the positions of the facilities of this type within the template as positions of the corresponding facilities within the game space.

[0118] On the other hand, when the former is larger than the latter, the template application unit 253 moves the facilities of this type within the game space for which the moving distance to the positions of the facilities of this type within the template is the smallest, to the positions of these facilities. In other words, for each position of a facility of a type within the template, the template application unit 253 specifies a facility of this type within the game space for which the moving distance to the position is the smallest. The template application unit 253 then refers to the facility table stored in the device storage unit 22 by using the ID of the specified facility as key, and stores the position of the specified facility as position of the corresponding facility within the game space.

[0119] On the other hand, when the former is smaller than the latter, the template application unit 253 moves the facilities of a type within the game space to positions of the facilities of this type within the template to which the moving distance is the smallest. In other words, for each facility of a type within the game space, the template application unit 253 specifies a position of a facility of this type within the template to which the moving distance is the smallest. The template application unit 253 then refers to the facility table stored in the device storage unit 22 by using the ID of the facility as key, and stores the specified position as position of the corresponding facility within the game space.

[0120] Other than facilities for which the moving distance is the smallest, the player may also designate facilities which are to be moved, or an area containing facilities which are to be moved. Further, the player may also in advance designate facilities which are not to

be moved, or an area containing facilities which are not to be moved.

[0121] Then, the template application unit 253 terminates the processing.

[0122] FIG. 5A illustrates one possible schematic configuration of the server 3.

[0123] In response to requests from the portable device 2, the server 3 registers and provides templates. In order to achieve such functions, the server 3 is provided with a server communication unit 31, a server storage unit 32, and a server processing unit 33.

[0124] The server communication unit 31 includes a communication interface circuit for connecting the server 3 to the Internet 7, and communicates with the Internet 7. The server communication unit 31 supplies the data received from the portable device 2 or the like to the server processing unit 33. The server communication unit 31 sends the data supplied from the server processing unit 33 to the portable device 2 or the like.

[0125] The server storage unit 32 includes at least one of a magnetic tape device, a magnetic disk device and an optical disk device, for example. The server storage unit 32 stores an operating system program, a driver program, an application program, data, etc., used for processing in the server processing unit 33. The server storage unit 32 stores, for example, a game control program, etc., for registering and providing templates, as the application program. The server storage unit 32 stores a player table (FIG. 5B) for managing players, a template table (FIG. 5C) for managing templates, and image data, video data, etc., relating to the players, templates, etc., as the data. Further, the server storage unit 32 may store temporary data relating to certain processing.

[0126] FIG. 5B depicts a player table. In the player table, a player ID, a name, a file name of image data, an ID of a created template, etc., are recorded for each

player.

[0127] FIG. 5C depicts a template table. Similarly to FIG. 2D, in the template table, for each template, a template ID, a file name of thumbnail image data, a type ID and a position within the template of each facility, etc., are recorded.

[0128] The server processing unit 33 includes one or more processors and their peripheral circuits. The server processing unit 33 is, for example, a CPU, and integrally controls an overall operation of the server 3. The server processing unit 33 controls an operation of the server communication unit 31 or the like so that various types of processing of the server 3 are executed in an appropriate order in accordance with the programs stored in the server storage unit 32. The server processing unit 33 executes processing based on the programs stored in the server storage unit 32 (the operating system program, the driver program, the application program, etc.). The server processing unit 33 can execute the multiple programs (the application program, etc.) in parallel.

[0129] The server processing unit 33 includes a server control unit 331, a template registration unit 332, and a template provision unit 333. Each of the units is a functional module implemented by a program to be executed by the processor included in the server processing unit 33. Alternatively, each of the units may be provided as a firmware on the server 3.

[0130] In the following, processing by the server control unit 331 will be described.

[0131] The server control unit 331 controls the performance of the server and appropriately gives commands to execute processing to the template registration unit 332, template provision unit 333, etc.

[0132] Specifically, when a template registration request is received from the portable device 2 via the server communication unit 31, the server control unit 331

gives the template registration unit 332 a command to execute processing, by using the received template registration request as a parameter.

[0133] When a request for providing a template list or a template provision request is received from the portable device 2 via the server communication unit 31, the server control unit 331 gives the template provision unit 333 a command to execute processing, by using the received request for providing a template list or the like as a parameter.

[0134] When a different request is received from the portable device 2 via the server communication unit 31, the server control unit 331 executes different processing corresponding to the request.

[0135] In the following, processing by the template registration unit 332 will be described.

[0136] The template registration unit 332 stores templates in the server storage unit 32.

[0137] In other words, the template registration unit 332 interprets the received template registration request, and specifies the ID of the player, the ID of the template, thumbnail image data, as well as the type ID and position of each facility. Then, the template registration unit 332 stores the specified thumbnail image data in the server storage unit 32. The template registration unit 332 further refers to the player table stored in the server storage unit 32 by using the specified player ID as key, and stores the specified template ID as an ID of a template created by the corresponding player. Moreover, the template registration unit 332 stores the specified template ID, the file name of the stored thumbnail image data, the type ID and position of each specified facility, etc., in the template table stored in the server storage unit 32.

[0138] Then, the template registration unit 332 terminates the processing.

[0139] In the following, processing by the template

provision unit 333 will be described.

[0140] The template provision unit 333 obtains a template list or a template from the server storage unit 32, and sends the obtained template list or the like to the portable device 2.

[0141] Specifically, when a request for providing a template list has been received, the template provision unit 333 obtains a template list from the server storage unit 32.

[0142] In other words, the template provision unit 333 interprets the received request for providing a template list, and specifies the ID of the player. The template provision unit 333 then refers to the player table stored in the server storage unit 32 by using the specified player ID as key, and extracts an ID of a template created by a player different from the corresponding player. Further, the template provision unit 333 refers to the template table stored in the server storage unit 32 by using the extracted template ID as key, and extracts a file name of thumbnail image data for the corresponding template. Moreover, the template provision unit 333 obtains the thumbnail image data corresponding to the extracted file name, from the server storage unit 32.

[0143] On the other hand, when a template provision request is received, the template provision unit 333 obtains a template from the server storage unit 32.

[0144] In other words, the template provision unit 333 interprets the received template provision request, and specifies the ID of the template. Then, the template provision unit 333 refers to the template table stored in the server storage unit 32 by using the specified template ID as key, and extracts a file name of thumbnail image data for the corresponding template, as well as the type ID and position of each facility. Further, the template provision unit 333 obtains thumbnail image data corresponding to the extracted file name, from the server

storage unit 32.

[0145] The template provision unit 333 sends the obtained template list or the like to the portable device 2.

[0146] In other words, the template provision unit 333 sends the extracted ID of each template and the thumbnail image data, or the thumbnail image data of the template as well as the type ID and position of each facility that are obtained or the like, to the portable device 2 via the server communication unit 31.

[0147] Then, the template provision unit 333 terminates the processing.

[0148] FIGS. 6A to 6C illustrate examples of the operational flow of the portable device 2.

[0149] The below-described operational flow is executed, based on a program that is stored in advance in the device storage unit 22, mostly by the device processing unit 25 by working together with each component of the portable device 2.

[0150] FIG. 6A illustrates an example of the operational flow of the game progression unit 251.

[0151] The player gives the device processing unit 25 a command to start a game via the operation unit 23. The device processing unit 25 starts processing based on the game program. In other words, the game progression unit 251 implemented by the game program displays the game progression screen 300 (Step S100).

[0152] When a command to create a template is given by the player via the operation unit 23 (Step S102 - Yes), the game progression unit 251 gives the template creation unit 252 a command to execute processing (Step S104).

[0153] FIG. 6B illustrates an example of the operational flow of the template creation unit 252.

[0154] The template creation unit 252 displays the area selection screen 310 (Step S120).

[0155] When an area is selected by the player via the operation unit 23 (Step S122) and a command to create a

template is given, the template creation unit 252 creates a template (Step S124).

[0156] The template creation unit 252 registers the created template on the server 3 (Step S126). Then, the template creation unit 252 terminates processing.

[0157] On the other hand, when a command to apply a template is given by the player via the operation unit 23 (Step S106 - Yes), the game progression unit 251 gives the template application unit 253 a command to execute processing (Step S108).

[0158] FIG. 6C illustrates an example of the operational flow of the template application unit 253.

[0159] The template application unit 253 displays the template selection screen 320 (Step S130).

[0160] When a template is selected by the player via the operation unit 23 (Step S132), the template application unit 253 displays the template display screen 330.

[0161] When the template is confirmed by the player via the operation unit 23 (Step S134), the template application unit 253 displays the area selection screen 340.

[0162] When an area is selected by the player via the operation unit 23 (Step S136) and a command to apply a template is given, the template application unit 253 applies the template (Step S138). Then, the template application unit 253 terminates processing.

[0163] On the other hand, when a command for different processing is given by the player via the operation unit 23 (Step S106 - No), the game progression unit 251 executes the different processing (Step S110).

[0164] FIGS. 7A to 7C illustrate examples of the operational flow of the server 3.

[0165] The below-described operational flow is executed, based on a program that is stored in advance in the server storage unit 32, mostly by the server processing unit 33 by working together with each

component of the server 3.

[0166] FIG. 7A illustrates an example of the operational flow of the server control unit 331.

[0167] When a template registration request is received from the portable device 2 via the server communication unit 31 (Step S200 - Yes), the server control unit 331 gives the template registration unit 332 a command to execute processing (Step S202), by using the received template registration request as a parameter.

[0168] FIG. 7B illustrates an example of the operational flow of the template registration unit 332.

[0169] The template registration unit 332 stores the template included in the received template registration request in the server storage unit 32 (Step S220). Then, the template registration unit 332 terminates processing.

[0170] On the other hand, when a request for providing a template list or a template provision request is received from the portable device 2 via the server communication unit 31 (Step S204 - Yes), the server control unit 331 gives the template provision unit 333 a command to execute processing (Step S206), by using the received request for providing a template list or the like as a parameter.

[0171] FIG. 7C illustrates an example of the operational flow of the template provision unit 333.

[0172] When the request for providing a template list is received (Step S230 - Yes), the template provision unit 333 obtains a list of templates of players other than the player corresponding to the player ID included in the received request for providing a template list, from the server storage unit 32 (Step S232).

[0173] On the other hand, when the template provision request is received (Step S230 - No), the template provision unit 333 obtains a template corresponding to the template ID included in the received template provision request, from the server storage unit 32 (Step S234).

[0174] The template provision unit 333 sends the obtained template list or the like to the portable device 2 (Step S236). Then, the template provision unit 333 terminates processing.

[0175] On the other hand, when a different request is received from the portable device 2 via the server communication unit 31 (Step S204 - No), the server control unit 331 executes different processing corresponding to the request (Step S208).

[0176] As have been described above, by making the arrangement of facilities changeable by using templates, the usability of city building games is improved, and it becomes possible to continuously attract players to the game.

[0177] In the above-described embodiment, the case is described where upon application of a template, facilities are automatically arranged within the game space based on definition in the template. However, it is also possible that when a template is being applied, a mark is displayed on the game space, so that the player can use this mark as approximation and change the types and positions of facilities himself/herself.

[0178] Further, besides buildings, walls, fences and so forth, facilities may also include information on types and quantities of soldiers and weapons to fight back against an attack by a different player.

[0179] Further, multiple templates may be prepared corresponding to objectives, and the player may be able to select a template depending on the objective. To give specific examples; there are multiple types of soldiers with which a different player attacks, and there may be a template realizing a city that offers strong protection against soldiers with bows and arrows, a template realizing a city that work effectively for protection against attacks by giants, a template that strengthens the protection against air attacks, etc.

