UNITED STATES PATENT AND TRADEMARK OFFICE

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P.O. Box 1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/837,402	09/25/2018	10084991	ASA-9567-06	6521

24956 7590 09/05/2018

MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314
UNITED STATES OF AMERICA

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):

Kazunori IWABUCHI, Yokohama, JAPAN;
Maxell, Ltd., Kyoto, JAPAN;
Hiroki MIZOSOE, Kawasaki, JAPAN;
Mutsumi SHIMODA, Kawasaki, JAPAN;
Setiawan BONDAN, Yamato, JAPAN;
Manabu SASAMOTO, Yokohama, JAPAN;

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)

24956 7590 06/08/2018
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314
UNITED STATES OF AMERICA

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.
15/837,402	12/11/2017	Kazunori IWABUCHI	ASA-9567-06	6521

TITLE OF INVENTION: TELEVISION RECEIVER WITH A TV PHONE FUNCTION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$0	$1000	09/10/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, KHAI N	2652	348-014040

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 Mattingly & Malur, PC
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: Maxell, Ltd.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Kyoto, 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. 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 50-1417 (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 /John R. Mattingly/ Date August 23, 2018

Typed or printed name John R. Mattingly Registration No. 30,293

Electronic Patent Application Fee Transmittal

Application Number:	15837402
Filing Date:	11-Dec-2017
Title of Invention:	A COMMUNICATION APPARATUS AND METHOD FOR RECEIVING AN INBOUND VIDEOPHONE CALL NOTICE WHILE DISPLAYING DIGITAL INFORMATION ON THE DISPLAY.
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Filer:	John Roberts Mattingly/Krista Hargrove
Attorney Docket Number:	ASA-9567-06

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	1000	1000

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1000**

Electronic Acknowledgement Receipt

EFS ID:	33513809
Application Number:	15837402
International Application Number:	
Confirmation Number:	6521
Title of Invention:	A COMMUNICATION APPARATUS AND METHOD FOR RECEIVING AN INBOUND VIDEOPHONE CALL NOTICE WHILE DISPLAYING DIGITAL INFORMATION ON THE DISPLAY.
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Customer Number:	24956
Filer:	John Roberts Mattingly
Filer Authorized By:	
Attorney Docket Number:	ASA-9567-06
Receipt Date:	23-AUG-2018
Filing Date:	11-DEC-2017
Time Stamp:	14:30:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1000
RAM confirmation Number	082418INTEFSW14305200
Deposit Account	501417
Authorized User	John Mattingly

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

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	9567-06-issuefeetransmittal.pdf	1233209 26c04f727bb3ef00e494b27be6b8ca58d42a6ce4	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30833 096eceb88c5431c881c4ea8b91e60ce9516fd8b4	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1264042		

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.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/837,402	12/11/2017	Kazunori IWABUCHI	ASA-9567-06	6521

24956 7590 08/03/2018

MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VIRGINIA 22314
UNITED STATES OF AMERICA

EXAMINER
NGUYEN, KHAI N

ART UNIT	PAPER NUMBER
2652	

NOTIFICATION DATE	DELIVERY MODE
08/03/2018	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):

ptomail@mmiplaw.com

Response to Rule 312 Communication	Application No.	Applicant(s)	
	15/837,402	IWABUCHI et al.	
	Examiner	Art Unit	AIA Status
	KHAI N NGUYEN	2652	No

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

1. ☑ The amendment filed on 24 July 2018 under 37 CFR 1.312 has been considered, and has been:

a) ☐ entered.

b) ☑ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.

Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

Amendment under Rule 312 to change the Title filed on 07/24/2018 has been entered.

/Khai N. Nguyen/
Primary Examiner, Art Unit 2652

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Kazunori IWABUCHI Confirmation No. 6521

Serial No. : 15/837,402

Filed : November 12, 2017

For : A COMMUNICATION APPARATUS AND METHOD FOR RECEIVING AN INBOUND VIDEOPHONE CALL NOTICE WHILE DISPLAYING DIGITAL INFORMATION ON THE DISPLAY (as amended)

Group : 2652

Examiner : Khai N. NGUYEN

Docket No. : ASA-9567-06

Customer No.: 24956

AMENDMENT UNDER 37 CFR §1.312

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450 July 24, 2018

Sir:

Following the mailing of the Notice of Allowance mailed June 8, 2018, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

Amendments to the Title begin on page 2 of this paper.

Remarks are included following the amendments.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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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
15/837,402	12/11/2017	2652	2020	ASA-9567-06	16	4

CONFIRMATION NO. 6521

CORRECTED FILING RECEIPT

24956
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

OC000000101454941

Date Mailed: 08/03/2018

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)

Kazunori IWABUCHI, Yokohama, JAPAN;
Hiroki MIZOSOE, Kawasaki, JAPAN;
Mutsumi SHIMODA, Kawasaki, JAPAN;
Setiawan BONDAN, Yamato, JAPAN;
Manabu SASAMOTO, Yokohama, JAPAN;

Applicant(s)

Maxell, Ltd., Kyoto, JAPAN;

Power of Attorney: The patent practitioners associated with Customer Number 24956

Domestic Priority data as claimed by applicant

This application is a CON of 15/631,298 06/23/2017
which is a CON of 15/215,839 07/21/2016 PAT 9723268
which is a CON of 14/811,048 07/28/2015 PAT 9432618
which is a CON of 13/723,312 12/21/2012 PAT 9124758
which is a CON of 12/457,257 06/04/2009 PAT 8363087

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 2008-246232 09/25/2008 No Access Code Provided

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.