[0180] Moreover, a characteristic value of each

template may be calculated based on the facilities included in the template and the records of battles fought using the template in the game. Further, the characteristic value of the template and characteristics of the template based on the characteristic value may be displayed and presented to the player. Specifically, a defense power may be displayed based on parameters of protective facilities and the number of the protective facilities included in the template; a winning percentage when using the template may be displayed; and characteristic that the template has good defense power and a good winning percentage is displayed based on the defense power and winning percentage included in the templates. Thus, the player can easily understand the characteristics of respective templates and compare the characteristics.

[0181] (Second embodiment)

In the first embodiment, a single player environment is assumed, wherein a player progresses the game by himself/herself. However, the present invention can also be applied to a multi-player environment wherein multiple players progress the game together. In the present embodiment, multiple players build a city within a single game space, and each player applies templates to a predetermined area within the game space. When a template is applied by a player, the facilities that belong to the player among the facilities arranged within the game space are moved to positions of these facilities defined by the template.

[0182] Since the schematic configuration of the game system 1 is the same as illustrated in FIG. 1, a description thereof is omitted.

[0183] FIG. 8A illustrates an example of a schematic configuration of the portable device 2.

[0184] The portable device 2 progresses the game in response to an operation of an operation unit 23 by a player or a command from a different portable device 2.

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When necessary, the portable device 2 is connected to the server 3 via the base station 4, the mobile communication network 5, the gateway 6, and the Internet 7, to communicate with the server 3. In order to implement the foregoing functions, the portable device 2 includes a device communication unit 21, a device storage unit 22', the operation unit 23, a display unit 24, and a device processing unit 25.

[0185] Since the device communication unit 21, the operation unit 23, and the display unit 24 are the same as illustrated in FIG. 2A, a description thereof is omitted.

[0186] The device storage unit 22' includes a semiconductor memory, for example. The device storage unit 22' stores an operating system program, a driver program, an application program, data, etc., used for processing in the device processing unit 25. For example, the device storage unit 22' stores an input device driver program for controlling the operation unit 23 and an output device driver program for controlling the display unit 24, as the driver program. The device storage unit 22' stores a game program, etc., for progressing the game and displaying the result thereof, as the application program. The device storage unit 22' stores player IDs, a facility table (FIG. 8B) for managing facilities arranged within the game space, a facility-type table (FIG. 2C) for managing types of the facilities, a template table (FIG. 2D) for managing templates, and image data, video data, etc., relating to the facilities, templates, etc., as the data. Further, the device storage unit 22' may store temporary data relating to predetermined processing.

[0187] FIG. 8B depicts a facility table. In the facility table, for each player, an ID of each facility arranged within the game space by the player, a type ID, a position within the game space, etc., are recorded.

[0188] The device processing unit 25 includes one or

more processors and their peripheral circuits. The device processing unit 25 is, for example, a CPU, and integrally controls an overall operation of the portable device 2. The device processing unit 25 controls operations of the device communication unit 21, the display unit 24, etc., so that various types of processing of the portable device 2 are executed in an appropriate order in accordance with the programs stored in the device storage unit 22', the operation of the operation unit 23, etc. The device processing unit 25 executes processing based on the programs (the operating system program, the driver program, the application program, etc.) stored in the device storage unit 22'. The device processing unit 25 can execute multiple programs (application programs, etc.) in parallel.

[0189] FIG. 9 illustrates a concept of applying a template in a multi-player environment.

[0190] 900 illustrates a game space. Twelve facilities are arranged within the game space 900. Specifically, four facilities illustrated as "black circle", four facilities illustrated as "black triangle", and four facilities illustrated as "black square" are arranged therein. Among these facilities, assume that the one facility illustrated as "black circle" and the two facilities illustrated as "black triangle" arranged in the upper-right three by three squares are those of a $player_1$. Further, assume that the three facilities illustrated as "black square" arranged in the lower-right three by three squares are those of a $player_2$, the two facilities illustrated as "black triangle" and the one facility illustrated as "black square" arranged in the lower-left three by three squares are those of a $player_3$, and the three facilities illustrated as "black circle" arranged in the upper-left three by three squares are those of a $player_4$.

[0191] Assume that a template 910 has been applied to an area 901 within the game space 900 by the $player_1$.

Similarly, assume that templates 920 to 940 have been applied to areas 902 to 904 by the $player_2$ to $player_4$, respectively. In relation to the $player_1$, the number of types of facilities and the number of facilities in each type arranged within the game space 900 are equal to the number of types of facilities and the number of facilities in each type, respectively, positions of the facilities being defined by the template 910. Thus, all facilities of the $player_1$ are moved to positions of facilities as defined by the template 910. Similarly, all facilities of the $player_2$ to $player_4$ are moved to positions of facilities as defined by the templates 920 to 940, respectively. 900' illustrates the game space 900 after all the facilities have been moved.

[0192] In order to achieve the above-described functions, the device processing unit 25 includes a game progression unit 251', a template creation unit 252, a template application unit 253, and a second template application unit 254. All of these units are functional modules implemented by a program executed on a processor provided in the device processing unit 25. Alternatively, these units may also be provided as firmware on the portable device 2.

[0193] Since the template creation unit 252 and the template application unit 253 are the same as illustrated in FIG. 2A, a description thereof is omitted.

[0194] In the following, processing by the game progression unit 251' will be described.

[0195] The game progression unit 251' controls the start and progression of the game, and appropriately gives commands to execute processing to the template creation unit 252, template application unit 253, second template application unit 254, etc.

[0196] Specifically, when a command to start the game is given by the player via the operation unit 23, the game progression unit 251' displays the game progression screen 300.

[0197] When a command to create a template is given by the player via the operation unit 23, the game progression unit 251' gives a command to execute processing to the template creation unit 252.

[0198] When a command to apply a template is given by the player via the operation unit 23, the game progression unit 251' gives a command to execute processing to the template application unit 253.

[0199] When a template application command is received from a different portable device 2 via the device communication unit 21, the game progression unit 251' gives the second template application unit 254 a command to execute processing, by using the received template application command as a parameter.

[0200] When a command to execute different processing is given by the player via the operation unit 23, the game progression unit 251' executes the different processing.

[0201] In the following, processing by the second template application unit 254 will be described.

[0202] The second template application unit 254 obtains a template from the server 3, and applies the obtained template.

[0203] Specifically, the second template application unit 254 obtains a template from the server 3.

[0204] In other words, the second template application unit 254 interprets the received template application command, and specifies the ID of the player, the ID of the template, and the coordinates of the area to which the template is to be applied. Further, the second template application unit 254 sends a template provision request via the device communication unit 21 to the server 3 by using the specified template ID as a parameter. Further, the second template application unit 254 receives thumbnail image data of a corresponding template, as well as the type ID and position of each facility from the server 3 via the device communication

unit 21. The second template application unit 254 then stores the received thumbnail image data in the device storage unit 22'. Further, the second template application unit 254 stores the ID of the specified template, the file name of the stored thumbnail image data, the received type ID and position of each facility, etc., in the template table stored in the device storage unit 22'.

[0205] The second template application unit 254 applies the obtained template.

[0206] In other words, the second template application unit 254 refers to the facility table stored in the device storage unit 22' by using the ID of the specified player as key, and extracts an ID, a type ID and a position within the game space of each facility of the corresponding player. The second template application unit 254 counts the number of extracted types of facilities and the number of facilities in each type. The second template application unit 254 further refers to the template table stored in the device storage unit 22' by using the ID of the specified template as key, and extracts a type ID and a position within the template of each facility in the corresponding template. The second template application unit 254 counts the number of extracted types of facilities and the number of facilities in each type. Moreover, the second template application unit 254 converts the extracted positions within the template to positions within the game space based on coordinates of the specified area. For each type of facility, the second template application unit 254 compares the number of facilities of this type within the game space and the number of facilities of this type within the template, and, according to the result, moves the facilities of this type within the game space to the positions of the facilities of this type within the template.

[0207] Then, the second template application unit 254

terminates the processing.

[0208] Since the schematic configuration of the server 3 is the same as illustrated in FIG. 5A, a description thereof is omitted.

[0209] FIGS. 10A and 10B illustrate examples of the operational flow of the portable device 2.

[0210] The below-described operational flow is executed, based on a program that is stored in advance in the device storage unit 22', mostly by the device processing unit 25 by working together with each component of the portable device 2.

[0211] FIG. 10A illustrates an example of the operational flow of the game progression unit 251'.

[0212] Since Steps S100 to S108 are the same as illustrated in FIG. 6A, a description thereof is omitted.

[0213] When a template application command is received from a different portable device 2 via the device communication unit 21 (Step S300 - Yes), the game progression unit 251' gives the second template application unit 254 a command to execute processing, by using the received template application command as a parameter (Step S302).

[0214] FIG. 10B illustrates an example of the operational flow of the second template application unit 254.

[0215] The second template application unit 254 obtains a template corresponding to the template ID included in the received template application command, from the server 3 (Step S310).

[0216] The second template application unit 254 applies the obtained template (Step S312). Then, the second template application unit 254 terminates the processing.

[0217] On the other hand, when a command for different processing is given by the player via the operation unit 23 (Step S300 - No), the game progression unit 251' executes the different processing (Step S110).

[0218] As have been described above, by allowing each player to change the arrangement of facilities by using templates in a multi-player environment, the usability of city building games is improved, and it becomes possible to continuously attract players to the game.

[0219] It should be noted that the present invention is not limited to the above-described embodiment. For example, in the above-described embodiment, in order to combine multiple templates to create a single template, it is assumed that a player applies multiple templates to predetermined areas within the game space, or multiple players apply a template each to predetermined areas within the game space, and then a template for a predetermined area that encompasses all these areas is created. However, a player may designate multiple templates or multiple players may designate a template each, and then a template may be created by directly joining these templates.

[0220] FIG. 11 illustrates a concept of combining templates in a multi-player environment.

[0221] Assume that the $player_1$ has specified a template 1110 for an area 1100. Further, assume that the $player_2$ to $player_4$ have specified templates 1120 to 1140 for areas 1101 to 1103, respectively. 1150 illustrates a template obtained by combining the templates 1110 to 1140.

[0222] In order to achieve the above-described functions, the portable device 2 may perform processing as described below.

[0223] When a command to create a template is given by the player via the operation unit 23, the portable device 2 displays a predetermined screen and receives designations of template and area. In the same manner, the portable device 2 receives designations of template and area from a different portable device 2. Then, the portable device 2 obtains the designated templates from the device storage unit 22 or the server 3, and creates a new template by arranging the obtained templates on the

designated areas.

[0224] In other words, the portable device 2 corrects the position of each facility defined by the obtained templates based on the coordinates specified by the designated areas. The portable device 2 then stores the type ID and corrected position, etc., of each facility defined by the obtained templates, in the template table stored in the device storage unit 22 under a newly assigned template ID.

[0225] (Third embodiment)

In the above-described embodiment, it is assumed that templates are created by the player. However, preexisting templates may also be distributed by a server or the like. In the present embodiment, a preexisting template is distributed by a server depending on an event (e.g., protecting the city from an enemy character) happening in the city building game. The player applies the template distributed by the server, to a predetermined area within his/her own game space, moves and adds facilities as necessary, and thus prepares for the event. After a certain time has passed, the event happens, and the player is given various rewards (e.g., templates, facilities, etc.) depending on the outcome. Such a template can also be understood as a task given to the player in an event.

[0226] Since the schematic configuration of the game system 1 is the same as illustrated in FIG. 1, a description thereof is omitted.

[0227] FIG. 12 illustrates an example of a schematic configuration of the portable device 2.

[0228] The portable device 2 progresses the game in response to an operation of an operation unit 23 by a player. When necessary, the portable device 2 is connected to the server 3 via the base station 4, the mobile communication network 5, the gateway 6, and the Internet 7, to communicate with the server 3. In order to implement the foregoing functions, the portable device

2 includes a device communication unit 21, a device storage unit 22, the operation unit 23, a display unit 24, and a device processing unit 25.

[0229] Since the device communication unit 21, the device storage unit 22, the operation unit 23, and the display unit 24 are the same as illustrated in FIG. 2A, a description thereof is omitted.

[0230] The device processing unit 25 includes one or more processors and their peripheral circuits. The device processing unit 25 is, for example, a CPU, and integrally controls an overall operation of the portable device 2. The device processing unit 25 controls operations of the device communication unit 21, the display unit 24, etc., so that various types of processing of the portable device 2 are executed in an appropriate order in accordance with the programs stored in the device storage unit 22, the operation of the operation unit 23, etc. The device processing unit 25 executes processing based on the programs (the operating system program, the driver program, the application program, etc.) stored in the device storage unit 22. The device processing unit 25 can execute multiple programs (application programs, etc.) in parallel.

[0231] The device processing unit 25 includes a game progression unit 251'', a template creation unit 252, a template application unit 253, and a third template application unit 255. All of these units are functional modules implemented by a program executed on a processor provided in the device processing unit 25. Alternatively, these units may also be provided as firmware on the portable device 2.

[0232] Since the template creation unit 252 and the template application unit 253 are the same as illustrated in FIG. 2A, a description thereof is omitted.

[0233] In the following, processing by the game progression unit 251'' will be described.

[0234] The game progression unit 251'' controls the

start and progression of the game, and appropriately gives commands to execute processing to the template creation unit 252, template application unit 253, third template application unit 255, etc.

[0235] Specifically, when a command to start the game is given by the player via the operation unit 23, the game progression unit 251'' displays the game progression screen 300.

[0236] When a command to create a template is given by the player via the operation unit 23, the game progression unit 251'' gives a command to execute processing to the template creation unit 252.

[0237] When a command to apply a template is given by the player via the operation unit 23, the game progression unit 251'' gives a command to execute processing to the template application unit 253.

[0238] When an event start report is received from the server 3 via the device communication unit 21, the game progression unit 251'' gives the third template application unit 255 a command to execute processing, by using the received event start report as a parameter.

[0239] When a command to execute different processing is given by the player via the operation unit 23, the game progression unit 251'' executes the different processing.

[0240] In the following, processing by the third template application unit 255 will be described.

[0241] The third template application unit 255 obtains a template for an event from the server 3, and applies the obtained template.

[0242] Specifically, the third template application unit 255 obtains a template for an event from the server 3.

[0243] In other words, the third template application unit 255 interprets the received event start report, and specifies the ID of the event. Further, when a command to participate in an event is given by the player via the

operation unit 23, the third template application unit 255 sends an event participation request via the device communication unit 21 to the server 3 by using the player ID and the specified event ID as parameters. Further, the third template application unit 255 receives an ID and thumbnail image data of a template for the corresponding event, as well as the type ID and position of each facility from the server 3 via the device communication unit 21. The third template application unit 255 then stores the received thumbnail image data in the device storage unit 22. Further, the third template application unit 255 stores the ID of the received template, the file name of the stored thumbnail image data, the received type ID and position of each facility, etc., in the template table stored in the device storage unit 22.

[0244] The third template application unit 255 applies the obtained template.

[0245] In other words, the third template application unit 255 refers to the facility table stored in the device storage unit 22, and extracts an ID, a type ID and a position within the game space of each facility. The third template application unit 255 counts the number of extracted types of facilities and the number of facilities in each type. The third template application unit 255 further refers to the template table stored in the device storage unit 22 by using the ID of the received template as key, and extracts a type ID and a position within the template of each facility in the corresponding template. The third template application unit 255 counts the number of extracted types of facilities and the number of facilities in each type. Moreover, the third template application unit 255 converts the extracted positions within the template to positions within the game space based on coordinates of the area selected by the player via the operation unit 23. For each type of facility, the third template application

unit 255 compares the number of facilities of this type within the game space and the number of facilities of this type within the template, and, according to the result, moves the facilities of this type within the game space to the positions of the facilities of this type within the template.

[0246] Then, the third template application unit 255 terminates the processing.

[0247] FIG. 13A illustrates one possible schematic configuration of the server 3.

[0248] In response to requests from the portable device 2, the server 3 registers and provides templates. Further, the server 3 manages events and provides templates. In order to achieve such functions, the server 3 is provided with a server communication unit 31, a server storage unit 32', and a server processing unit 33.

[0249] Since the server communication unit 31 is the same as illustrated in FIG. 5A, a description thereof is omitted.

[0250] The server storage unit 32' includes at least one of a magnetic tape device, a magnetic disk device and an optical disk device, for example. The server storage unit 32' stores an operating system program, a driver program, an application program, data, etc., used for processing in the server processing unit 33. The server storage unit 32' stores, for example, a game control program, etc., for registering and providing templates and managing events, as the application program. The server storage unit 32' stores a player table (FIG. 5B) for managing players, a template table (FIG. 5C) for managing templates, an event table for managing events (FIG. 13B), and image data, video data, etc., relating to the players, templates, etc., as the data. Further, the server storage unit 32' may store temporary data relating to certain processing.

[0251] FIG. 13B depicts an event table. In the event

table, an event ID, starting date and time, an ID of a template to be used, an ID of a participating player, etc., are recorded for each event.

[0252] The server processing unit 33 includes one or more processors and their peripheral circuits. The server processing unit 33 is, for example, a CPU, and integrally controls an overall operation of the server 3. The server processing unit 33 controls an operation of the server communication unit 31 or the like so that various types of processing of the server 3 are executed in an appropriate order in accordance with the programs stored in the server storage unit 32'. The server processing unit 33 executes processing based on the programs stored in the server storage unit 32' (the operating system program, the driver program, the application program, etc.). The server processing unit 33 can execute the multiple programs (the application program, etc.) in parallel.

[0253] The server processing unit 33 includes a server control unit 331', a template registration unit 332, a template provision unit 333, and an event management unit 334. Each of the units is a functional module implemented by a program to be executed by the processor included in the server processing unit 33. Alternatively, each of the units may be provided as a firmware on the server 3.

[0254] Since the template registration unit 332 and the template provision unit 333 are the same as illustrated in FIG. 5A, a description thereof is omitted.

[0255] In the following, processing by server control unit 331' will be described.

[0256] The server control unit 331' controls the performance of the server and appropriately gives commands to execute processing to the template registration unit 332, template provision unit 333, event management unit 334, etc.

[0257] Specifically, when a template registration

request is received from the portable device 2 via the server communication unit 31, the server control unit 331' gives the template registration unit 332 a command to execute processing, by using the received template registration request as a parameter.

[0258] When a request for providing a template list or a template provision request is received from the portable device 2 via the server communication unit 31, the server control unit 331' gives the template provision unit 333 a command to execute processing, by using the received request for providing a template list or the like as a parameter.

[0259] When there is an event whose starting date and time has passed, the server control unit 331' gives the event management unit 334 a command to execute processing, by using the event ID as a parameter.

[0260] In other words, the server control unit 331' refers to the event table stored in the server storage unit 32', and extracts an ID and starting date and time of each event. Further, the server control unit 331' obtains the current date and time from a clock (not illustrated). When there is an event whose starting date and time is before the obtained current date and time, the server control unit 331' gives the event management unit 334 a command to execute processing, by using the event ID as a parameter.

[0261] When an event participation request is received from the portable device 2 via the server communication unit 31, the server control unit 331' gives the event management unit 334 a command to execute processing, by using the received event participation request as a parameter.

[0262] When a different request is received from the portable device 2 via the server communication unit 31, the server control unit 331' executes different processing corresponding to the request.

[0263] In the following, processing by the event

management unit 334 will be described.

[0264] The event management unit 334 sends an event start report to the portable device 2. Further, the event management unit 334 obtains a template for an event from the server storage unit 32', and sends the obtained template to the portable device 2.

[0265] Specifically, when an event ID has been received, the event management unit 334 sends an event start report to the portable device 2.

[0266] In other words, the event management unit 334 refers to the player table stored in the server storage unit 32', and specifies players. Then, the event management unit 334 sends an event start report via the server communication unit 31 to the portable device 2 of each of the specified players, by using the received event ID as a parameter.

[0267] Then, the event management unit 334 terminates the processing.

[0268] On the other hand, when an event participation request has been received, the event management unit 334 makes the player participate in the corresponding event.

[0269] Specifically, the event management unit 334 interprets the received event participation request, and specifies the ID of the event and the ID of the player. The event management unit 334 then refers to the event table stored in the server storage unit 32' by using the specified event ID as key, and stores the specified player ID as an ID of a player participating in the corresponding event.

[0270] The event management unit 334 obtains a template for the corresponding event from the server storage unit 32'.

[0271] Specifically, the event management unit 334 refers to the event table stored in the server storage unit 32' by using the specified event ID as key, and extracts an ID of a template for the corresponding event. Then, the event management unit 334 refers to the

template table stored in the server storage unit 32′ by using the extracted template ID as key, and extracts a file name of thumbnail image data for the corresponding template, as well as the type ID and position of each facility. Further, the event management unit 334 obtains thumbnail image data corresponding to the extracted file name, from the server storage unit 32′.

[0272] The event management unit 334 sends the obtained template to the portable device 2.

[0273] In other words, the event management unit 334 sends the thumbnail image data of the template as well as the type ID and position of each facility that are obtained or the like, to the portable device 2 via the server communication unit 31.

[0274] Then, the event management unit 334 terminates the processing.

[0275] FIGS. 14A and 14B illustrate examples of the operational flow of the portable device 2.

[0276] The below-described operational flow is executed, based on a program that is stored in advance in the device storage unit 22, mostly by the device processing unit 25 by working together with each component of the portable device 2.

[0277] FIG. 14A illustrates an example of the operational flow of the game progression unit 251′′.

[0278] Since Steps S100 to S108 are the same as illustrated in FIG. 6A, a description thereof is omitted.

[0279] When an event start report is received from the server 3 via the device communication unit 21 (Step S400 - Yes), the game progression unit 251′′ gives the third template application unit 255 a command to execute processing, by using the received event start report as a parameter (Step S402).

[0280] FIG. 14B illustrates an example of the operational flow of the third template application unit 255.

[0281] The third template application unit 255 obtains

a template for an event from the server 3, and applies the obtained template (Step S410).

[0282] The third template application unit 255 applies the obtained template (Step S412). Then, the third template application unit 255 terminates the processing.

[0283] On the other hand, when a command for different processing is given by the player via the operation unit 23 (Step S400 - No), the game progression unit 251'' executes the different processing (Step S110).

[0284] FIGS. 15A to 15C illustrate examples of the operational flow of the server 3.

[0285] The below-described operational flow is executed, based on a program that is stored in advance in the server storage unit 32', mostly by the server processing unit 33 by working together with each component of the server 3.

[0286] FIG. 15A illustrates an example of the operational flow of the server control unit 331'.

[0287] Since Steps S200 to S206 are the same as illustrated in FIG. 7A, a description thereof is omitted.

[0288] When there is an event whose starting date and time has passed (Step S500 - Yes), the server control unit 331' gives the event management unit 334 a command to execute processing, by using the event ID as a parameter (Step S502).

[0289] FIG. 15B illustrates an example of the operational flow of the event management unit 334.

[0290] When an event ID has been received, the event management unit 334 sends an event start report to the portable device 2 (Step S510). Then, the event management unit 334 terminates the processing.

[0291] On the other hand, when an event participation request is received from the portable device 2 via the server communication unit 31 (Step S504 - Yes), the server control unit 331' gives the event management unit 334 a command to execute processing, by using the received event participation request as a parameter (Step

S506).