If Required, Foreign Filing License Granted: 01/11/2018

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/837,402**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

A COMMUNICATION APPARATUS AND METHOD FOR RECEIVING AN INBOUND VIDEOPHONE CALL NOTICE WHILE DISPLAYING DIGITAL INFORMATION ON THE DISPLAY.

Preliminary Class

348

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

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

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

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 U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Kazunori IWABUCHI Confirmation No. 6521

Serial No. : 15/837,402

Filed : November 12, 2017

For : A COMMUNICATION APPARATUS AND METHOD FOR RECEIVING AN INBOUND VIDEOPHONE CALL NOTICE WHILE DISPLAYING DIGITAL INFORMATION ON THE DISPLAY (as amended)

Group : 2652

Examiner : Khai N. NGUYEN

Docket No. : ASA-9567-06

Customer No.: 24956

AMENDMENT UNDER 37 CFR §1.312

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450 July 24, 2018

Sir:

Following the mailing of the Notice of Allowance mailed June 8, 2018, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

Amendments to the Title begin on page 2 of this paper.

Remarks are included following the amendments.

Amendments to the Title:

Please replace the original title of the invention with the following amended title:

~~TELEVISION RECEIVER WITH A TV PHONE FUNCTION~~ A COMMUNICATION APPARATUS AND METHOD FOR RECEIVING AN INBOUND VIDEOPHONE CALL NOTICE WHILE DISPLAYING DIGITAL INFORMATION ON THE DISPLAY.

REMARKS

This paper is filed subsequent to the Notice of Allowance having a USPTO mailing date of June 8, 2018.

The foregoing minor amendment is believed to be necessary, and accordingly, consideration and entry of the amendments is respectfully requested. No new matter has been added. It is believed that this minor amendment does not affect the allowability of the claims.

Respectfully submitted,

MATTINGLY & MALUR, PC

/John R. Mattingly/
John R. Mattingly
Registration No. 30,293
703-684-1120

Electronic Acknowledgement Receipt

EFS ID:	33263887
Application Number:	15837402
International Application Number:	
Confirmation Number:	6521
Title of Invention:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Customer Number:	24956
Filer:	John Roberts Mattingly
Filer Authorized By:	
Attorney Docket Number:	ASA-9567-06
Receipt Date:	24-JUL-2018
Filing Date:	11-DEC-2017
Time Stamp:	14:41:40
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		9567-06-312Amd.pdf	18459 4980461917a58d4870488987161 3a504e25fb78f	yes	3

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment after Notice of Allowance (Rule 312)	1	1
	Claims	2	2
	Applicant Arguments/Remarks Made in an Amendment	3	3
Warnings:			
Information:			
	Total Files Size (in bytes):	18459	

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.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

24956 7590 06/08/2018

MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314
UNITED STATES OF AMERICA

EXAMINER
NGUYEN, KHAI N

ART UNIT	PAPER NUMBER
2652	

DATE MAILED: 06/08/2018

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/837,402	12/11/2017	Kazunori IWABUCHI	ASA-9567-06	6521

TITLE OF INVENTION: TELEVISION RECEIVER WITH A TV PHONE FUNCTION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$0	$1000	09/10/2018

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.

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)

24956 7590 06/08/2018
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314
UNITED STATES OF AMERICA

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.
15/837,402	12/11/2017	Kazunori IWABUCHI	ASA-9567-06	6521

TITLE OF INVENTION: TELEVISION RECEIVER WITH A TV PHONE FUNCTION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0	$0	$1000	09/10/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, KHAI N	2652	348-014040

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. _____

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.
15/837,402	12/11/2017	Kazunori IWABUCHI	ASA-9567-06	6521

24956 7590 06/08/2018

MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314
UNITED STATES OF AMERICA

EXAMINER	
NGUYEN, KHAI N	
ART UNIT	PAPER NUMBER
2652	

DATE MAILED: 06/08/2018

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.

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. 15/837,402	Applicant(s) IWABUCHI ET AL.	
	Examiner KHAI N. NGUYEN	Art Unit 2652	AIA (First Inventor to File) Status No

-- 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 *Applicants' Amendment & Remarks filed 04/25/2018*.
   ☐ 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 *1-16*. 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. *12/457257* .
   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 _____.

/KHAI N NGUYEN/
Primary Examiner, Art Unit 2652

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	13/723312	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:46
S2	55922	(H04N21/254,42203,4223,431,4788;H04N7/141,142.17318).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:47
S3	2	"8363087".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:48
S4	1	"20100073455".pn. and (network near4 processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:53
S5	1	S1 and (network near4 processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:56
S6	0	S1 and (network near2 processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 15:13
S7	3	"20070070188".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 14:10
S8	8	("20090251526" "8013938" "20090174762").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:01
S9	3	"20070070188".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:05
S10	112945	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:13
S11	35096	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/12/15 16:13

			DERWENT; IBM_TDB			
S12	286	(S10 S11) and television and (((video near2 demand$3) content) near2 server) and (videophone (video near (telephone phone)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:16
S13	1350	television and (((video near2 demand$3) content) near2 server) and (videophone (video near (telephone phone)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:16
S14	124	S13 and (network near processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:17
S15	87	S14 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:18
S16	28	(video near2 (on-demand$3 demand$3)) and (paus$3 with ((video videophone) near2 call))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:25
S17	17	S16 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:25
S18	15	S17 and ((video content) near2 server) and (videophone (video near (telephone phone)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:30
S19	17	S17 and paus$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:33
S20	15	S18 and paus$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:33
S22	1	"20130127977".pn. and processor and network	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/17 12:51
S23	4	WO0203683	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/17 18:23
S27	1	(video on-demand) and center and (paus$3 near2 controller) and (charg$3 near2 time$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 12:53
S28	3	"20030041333".pn.	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2014/12/18 13:12

			EPO; JPO; DERWENT; IBM_TDB			
S29	113050	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04N3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:28
S30	35152	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:28
S31	275	(S29 S30) and (camera with (stop$4 halt$3) with (device apparatus endpoint videophone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:30
S32	15	S31 and (camera with (stop$4 halt$3) with instruction with (device apparatus endpoint videophone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:30
S33	8	S32 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:31
S34	218	(camera with (stop$4 halt$3) with instruction with (device apparatus endpoint videophone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:32
S35	125	S34 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:32
S36	117	S35 not S33	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:33
S37	23	("2007070188" "8013938" "2014009559" "2014009558" "2014015916").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 10:59
S38	15	("20070070188" "8013938" "20140009559" "20140009558" "20140015916").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:01
S40	0	S38 and ((stop$4 halt$3) with camera)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:07
S41	117520	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:08
S42	37197	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/21 11:08

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S43	137	(S41 S42) and ((stop$4 halt$3) with (instruction command$3) with camera)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:10
S44	91	S43 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:10
S45	7	S44 and ((stop$4 halt$3) with (instruction command$3) with camera with (remote$3 farend (far near end)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:13
S46	37	(receiv$3 with (stop$4 halt$3) with (instruction command$3) with camera with (remote$3 farend (far near end)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 12:49
S47	23	S46 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 12:50
S60	2	14/811048	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:41
S61	6	12/457257	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:43
S62	0	15/215839	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:45
S63	81352	(H04N21/254,42203,4223,431,4788;H04N7/141,142,147,148,17318).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:49
S64	143723	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04N5/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:50
S65	40696	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:50
S66	33	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20080134278" | "20080172693" | "20080212949" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20130033561" | "5526037" | "5528285" | "5610653" | "5684918" | "6339842" | "6529742" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758").PN.	US-PGPUB; USPAT	OR	ON	2016/10/25 13:50
S67	14	("5710591" "5467388" "6859526" "5771065").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2016/10/26 10:32

			IBM_TDB			
S68	4	"5778053".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/26 10:33
S69	2	(S67 S68) and (encod$3 decod$3 codec) and display$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/26 10:35
S70	81404	(H04N21/254,42203,4223,431,4788;H04N7/141,142,147,148,17318).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:04
S71	143837	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:04
S72	33	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20080134278" | "20080172693" | "20080212949" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20130033561" | "5526037" | "5528285" | "5610653" | "5684918" | "6339842" | "6529742" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758").PN.	US-PGPUB; USPAT	OR	ON	2016/10/29 10:04
S73	87	(S70 S71 S72) and (video with camera with (predeterm$4 period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:04
S74	33	S73 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:05
S75	21	S74 and (video near2 (phone telephone terminal device))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:07
S76	2	S75 and (video with camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:08
S77	32	(video near2 (phone telephone terminal)) and (video with camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:11
S78	11	S77 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:11
S79	6	(videophone video-phone video-telephone) and (video with camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:17
S80	7	(videophone video-phone video-telephone) and (camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:18
S81	1	S80 and @ad<="20080925"	US-PGPUB; USPAT	OR	ON	2016/10/29 10:18

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S82	26	(US-20070070188-$ or US-20090174762-$ or US-20090251526-$ or US-20070094691-$ or US-20010041053-$ or US-20040128700-$ or US-20130127977-$ or US-20030041333-$ or US-20150334352-$ or US-20100073455-$ or US-20070261091-$ or US-20080309759-$ or US-20050250531-$).did. or (US-8363087-$ or US-8013938-$ or US-5684918-$ or US-9432618-$ or US-9124758-$ or US-5710591-$ or US-5467388-$ or US-5771065-$ or US-6859526-$ or US-5778053-$).did. or (JP-08289280-$).did. or (US-20100073455-$ or US-20070070188-$).did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2016/10/29 11:15
S83	33	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20080134278" | "20080172693" | "20080212949" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20130033561" | "5526037" | "5528285" | "5610653" | "5684918" | "6339842" | "6529742" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758").PN.	US-PGPUB; USPAT	OR	ON	2016/10/29 11:15
S84	15	S82 not S83	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 11:15
S89	1	15/631298	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 14:41
S90	13	("8363087" "9124758" "9432618" "9723268").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:39
S91	3	"9124758".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:40
S92	5	(S90 S91) and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:48
S93	0	S92 and (echo$3 and cancel$6).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:51
S94	166630	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:53
S95	42924	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:53
S96	35584	(S94 S95) and (television and (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:07
S97	17858	S96 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:08
S98	295	S97 and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:09
S99	265	S98 and (television same (video$5 telephone phone))	US-PGPUB; USPAT;	OR	ON	2017/12/16

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			19:10
S100	29102	(S94 S95) and (television same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:11
S101	454	S100 and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:11
S102	265	S101 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:12
S103	15	S102 and ((television near receiver) same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:13
S104	213	S102 and (television same (includ$3 compris$3) same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:19
S105	166630	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S106	42924	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S107	29102	(S105 S106) and (television same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S108	454	S107 and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S109	265	S108 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S110	213	S109 and (television same (includ$3 compris$3) same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S111	67	S110 and ((echo$3 with cancel$6) same microphone same (speaker loudspeaker))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31