[0292] FIG. 15C illustrates another example of the operational flow of the event management unit 334.

[0293] When an event participation request has been received, the event management unit 334 makes the player participate in the corresponding event. (Step S520).

[0294] The event management unit 334 obtains a template for the corresponding event from the server storage unit 32' (Step S522).

[0295] The event management unit 334 sends the obtained template to the portable device 2 (Step S524). Then, the event management unit 334 terminates the processing.

[0296] On the other hand, when a different request is received from the portable device 2 via the server communication unit 31 (Step S504 - No), the server control unit 331' executes different processing corresponding to the request (Step S208).

[0297] As have been described above, by making preexisting templates distributable, it becomes possible to make an event happen in accordance with the arrangement of facilities, which increases the attractiveness of city building games, and makes it possible to continuously attract players to the game.

[0298] It should be noted that the present invention is not limited to the above-described embodiment. For example, in the above-described embodiment, it is assumed that a preexisting template is distributed depending on occurrence of an event. But templates may not only be used when an event is happening. During a so-called tutorial that is meant to teach players how to play by arranging various facilities, templates with arrangements for different intended uses, such as balance type, resource protecting type, and so forth may be provided.

[0299] Further, in the above-described embodiment, the creation and application of a template are performed by the portable device 2. However, the creation and

application may also be performed by the server 3. In this case, the server 3 may store facilities arranged within the game space for each player, and in response to commands by the player, create and/or apply a template to a predetermined area within the game space of the player.

[0300] Further, while the above-described embodiment is described by an example wherein positions of facilities are changed based on definition in the template, the types of facilities may be changed.

[0301] Further, types are not limited to buildings, walls, fences and so forth, and any other game items such as soldiers and weapons to fight back against an attack by a different player may be applicable.

[0302] A computer program for causing a computer to execute the respective functions of the device processing unit 25 and the server processing unit 33 may be provided in a form recorded on a non-transitory computer-readable recording medium such as a semiconductor recording medium, a magnetic recording medium and an optical recording medium, and may be installed on the device storage unit 22 and the server storage unit 32 from the recording medium by using a known set-up program, etc.

[0303] The preceding description has been presented only to illustrate and describe exemplary embodiments of the present invention. It is not intended to be exhaustive or to limit the invention to any precise form disclosed. It will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the scope of the invention. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the invention without departing from the essential scope. Therefore, it is intended that the invention not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out this invention, but that the invention will include all embodiments falling within

the scope of the claims. The invention may be practiced otherwise than is specifically explained and illustrated without departing from its spirit or scope.

WHAT IS CLAIMED IS:

1. One or more non-transitory computer readable media, including computer-program instructions, which when executed by a portable device, cause the portable device to:

arrange a plurality of game contents in first respective positions within a game space;

store information identifying the plurality of game contents and the first respective positions within the game space;

create, in response to a first input received at an interface of the portable device, a first template defining one or more of the plurality of game contents in second respective positions within the game space;

store the first template responsive to the first command received at the interface of the portable electronic device; and

apply the first template to a predetermined area within the game space based on a second command received at the interface of the portable device.

2. The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to:

store image data corresponding to each of the plurality of game contents.

3. The one or more non-transitory computer readable media of claim 1, wherein

the plurality of game contents are categorized into a plurality of different types of game content;

different image data is associated with each of the plurality of different types of game content, and

the computer-program instructions, when executed by the portable device, cause the portable device to store each of the plurality of game contents, the type of each of the game contents and the image data associated with each of the game contents.

4. The one or more non-transitory computer readable media of claim 1, wherein

the second respective positions of the game contents are identified by coordinates in the game space.

5. The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to:

create a second template defining the plurality of game contents in third respective positions within the game space;

store the second template;

cause a display to display an interface configured to receive a selection between the first template and the second template; and

apply one of the first template or the second template to the predetermined area within the game space based on a received input selecting the first template or the second template.

6. The one or more non-transitory computer readable media of claim 1, wherein

the plurality of game contents in the first respective positions and the one or more of the plurality of game contents in the second respective positions have a same number of game contents.

7. The one or more non-transitory computer readable media of claim 1, wherein the computer-program instructions, when executed by the portable device, cause the portable device to:

move the plurality of game contents in the first respective positions within the game space to the second respective positions within the game space when applying the first template to the predetermined area within the game space.

8. The one or more non-transitory computer readable media of claim 1, wherein

the one or more non-transitory computer readable media is a memory of the portable electronic device, which includes a processor configured to execute the computer-program instructions.

9. The one or more non-transitory computer readable media of claim 1, wherein

the one or more non-transitory computer readable media is one or more memories included in one or more servers, which include a communication interface configured to transmit the computer-program instructions to the portable device via a network.

10. A method performed by a portable electronic device, the method comprising:

storing first positions of game contents;

creating a template defining game contents and second positions of one or more of the game contents arranged in a game space based on a received template creation command;

storing the created template in memory of the portable electronic device; and

applying the template to a predetermined area within the game space based on a received template application command.

11. The method of claim 10, wherein applying the template comprises:

applying the template to the predetermined area within the game space by replacing an existing area within the game space.

12. The method of claim 11, wherein

the predetermined area and the existing area extend a same area of the game space.

13. The method of claim 12, wherein applying the template comprises:

applying the template to the predetermined area within the game space by allocating one or more of the game contents arranged at the first positions in the existing area to the second positons of the game contents defined by the template.

14. The method of claim 10, comprising:

creating a plurality of templates each defining the game contents and the second positions of the game contents arranged in the game space.

15. The method of claim 14, comprising:

selecting one of the created templates based on a received template selection command, wherein

applying the template includes applying the selected one of the created templates to the predetermined area.

16. The method of claim 10, comprising:

registering the created template to the server by transmitting information corresponding to the created template to the server via a communication interface of the portable electronic device.

17. A method performed by a portable electronic device, the method comprising:

executing a game by arranging, based on a command received from a first player, a plurality of game contents within a game space, the game contents including at least game contents for defending from an attack initiated by a second player;

receiving a command to create a template from the first player;

creating, responsive to the received command to create the template, a plurality of templates defining the plurality of game contents and respective positions of the plurality of game contents within the game space;

creating a plurality of images that each correspond to one of the plurality of templates;

displaying a screen including the plurality of images;

receiving a selection corresponding to one of the displayed images; and

applying a template corresponding to the received selection to a predetermined area within the game space.

18. The method of claim 17, wherein

the respective positions of the plurality of game contents within the game space are defined by coordinates in the game space.

19. The method of claim 17, comprising:

displaying an interface including the game space and images corresponding to a plurality of game contents; and

receiving a command to allocate at least one of the plurality of game contents in an area of the game space; and

allocating the at least one of the plurality of game contents to the area of the game space based on the received command.

20. The method of claim 19, wherein

the plurality of game contents are categorized into a plurality of different types of game content, and

different image data is associated with each of the plurality of different types of game content.

21. The method of claim 17, comprising:

allocating the applied template as the first player's active allocation of the plurality of game contents upon receiving a command from the first player.

22. The method of claim 17, comprising:

registering the applied template to a server by transmitting information corresponding to the applied template to the server via a communication interface of the portable electronic device.

23. One or more non-transitory computer readable media, including computer-program instructions, which when executed by an information processing system, cause the information processing system to:

receive information for reproducing a template for defending an attack initiated by a second player, the template defining positions of game contents in a game space and being created by a first terminal executing a game by arranging, based on a first command by a first player, the game contents within the game space, the game contents including at a least game content for defending from the attack initiated by the second player;

store the received information for reproducing the template; and

send the received information for reproducing the template to a second terminal different from the first terminal, the second terminal executing the game by arranging, based on a second command by the first player, game contents within the game space, the game contents including at least a game content for defending from an attack initiated by the second player.

24. The one or more non-transitory computer readable media of claim 23, wherein the computer-program instructions, when executed by the information processing system, cause the information processing system to:

receive, at the first terminal, a third command from the first player to create the template; and

create the template defining the game contents and respective positions of the game contents within the game space based on the received third command.

25. The one or more non-transitory computer readable media of claim 23, wherein the computer-program instructions, when executed by the information processing system, cause the information processing system to:

cause the second terminal to display an interface including an image corresponding to the template;

receive a third command from the first player selecting the image corresponding to the template; and

apply the template corresponding to the received selection to a predetermined area within the game space.

26. The one or more non-transitory computer readable media of claim 23, wherein

the one or more non-transitory computer readable media includes at least a first memory of the first terminal and a second memory at the second

terminal including respective processors configured to execute the computer-program instructions.

27. The one or more non-transitory computer readable media of claim 23, wherein

the one or more non-transitory computer readable media is one or more memories included in one or more servers, which include a communication interface configured to transmit the computer-program instructions to the first terminal and the second terminal via a network.

28. The one or more non-transitory computer readable media of claim 23, wherein

the information processing system includes one or more servers communicatively coupled to the first terminal and the second terminal via a network.

29. The one or more non-transitory computer readable media of claim 28, wherein

the information processing system includes the first terminal and the second terminal.

ABSTRACT

Provided is a method for controlling a computer, etc., which makes it possible to improve the usability of city building games. The computer is provided with a storage unit configured to store game contents arranged within a game space, positions of the game contents, and a template defining positions of one or more of game contents, and progresses a game by arranging the game contents within the game space based on a command by a player. The method includes when the template is applied to a predetermined area within the game space based on the command by the player, moving, by the computer, the game contents arranged within the game space to the positions of the game contents defined by the template.

FIG. 1

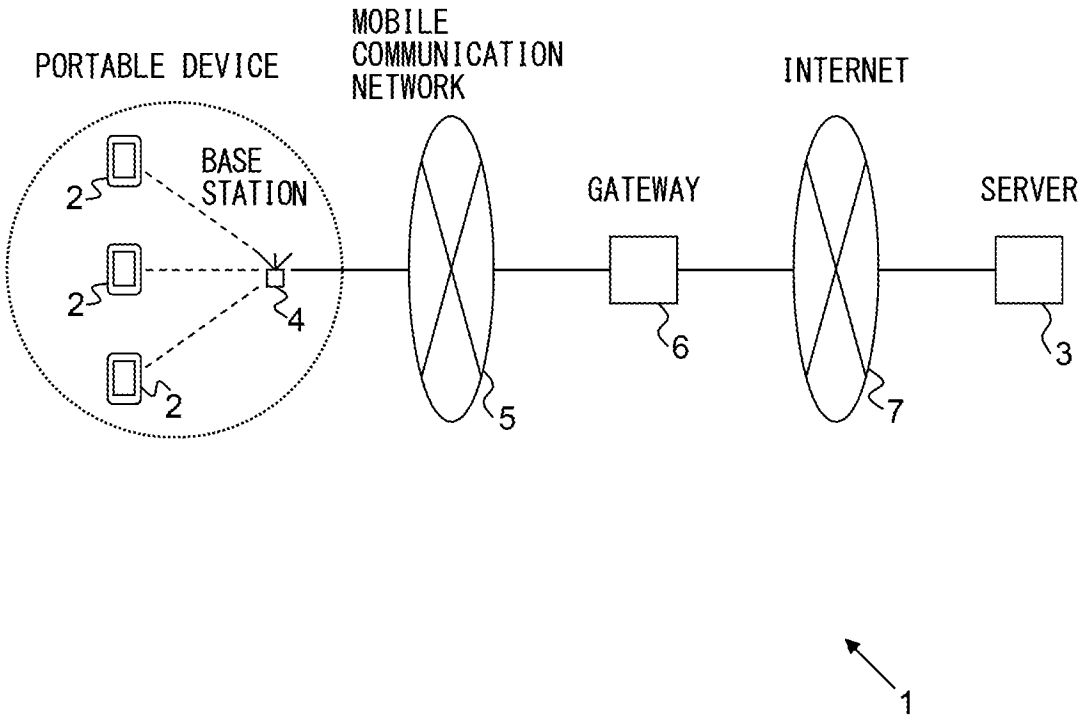
PORTABLE DEVICE
MOBILE COMMUNICATION NETWORK
INTERNET
BASE STATION
GATEWAY
SERVER
2
2
2
4
5
6
7
3
1