S112	45	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20050250531" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20070261091" | "20080134278" | "20080172693" | "20080212949" | "20080309759" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20100073455" | "20130033561" | "20130127977" | "20150334352" | "5467388" | "5526037" | "5528285" | "5610653" | "5684918" | "5710591" | "5771065" | "5778053" | "6339842" | "6529742" | "6859526" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758" | "9432618").PN.	US-PGPUB; USPAT	OR	ON	2017/12/18 12:35
S113	8	S112 and ((echo$3 with cancel$6) same microphone same (speaker loudspeaker))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/18 12:35
S114	2	S113 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/18 12:36
S115	45	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20050250531" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20070261091" | "20080134278" | "20080172693" | "20080212949" | "20080309759" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20100073455" | "20130033561" | "20130127977" | "20150334352" | "5467388" | "5526037" | "5528285" | "5610653" | "5684918" | "5710591" | "5771065" | "5778053" | "6339842" | "6529742" | "6859526" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758" | "9432618").PN.	US-PGPUB; USPAT	OR	ON	2018/01/30 12:27
S116	167926	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431.4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:13
S117	43033	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:13
S118	26	(US-20070070188-$ or US-20090174762-$ or US-20090251526-$ or US-20070094691-$ or US-20010041053-$ or US-20040128700-$ or US-20130127977-$ or US-20030041333-$ or US-20150334352-$ or US-20100073455-$ or US-20070261091-$ or US-20080309759-$ or US-20050250531-$).did. or (US-8363087-$ or US-8013938-$ or US-5684918-$ or US-9432618-$ or US-9124758-$ or US-5710591-$ or US-5467388-$ or US-5771065-$ or US-6859526-$ or US-5778053-$).did. or (JP-08289280-$).did. or (US-20100073455-$ or US-20070070188-$).did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2018/01/31 14:14
S119	45	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20050250531" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20070261091" | "20080134278" | "20080172693" | "20080212949" | "20080309759" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20100073455" | "20130033561" | "20130127977" | "20150334352" | "5467388" | "5526037" | "5528285" | "5610653" | "5684918" | "5710591" | "5771065" | "5778053" | "6339842" | "6529742" | "6859526" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758" | "9432618").PN.	US-PGPUB; USPAT	OR	ON	2018/01/31 14:15
S120	23000	(S116 S117 S118 S119) and ((TV television settop (set near top)) same (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:18
S121	18912	S120 and ((TV television settop (set near top)) with (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:19
S122	15097	S120 and ((television settop (set near top)) with (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:19
S123	1007	S120 and ((television settop (set near top)) with (videophone (video near (phone telephone))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:20
S124	90	S123 and (echo$3 with (cancel$3 cancellation cancelation))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:24
S125	50	S124 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:24
S126	465014	((TV television settop (set near top)) same (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2018/01/31 14:24

			EPO; JPO; DERWENT; IBM_TDB			
S127	23270	S126 and ((TV television settop (set near top)) with (videophone (video near (phone telephone))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:25
S128	206	S127 and (echo$3 with (cancel$3 cancellation cancelation))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:26
S129	131	S128 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:26
S130	131	(S125 S129)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:26
S132	2	S130 and (stop$3 near4 camera)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:28
S133	2	S130 and (paus$3 with display$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:34
S134	6	"9723268".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/01 10:26

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S48	40707	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152.155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT	OR	ON	2015/04/21 12:55
S49	26946	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.ccls.	US-PGPUB; USPAT	OR	ON	2015/04/21 12:55
S50	0	(S48 S49) and (interfac$3 and video and audio and network and display$3 and (speaker loudspeaker)and (videophone communicat$3) and (inbound incoming call) and (middle during) and (stop finish$3 complet$3 done terminat$3) and (stop$4 halt$3) and (instruction command) and camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:07
S51	3	(S48 S49) and (interfac$3 and video and audio and network and display$3 and (speaker loudspeaker)and (videophone communicat$3) and (inbound incoming call) and (middle during) and (stop$4 finish$3 complet$3 done terminat$3) and camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:08
S52	0	(S48 S49) and (video same audio same network same display$3 same (speaker loudspeaker) same (videophone communicat$3) same (inbound incoming call) same (middle during) same (stop$4 finish$3 complet$3 done terminat$3) same (instruction command) same camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:17
S53	0	S51 and (interfac$3 same processor same video same audio same network same display$3 same (speaker loudspeaker) same (videophone communicat$3) same (inbound incoming call) same (middle during) same (stop$4 finish$3 complet$3 done terminat$3) same camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:17
S54	0	(S48 S49) and (video same audio same network same display$3 same (speaker loudspeaker) same (videophone communicat$3) same (inbound incoming call) same (stop$4 finish$3 complet$3 done terminat$3) same (instruction command) same camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:18
S55	0	(S48 S49) and (video same audio same network same display$3 same (speaker loudspeaker) same (inbound incoming call) same (stop$4 finish$3 complet$3 done terminat$3) same (instruction command) same camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:18
S56	3	(video same audio same network same display$3 same (speaker loudspeaker) same (videophone communicat$3) same (inbound incoming call) same (middle during) same (stop$4 finish$3 complet$3 done terminat$3) same (instruction command) same camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:19
S57	0	S56 and (network same (video near8 display$3) same (audio near8 (speaker loudspeaker)) same (videophone communicat$3) same (inbound incoming call) same (middle during) same (stop$4 finish$3 complet$3 done terminat$3) same (instruction command) same camera).dlm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:20
S58	0	(network same (video near8 display$3) same (audio near8 (speaker loudspeaker)) same (videophone communicat$3) same (inbound incoming call) same (middle during) same (stop$4 finish$3 complet$3 done	US-PGPUB;	OR	ON	2015/04/21