FIG. 2A

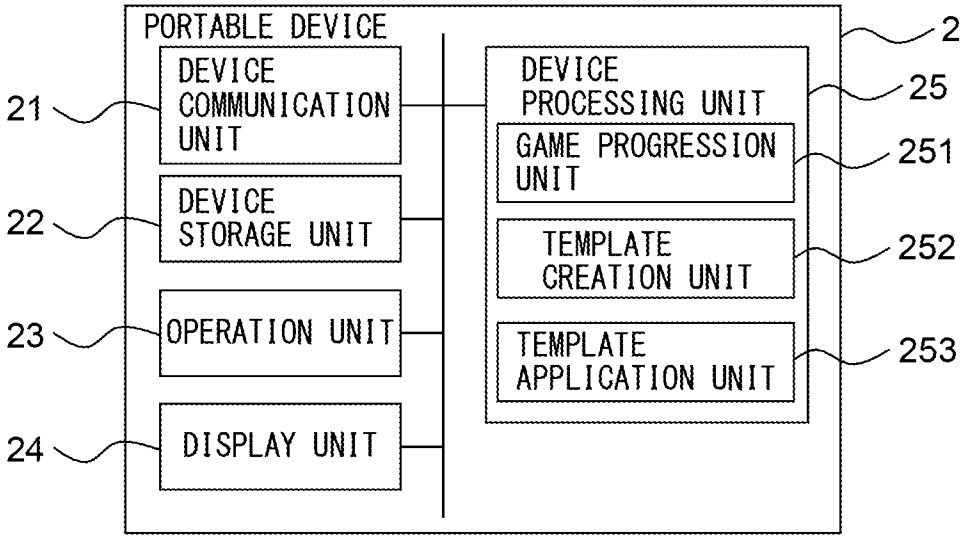

FIG. 2B

FACILITY	TYPE	POSITION	...
F_001	S_001	(3, 2)	...
F_002	S_001	(3, 3)	...
F_003	S_002	(4, 2)	...
...	...	...	...

FIG. 2C

TYPE	NAME	IMAGE	...
S_001	WALL	S_001.jpg	...
S_002	HOUSE	S_002.jpg	...
S_003	CASTLE	S_003.jpg	...
...	...	...	...

FIG. 2D

TEMPLATE	IMAGE	TYPE	POSITION	...
T_001	T_001.jpg	S_001	(1, 1)	...
		S_001	(1, 2)	...
		S_002	(2, 1)	...
...		...	...	...

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FIG. 3A

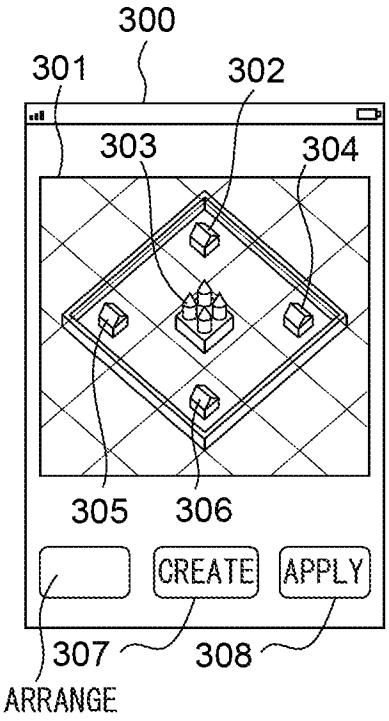

FIG. 3B

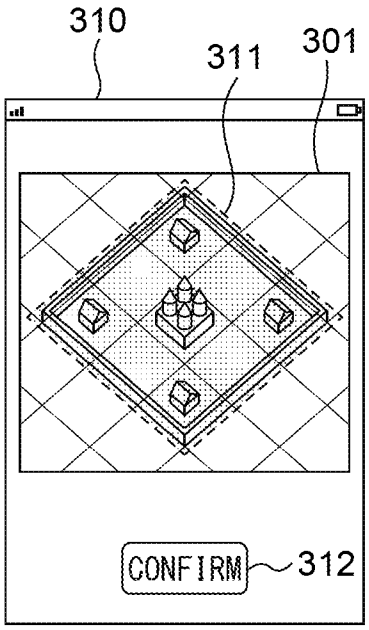

FIG. 3C

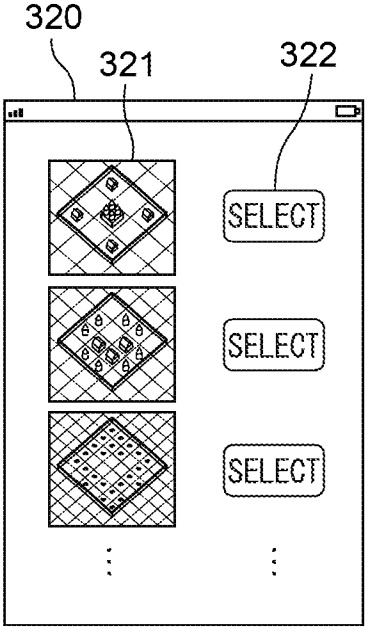

FIG. 3D

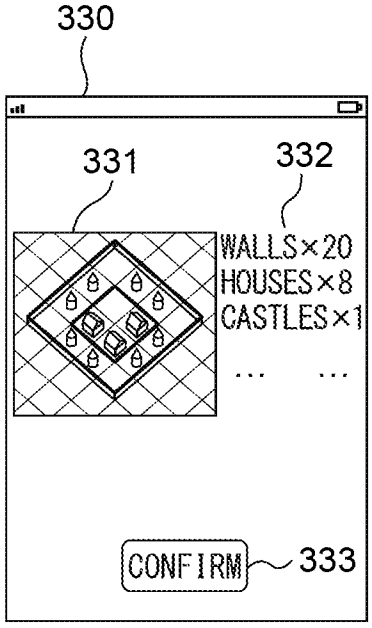

FIG. 3E

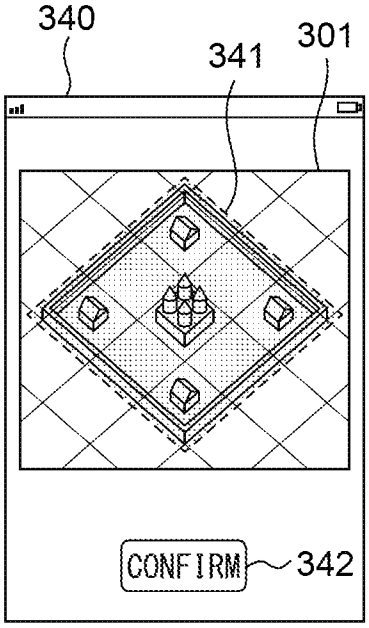

FIG. 4

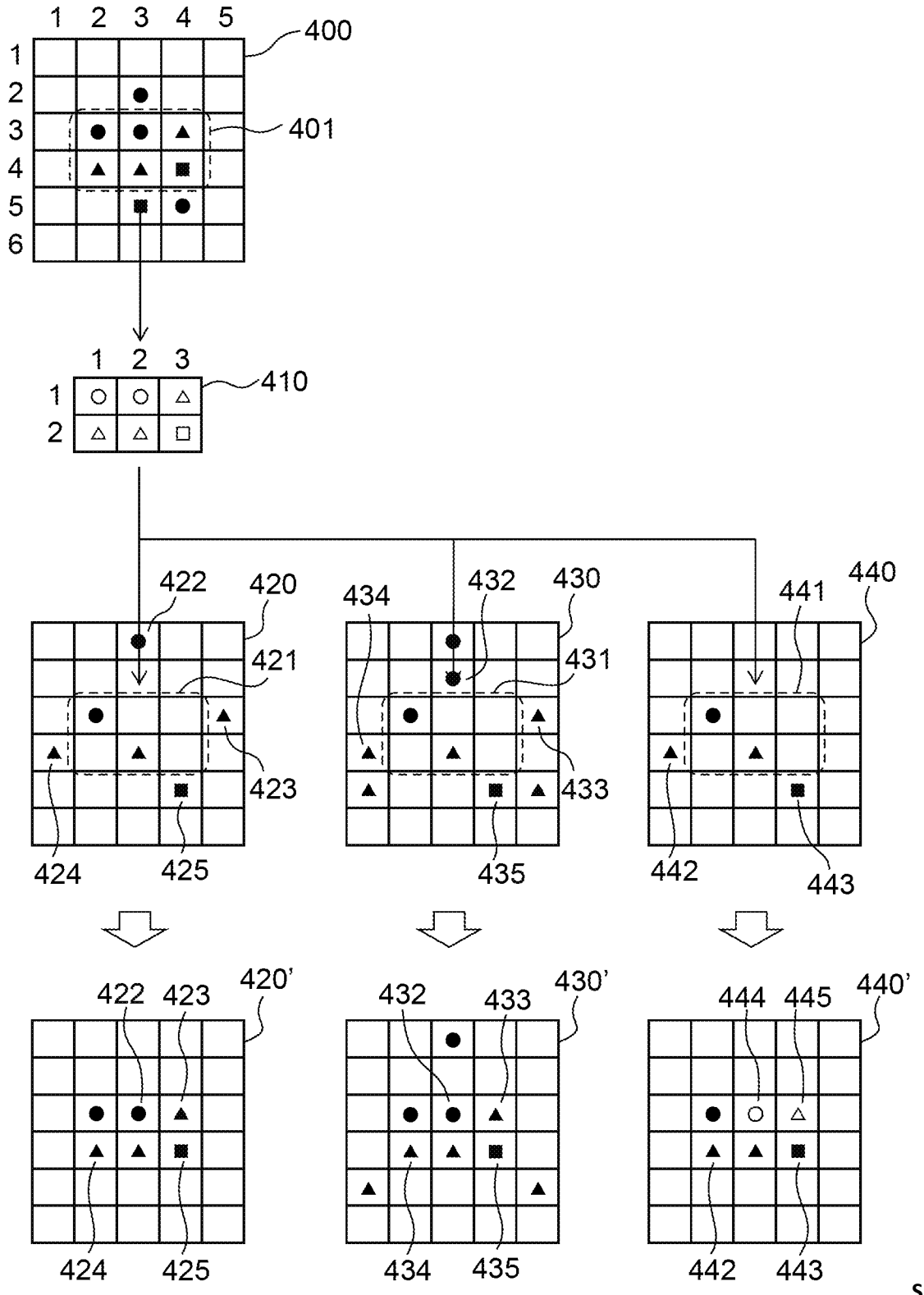

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FIG. 5A

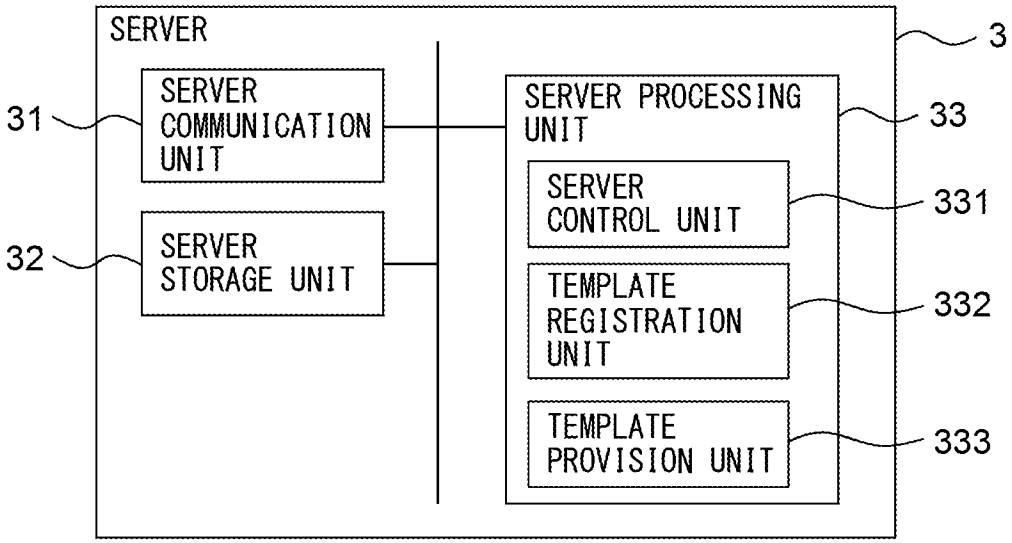

FIG. 5B

PLAYER	NAME	IMAGE	TEMPLATE	...
P_001	PLAYER 1	P_001.jpg	T_001,...	...
P_002	PLAYER 2	P_002.jpg	T_003,...	...
P_003	PLAYER 3	P_003.jpg	T_004,...	...
...	...	...	...	...

FIG. 5C

TEMPLATE	IMAGE	TYPE	POSITION	...
T_001	T_001.jpg	S_001	(1, 1)	...
		S_001	(1, 2)	...
		S_002	(2, 1)	...
...		...	...	...

FIG. 6A

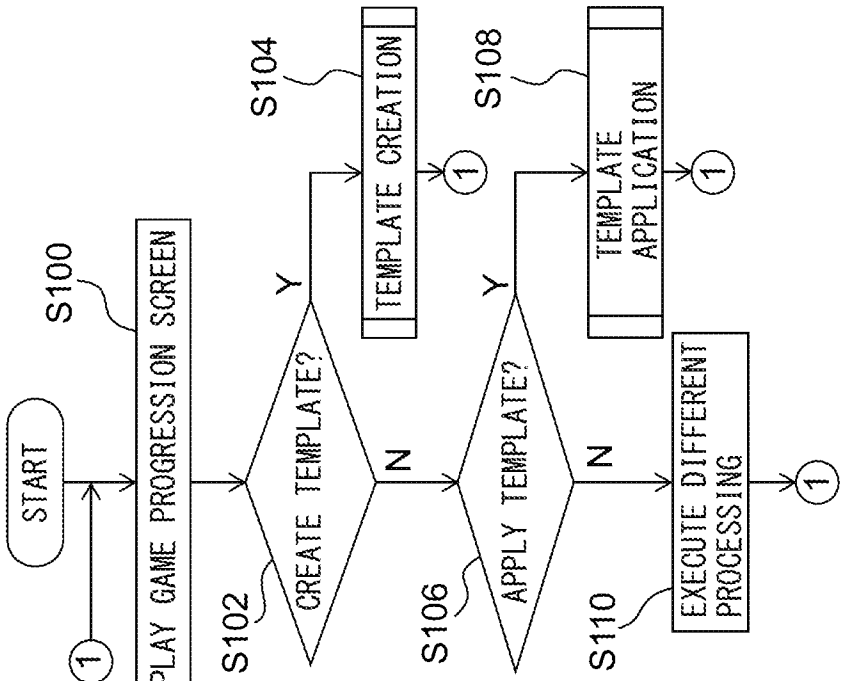

FIG. 6B

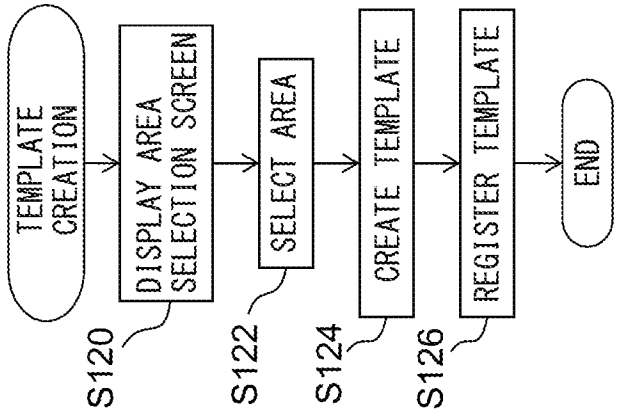

FIG. 6C

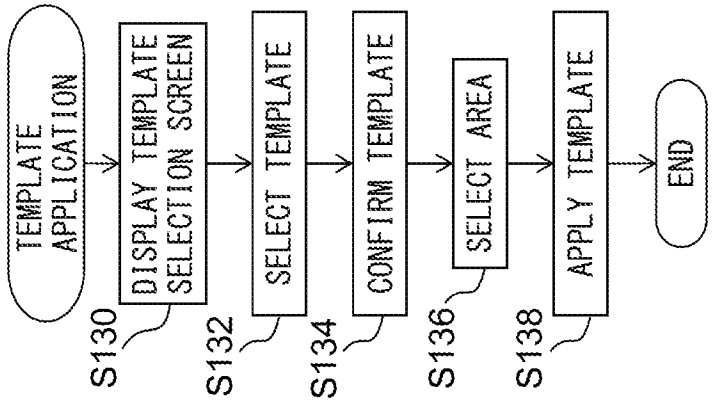

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FIG. 7A

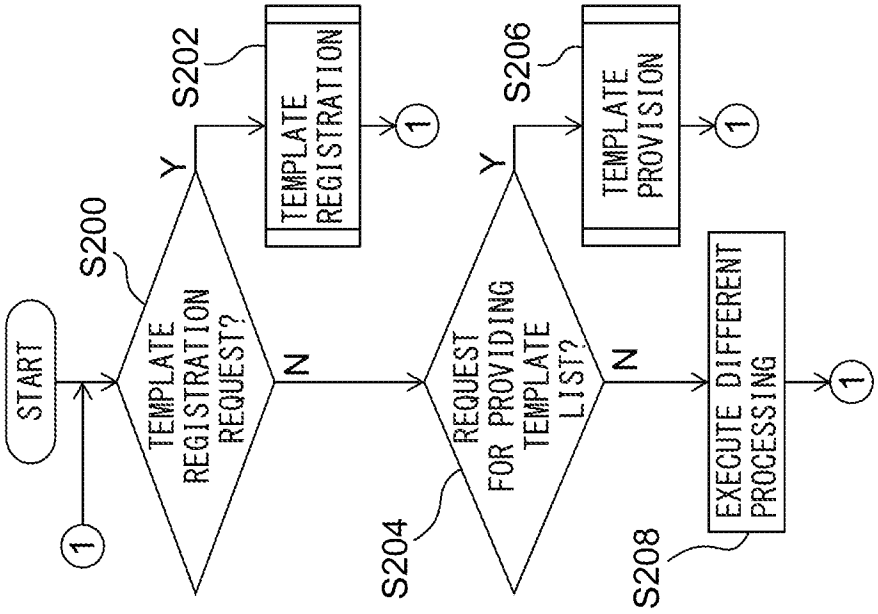

FIG. 7B

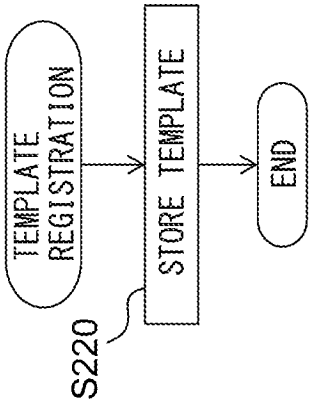

FIG. 7C

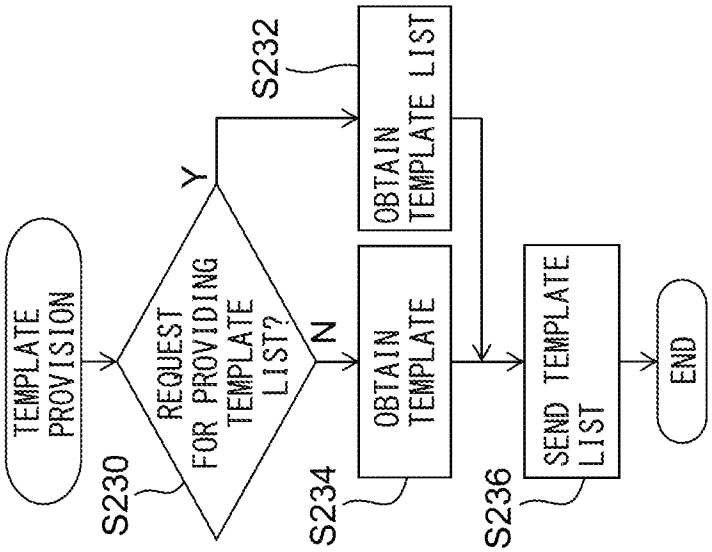

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FIG. 8A

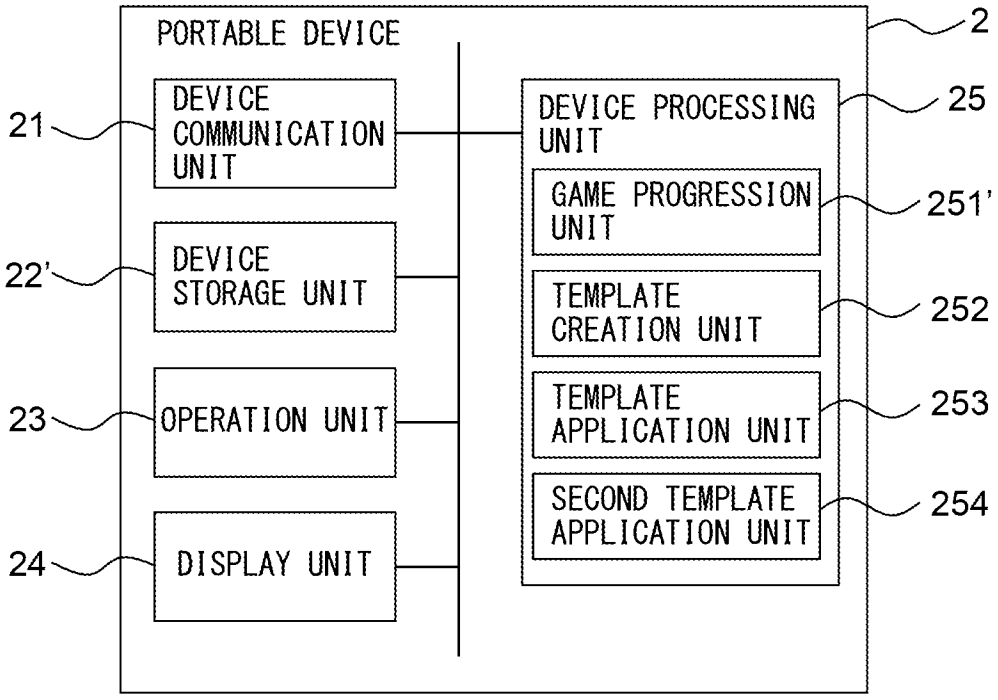

FIG. 8B

PLAYER	FACILITY	TYPE	POSITION	...
P_001	F_001	S_001	(3, 2)	...
	F_002	S_002	(3, 3)	...
	F_003	S_003	(4, 2)	...
...	...	...	...	...