		terminat$3) same (instruction command) same camera).clm.	PGPUB; USPAT			13:21
S59	0	(network same (video near8 display$3) same (audio near8 (speaker loudspeaker)) same (inbound incoming call) same (stop$4 finish$3 complet$3 done terminat$3) same (instruction command) same camera).clm.	US-PGPUB; USPAT	OR	ON	2015/04/21 13:22
S85	52649	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT	OR	ON	2017/03/22 13:56
S86	28324	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.ccls.	US-PGPUB; USPAT	OR	ON	2017/03/22 13:56
S87	1	(S85 "L2") and (video and network and content and server and encod$3 and camera and decod$3 and display$3 and (incoming call inbound) and videophone and (middle during) and (stop finish$3 complet$3 done terminat$3) and (suspen$4$4 halt$3) and (instruction command)).clm.	US-PGPUB; USPAT	OR	ON	2017/03/22 14:05
S88	1	(video and network and content and server and encod$3 and camera and decod$3 and display$3 and (incoming call inbound) and videophone and (middle during) and (stop finish$3 complet$3 done terminat$3) and (suspen$4$4 halt$3) and (instruction command)).clm.	US-PGPUB; USPAT	OR	ON	2017/03/22 14:06
S135	24951	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	USPAT	OR	ON	2018/05/29 16:10
S136	16312	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.ccls.	USPAT	OR	ON	2018/05/29 16:11
S137	1	(S135 S136) and (video and network and content and server and camera and display$3 and (incoming call inbound) and (notice notif$4 notification) and videophone and (stop finish$3 complet$3 done terminat$3) and (suspen$4$4 halt$3 paus$3)).clm.	US-PGPUB; USPAT	OR	ON	2018/05/29 16:38
S138	3	(video and network and content and server and camera and display$3 and (incoming call inbound) and (notice notif$4 notification) and videophone and (stop finish$3 complet$3 done terminat$3) and (suspen$4$4 halt$3 paus$3)).clm.	US-PGPUB; USPAT	OR	ON	2018/05/29 16:38

5/29/2018 4:41:27 PM
C:\Users\knguyen23\Documents\EAST\Workspaces\15_837402_15_631298_CON_15_215839_CON_14_811048_CON_12_457257_CON_13_723312_01_30_2018.wsp

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15837402	IWABUCHI ET AL.
	Examiner	**Art Unit**
	KHAI N NGUYEN	2652

CPC								
Symbol							**Type**	**Version**
H04N		7	/	17318			F	2013-01-01
H04N		21	/	42203			I	2013-01-01
H04N		21	/	4223			I	2013-01-01
H04N		21	/	4788			I	2013-01-01
H04L		65	/	1063			I	2013-01-01
H04N		7	/	148			I	2013-01-01
H04N		7	/	147			I	2013-01-01
			/					
			/					
			/					
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CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	16	
/KHAI N NGUYEN/ Primary Examiner.Art Unit 2652	05/29/2018	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15837402	IWABUCHI ET AL.
	Examiner	**Art Unit**
	KHAI N NGUYEN	2652

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
348	14.04	H	0	4	N	7 / 14 (2006.01.01)						

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
348	14.01	14.07			

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	16	
/KHAI N NGUYEN/ Primary Examiner.Art Unit 2652	05/29/2018	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15837402	IWABUCHI ET AL.
	Examiner	**Art Unit**
	KHAI N NGUYEN	2652

☒ 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														
2	2														
3	3														
4	4														
5	5														
6	6														
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8	8														
9	9														
10	10														
11	11														
12	12														
13	13														
14	14														
15	15														
16	16														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 16	
/KHAI N NGUYEN/ Primary Examiner.Art Unit 2652 (Primary Examiner)	05/29/2018 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 2

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15837402	IWABUCHI ET AL.
	Examiner	**Art Unit**
	KHAI N NGUYEN	2652

CPC- SEARCHED		
Symbol	**Date**	**Examiner**
G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191	2/1/2018	KNN
H04N2007/145;H04N21/254,42203,4223,431,4788	2/1/2018	KNN
H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185	2/1/2018	KNN
Updated the above searches.	5/29/2018	KNN

CPC COMBINATION SETS - SEARCHED		
Symbol	**Date**	**Examiner**

US CLASSIFICATION SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
348	14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16	2/1/2018	KNN
379	265.03	2/1/2018	KNN
455	414.1,566	2/1/2018	KNN
704	270	2/1/2018	KNN
348;379;455;704	Updated the above searches.	5/29/2018	KNN

* 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**
East - US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2/1/2018	KNN
East - CPC and USPC searches.	2/1/2018	KNN
NPL search.	2/1/2018	KNN

	/KHAI N NGUYEN/ Primary Examiner.Art Unit 2652

SEARCH NOTES

Search Notes	Date	Examiner
G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191	2/1/2018	KNN
H04N2007/145;H04N21/254,42203,4223,431,4788	2/1/2018	KNN
H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185 (See search history)	2/1/2018	KNN
Updated East & CPC & USPC & NPL & Interference/Claim(s) searches.	5/29/2018	KNN