FIG. 9

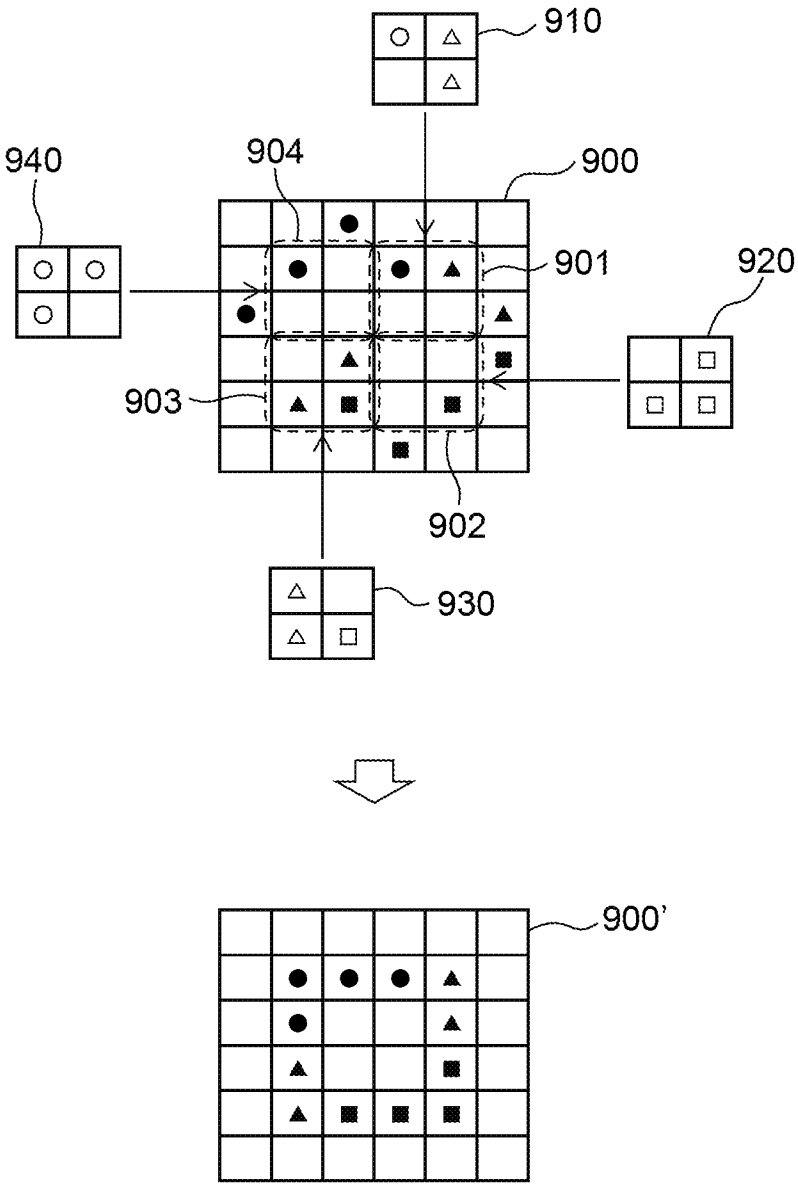

FIG. 10A

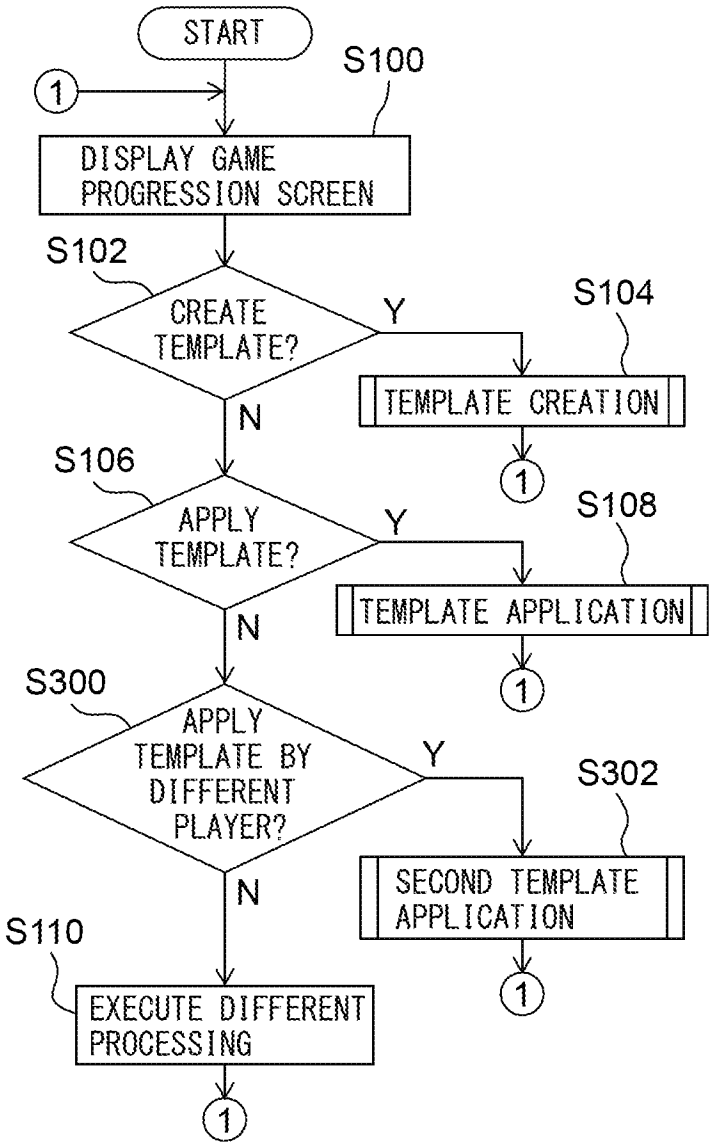

FIG. 10B

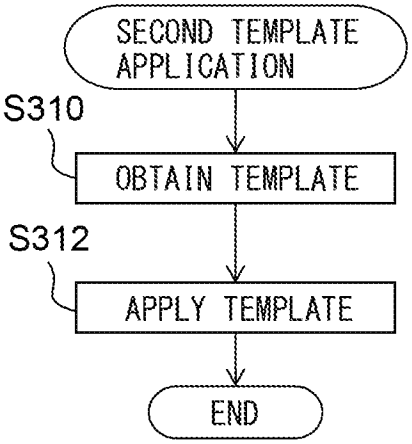

FIG. 11

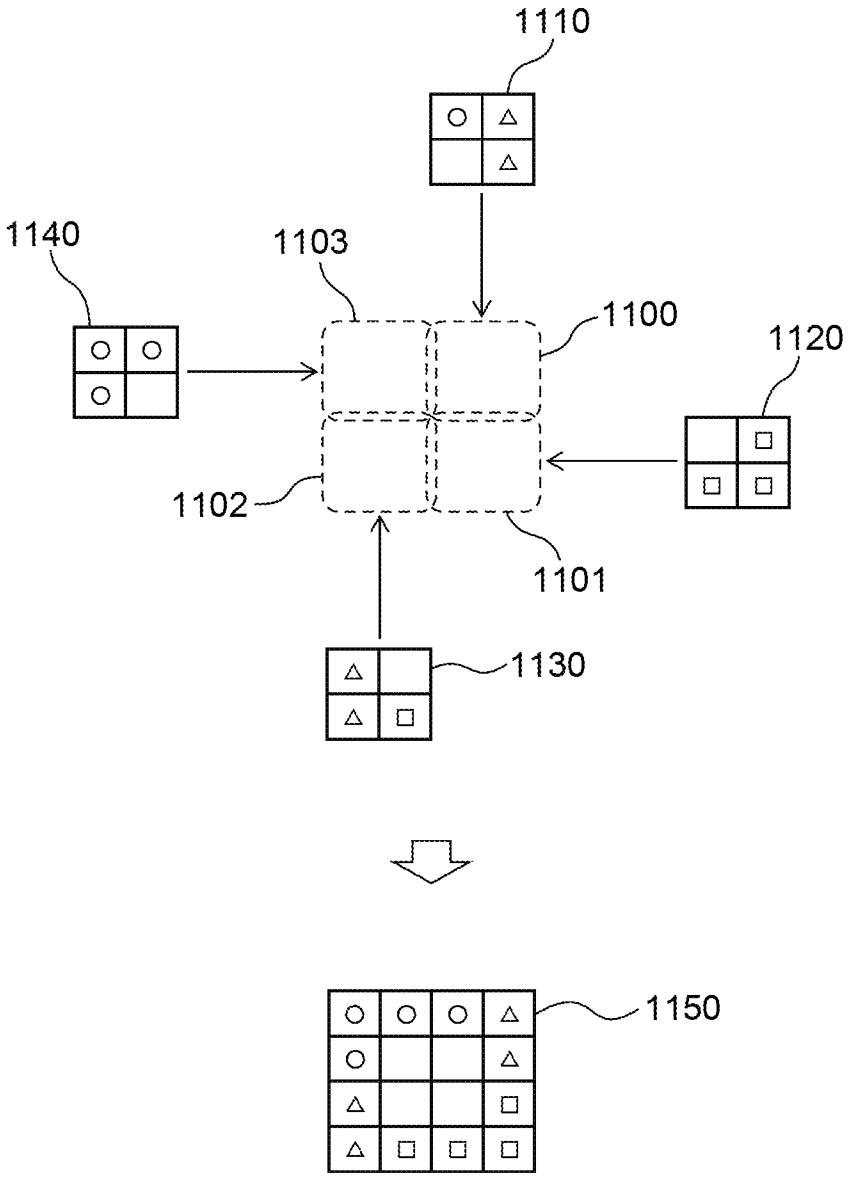

FIG. 12

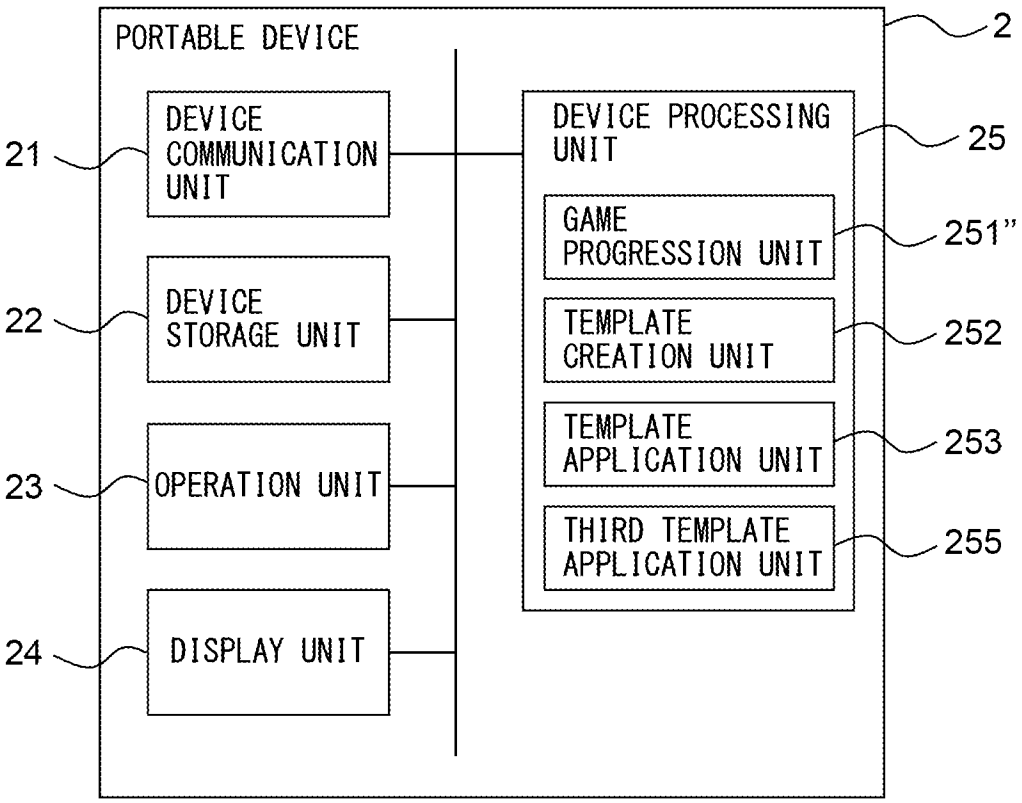
PORTABLE DEVICE
2
21
DEVICE COMMUNICATION UNIT
22
DEVICE STORAGE UNIT
23
OPERATION UNIT
24
DISPLAY UNIT
DEVICE PROCESSING UNIT
25
GAME PROGRESSION UNIT
251"
TEMPLATE CREATION UNIT
252
TEMPLATE APPLICATION UNIT
253
THIRD TEMPLATE APPLICATION UNIT
255