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
G01S5	0072	5/29/2018	KNN
H04M1	72572	5/29/2018	KNN
H04M2201	40	5/29/2018	KNN
H04M2250	52	5/29/2018	KNN
H04M3	4936,5191	5/29/2018	KNN
H04N2007	145	5/29/2018	KNN
H04N21	254,42203,4223,431,4788	5/29/2018	KNN
H04N5	272	5/29/2018	KNN
H04N7	14,141,142,144,147,148,15,152,155,157,17318	5/29/2018	KNN
H04W4	18,185	5/29/2018	KNN
348	14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16	5/29/2018	KNN
379	265.03	5/29/2018	KNN
455	414.1	5/29/2018	KNN
704	270	5/29/2018	KNN

	/KHAI N NGUYEN/ Primary Examiner.Art Unit 2652

Bibliographic Data

Application No: 15/837,402

Foreign Priority claimed: (•) Yes ( ) No

35 USC 119 (a-d) conditions met: [✓] Yes [ ] No [ ] Met After Allowance

Verified and Acknowledged: /Khai N. Nguyen/ Examiner's Signature [ ] Initials

Title: TELEVISION RECEIVER WITH A TV PHONE FUNCTION

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/11/2017	348	2652	ASA-9567-06
RULE			

APPLICANTS

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INVENTORS

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Setiawan BONDAN Yamato, JAPAN

Manabu SASAMOTO Yokohama, JAPAN

CONTINUING DATA

This application is a CON of 15631298 06/23/2017

15631298 is a CON of 15215839 07/21/2016 PAT 9723268

15215839 is a CON of 14811048 07/28/2015 PAT 9432618

14811048 is a CON of 13723312 12/21/2012 PAT 9124758

13723312 is a CON of 12457257 06/04/2009 PAT 8363087

FOREIGN APPLICATIONS

JAPAN 2008-246232 09/25/2008

IF REQUIRED, FOREIGN LICENSE GRANTED**

01/11/2018

STATE OR COUNTRY

JAPAN

ADDRESS

MATTINGLY & MALUR, PC

1800 DIAGONAL ROAD

SUITE 210

ALEXANDRIA, VA 22314
UNITED STATES

FILING FEE RECEIVED

$6,160

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15837402	IWABUCHI ET AL.
	Examiner	**Art Unit**
	KHAI N NGUYEN	2652

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

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

CLAIM		DATE								
Final	Original	02/01/2018	05/29/2018							
1	1	✓	=							
2	2	✓	=							
3	3	✓	=							
4	4	✓	=							
5	5	✓	=							
6	6	✓	=							
7	7	✓	=							
8	8	✓	=							
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10	10	✓	=							
11	11	✓	=							
12	12	✓	=							
13	13	✓	=							
14	14	✓	=							
15	15	✓	=							
16	16	✓	=							

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	15837402
Filing Date	11-Dec-2017
First Named Inventor	Kazunori IWABUCHI
Attorney Docket Number	ASA-9567-06
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION

☒ 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
MAXELL, LTD.	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)

9723268

9432618

9124758

8363087

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 30293

( ) 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	/John R. Mattingly/
Name	John R. Mattingly

*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:	15837402
Filing Date:	11-Dec-2017
Title of Invention:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Filer:	John Roberts Mattingly
Attorney Docket Number:	ASA-9567-06

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.: 15837402

Filing Date: 11-Dec-2017

Applicant/Patent under Reexamination: IWABUCHI

Electronic Terminal Disclaimer filed on April 25, 2018

☒ 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:	32436299
Application Number:	15837402
International Application Number:	
Confirmation Number:	6521
Title of Invention:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Customer Number:	24956
Filer:	John Roberts Mattingly
Filer Authorized By:	
Attorney Docket Number:	ASA-9567-06
Receipt Date:	25-APR-2018
Filing Date:	11-DEC-2017
Time Stamp:	14:54:03
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	042618INTEFSW14540100
Deposit Account	501417
Authorized User	John Mattingly

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

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	35057 1b52856ecdf413c35f4016556c85a4e4b3726f39	no	3
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30663 1cb0908a9f06bd452732b8da86f4f19679a46972	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	65720		

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : MAXELL, LTD.

Confirmation No.: 6521

Serial No. : 15/837,402

Filed : December 11, 2017

For : TELEVISION RECEIVER WITH A TV PHONE FUNCTION

Group : 2652

Examiner : Khai N. NGUYEN

Docket No. : ASA-9567-06

Customer No.: 24956

AMENDMENT

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

April 25, 2018

Sir:

In response to the Office Action mailed February 6, 2018, please amend the above-identified patent application as follows.

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 10 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:

a network interface configured to receive first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface and second digital information from the another communication apparatus;

a camera configured to generate video information which is included in third digital information;

a display configured to display at least the first and the second digital information; and

a processor;

wherein when the processor receives an inbound videophone call notice while displaying the first digital information on the display, the processor pauses the displaying of the first digital information and renders the camera operative;

wherein the processor outputs the third digital information to the another communication apparatus and displays the second digital information of the

videophone call on the display; and

wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and stops the camera.

2. (Original) The communication apparatus according to claim 1,

wherein after the videophone call is finished, the processor restarts the displaying of the first digital information.

3. (Original) The communication apparatus according to claim 2, further comprising a microphone configured to generate audio information which is included in the third digital information.

4. (Original) The communication apparatus according to claim 3,

wherein when the processor receives the inbound videophone call notice while displaying the first digital information on the display, the processor switches a function of processing video information of the first digital information to a function of processing video information of the second digital information of the videophone call.

5. (Original) The communication apparatus according to claim 4,

wherein when the processor receives an input for making an outbound videophone call to the another communication apparatus, the processor renders the

camera and microphone operative and displays information indicating the outbound videophone call on the display calling message.

6. (Original) The communication apparatus according to claim 5, further comprising an echo canceller which cancels an audio signal of the first digital information from an audio signal that is output from the microphone.

7. (Original) The communication apparatus according to claim 6,

wherein the processor processes the first digital information with an HTML browser.

8. (Original) A method for transmitting and receiving digital information for a communication apparatus,

wherein the communication apparatus comprises a camera, a network interface, a display and a processor; and

wherein the method is executed by the processor,

the method comprising the steps of:

displaying first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface;

upon receiving an inbound videophone call notice while playing the first digital information,

pausing the displaying of the first digital information;

rendering the camera operative;

receiving second digital information from the another communication apparatus via the network interface;

generating video information which is included in third digital information by the camera;

displaying the second digital information on the display; and

outputting the third digital information to an another communication apparatus;

upon receiving an input for stopping the videophone call,

stopping output of the third digital information; and

stopping the camera.

9. (Original) The method according to claim 8, further comprising the step of:

restarting the displaying of the first digital information after the videophone call is finished.

10. (Original) The method according to claim 9,

wherein the communication apparatus further comprises a microphone, and

the method further comprising the step of:

generating audio information which is included in the third digital information by the microphone.

11. (Original) The method according to claim 10, further comprising the step of:

upon receiving the inbound videophone call notice while displaying the first digital information,

switching a function of processing video information of the first digital information to a function of processing video information of the second digital information of the videophone call.

12. (Original) The method according to claim 11, further comprising the steps of:

upon receiving an input for making an outbound videophone call to the another communication apparatus,

rendering the camera and microphone operative; and

displaying information indicating the outbound videophone call on the display at the same time.

13. (Original) The method according to claim 12,

wherein the communication apparatus further comprising an echo canceller,

the method further comprising the step of:

cancelling an audio signal of the first digital information form an audio signal

that is output from the microphone by the echo canceller.

14. (Currently amended) The method according to claim 13, further comprising the step of:

processing the first digital information with an HTML (Hypertext Markup Language) browser.

15. (Currently amended) A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:

a network interface configured to receive first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface and second digital information from the another communication apparatus;

a camera configured to generate video information which is included in a third digital information;

a display configured to display at least the first and the second digital information; and

a processor;

wherein when the processor receives an inbound videophone call notice while displaying the first digital information on the display, the processor renders the camera operative;

wherein the processor outputs the third digital information to the another communication apparatus, displays the first digital information on the display and displays the second digital information of the videophone call on the display, simultaneously; and

wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and stops the camera.

16. (Currently amended) A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:

a network interface configured to receive first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface and second digital information from the another communication apparatus;

a camera configured to generate video information which is included in third digital information;

a microphone configured to generate audio information which is included in the third digital information;

a display configured to display at least the first and the second digital information; and

a processor;

wherein when the processor receives an inbound videophone call notice while storing a video signal from the camera and storing an audio signal from the microphone, the processor pauses the storing of the video signal and the audio signal ~~the image pickup signal~~ and renders the camera operative;

wherein the processor outputs the third digital information to the another communication apparatus and displays the second digital information of the videophone call on the display; and

wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and restarts to store the video signal and the audio signal.

REMARKS

Claims 1-16 are pending in this application. Claims 1, 14, 15 and 16 have been amended. No new matter has been added.

Claim for Priority

Applicants appreciate the Examiner's acknowledgement of the claim for foreign priority and the safe receipt of the certified priority document.

Drawings

Applicant respectfully requests that the Examiner officially acknowledge the drawings filed on December 11, 2017.

Information Disclosure Statement

Applicants appreciate the Examiner's consideration of the references submitted in the Information Disclosure Statement filed December 11, 2017.

Rejections Under 35 U.S.C. §112

The Examiner has rejected claims 1-7 and 14-16 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.

It is submitted that the amendments to claims 1, 14 and 15 overcome the rejection under 35 U.S.C. §112. Claim 16 has been similarly amended to claim 15 and also to overcome the rejection under 35 U.S.C. §112.

Double Patenting Rejections

Claims 1-2 and 8-9 stand rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 9,723,268, as being unpatentable over claims 1-2 and 5-6 of U.S. Patent No. 9,432,618, and as being unpatentable over claim 1 of U.S. Patent No. 9,124,758. Claims 1-3, 8 and 15 stand rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-3 and 8 of U.S. Patent No. 8,363,087. A Terminal Disclaimer is being submitted with this Reply to overcome the rejection, without admitting to its propriety.

Allowable Subject Matter

Applicant's acknowledge that the Examiner has indicated that claims 1-16 would be allowable if a timely filed terminal disclaimer to overcome the rejection based on a nonstatutory double patenting and if rewritten or amended to overcome the rejection under 35 U.S.C. § 112.

Conclusion

In view of the foregoing amendments and remarks, Applicants request reconsideration of the rejection and allowance of the claims.

The Commissioner is authorized to charge any shortage in the fees due, or credit any overpayment, to Deposit Account No. 50-1417 (referencing Attorney Docket No. ASA-9567-06).