FIG. 13A

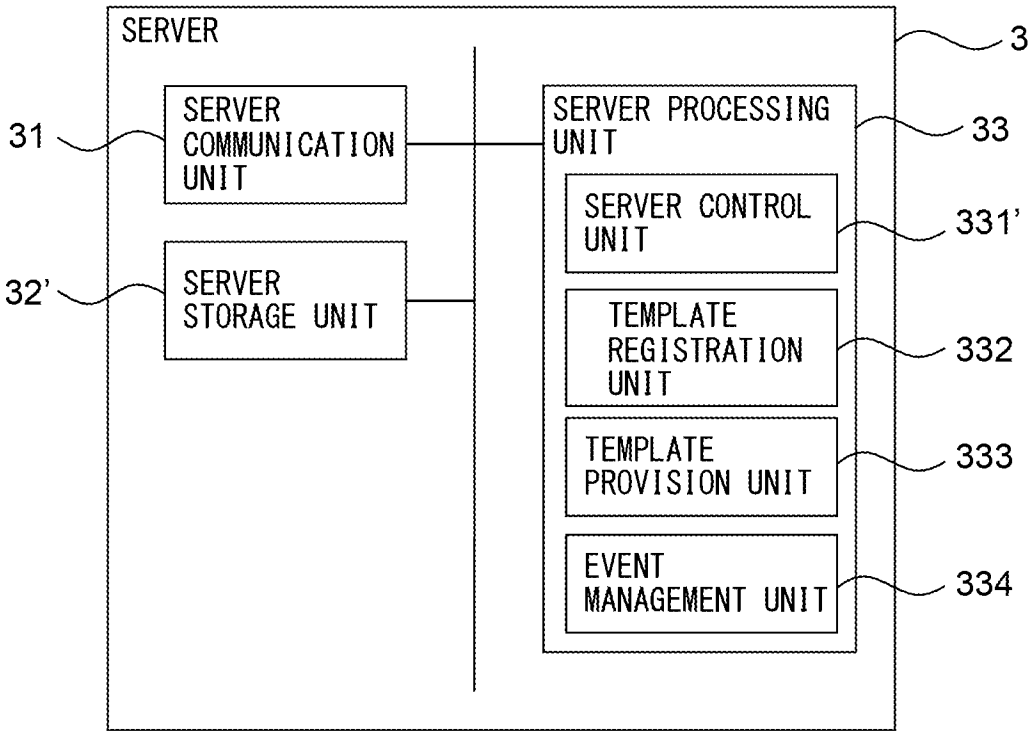

FIG. 13B

EVENT	STARTING DATE AND TIME	TEMPLATE	PLAYER	...
I_001	13/10/1,21:00:00	T_001	P_001,...	...
I_002	13/10/2,21:00:00	T_003		...
I_003	13/10/3,21:00:00	T_004		...
...	...	...	...	...

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FIG. 14A

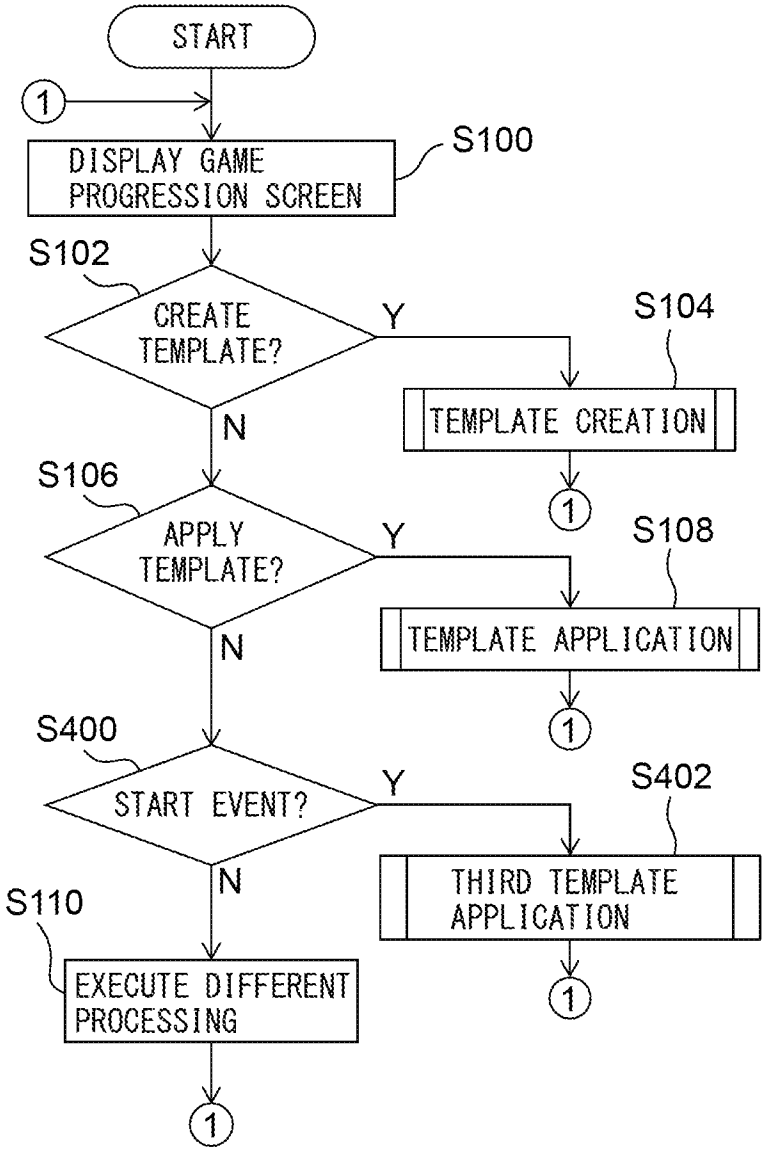


FIG. 14B

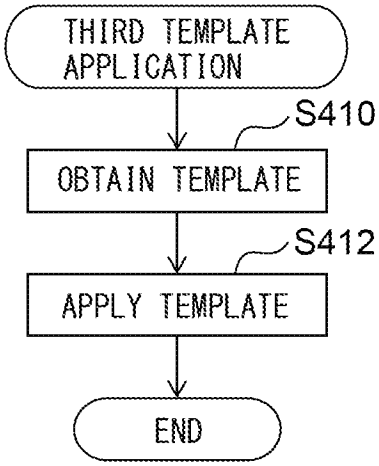


FIG. 15A

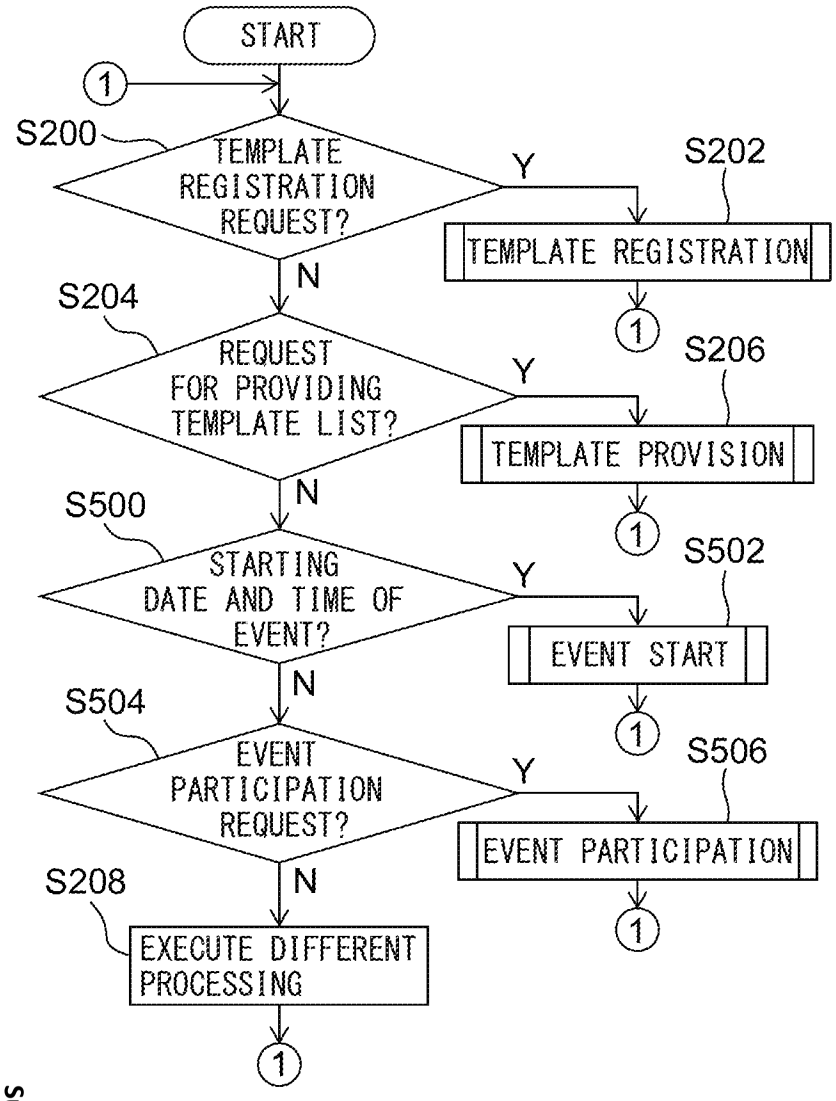


FIG. 15B

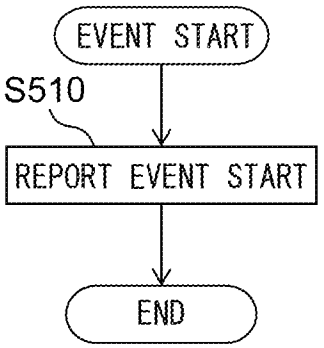
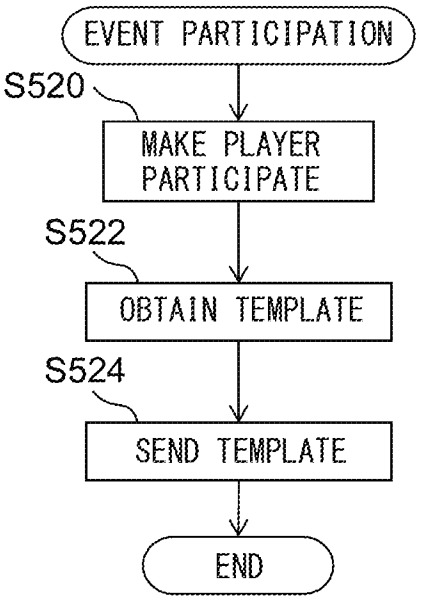


FIG. 15C



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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	COMPUTER CONTROL METHOD, CONTROL PROGRAM AND COMPUTER

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 14/983,984

filed on December 30, 2015.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Taiki EDA Date (Optional): 09/11/2016

Signature: Taiki Eda

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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