Respectfully submitted,

MATTINGLY & MALUR, PC

/John R. Mattingly/
John R. Mattingly
Registration No. 30,293
703-684-1120

Electronic Acknowledgement Receipt

EFS ID:	32436229
Application Number:	15837402
International Application Number:	
Confirmation Number:	6521
Title of Invention:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Customer Number:	24956
Filer:	John Roberts Mattingly
Filer Authorized By:	
Attorney Docket Number:	ASA-9567-06
Receipt Date:	25-APR-2018
Filing Date:	11-DEC-2017
Time Stamp:	14:55:52
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		9567-06-AMD01.pdf	81593 b51df7abc40e2a333048fe98427c2254702a0b39	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	12
Warnings:			
Information:			
	Total Files Size (in bytes):	81593	

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.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/837,402	12/11/2017	Kazunori IWABUCHI	ASA-9567-06

CONFIRMATION NO. 6521

24956
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

PUBLICATION NOTICE

Title:TELEVISION RECEIVER WITH A TV PHONE FUNCTION

Publication No.US-2018-0109761-A1
Publication Date:04/19/2018

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/.

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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 https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/837,402	12/11/2017	Kazunori IWABUCHI	ASA-9567-06	6521

24956 7590 02/06/2018

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EXAMINER
NGUYEN, KHAI N

ART UNIT	PAPER NUMBER
2652	

NOTIFICATION DATE	DELIVERY MODE
02/06/2018	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):

ptomail@mmiplaw.com

Office Action Summary	Application No. 15/837,402	Applicant(s) IWABUCHI ET AL.	
	Examiner KHAI N. NGUYEN	Art Unit 2652	AIA (First Inventor to File) Status No

-- 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 *12/11/2017*.

☐ 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) *1-16* 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) *1-16* 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. 13/723,312.

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: _____.

The present application is being examined under the pre-AIA first to invent provisions.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 12/11/2017 was filed on the filing date of the instant application on 12/11/2017. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

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.

1. Claims 1-7 and 14-16 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.

■ Claims 1 and 15 recite the limitations "**digital information**" in line 2, and "**digital information**" in line 10 of the claims. And thus, it is *unclear* **whether** "digital information" is the same as "digital information" **or** not.

Appropriate correction is required.

■ Claim 14 recites an acronym HTML that need to be spelled out in the first claim that used the acronym to avoid any possible confusion now and in the future for the acronym may refer to different item or object. Appropriate correction is required.

■ Claim 16 recites the limitation "**the** *image pickup signal*" in line 17 of the claim. There is insufficient antecedent basis for this limitation in the claim. And thus, it is *unclear* **whether** "the image pickup signal" is the same as "a/the video signal" **or** not.

Appropriate correction is required.

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 claims at issue 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); and *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 a nonstatutory double patenting ground provided the reference application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO internet Web site contains terminal disclaimer forms which may be used. Please visit http://www.uspto.gov/forms/. The filing date of the application will determine what form 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 http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

2. Claims 1-2 and 8-9 are rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 9,723,268, as being unpatentable over claims 1-2 and 5-6 of U.S. Patent No. 9,432,618, and as being unpatentable over claim 1 of U.S. Patent No. 9,124,758. Although the claims at issue are not identical, they are not patentably distinct from each other because:

■ Claim 1 of the instant application recites similar and/or word-for-word limitations as in claim 1 of the patent 9,723,268, and omitted detail features such as “an encoder which generates fourth digital information including encoded fourth video

information …", "displays decoded first video information, decoded second video information or decoded third video information, wherein the first video information is decoded by the first decoder, and the second video information or the third video information is decoded by the second decoder", etc. Therefore, claim 1 of the instant application (i.e., omission of an element and its function) is broader than claim 1 of the patent 9,723,268.

■ Claims 1 and 8 of the instant application recites similar and/or word-for-word limitations as in claims 1 and 5 of the patent 9,432,618, and omitted detail features such as "an encoder configured to generate … encoding a video signal generated by a camera", "a user input device … accept an input from a user …", "communicates with the content server for pausing a transmission …", etc. Therefore, claims 1 and 8 of the instant application (i.e., omission of an element and its function) is broader than claims 1 and 5 of the patent 9,432,618.

Dependent claims 2 and 9 recite similar and/or word-for-word limitations as in claims 2 and 6 of the patent 9,432,618.

■ Claim 1 of the instant application recites similar and/or word-for-word limitations as in claim 1 of the patent 9,124,758, and omitted detail features such as "a second video information and a second audio information", "transmit … including a third video information and a third audio information … via the network", "output the first audio information and the second audio information through a speaker", etc. Therefore, claim 1 of the instant application (i.e., omission of an element and its function) is broader than claim 1 of the patent 9,124,758.

When claims in the pending application are broader than the ones in the patent, the broad claims in the pending application are rejected under obviousness type double patenting over previously patented narrow claims, In re Van Ornum and Stang, 214 USPQ 761. Also, omission of an element and its function is an obvious expedient if the remaining elements perform the same functions as before, In re KARLSON (CCPA) 136 USPQQ 184 (1963).

3. Claims 1-3, 8, and 15 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-3 and 8 of U.S. Patent No. 8,363,087 hereinafter "the patent claims '087" in view of Allen et al. (US-PGPUB 2003/0041333 A1 hereinafter "Allen").

■ Here, claims 1-3, 8, and 15 of the instant application recite similar and/or at least word-for-word limitations as in claims 1-3 and 8 of the patent, and omitted detail features such as "a television receiver with video telephone functions …", "a decoder …", "an encoder …", "a videophone communicator", "an output unit", and "a controller", etc., and added obvious features such as "a network interface" and "a content server" in the instant application; although the patent claims '087 recite "receiving a digital broadcast program signal …" (see the patent claims '087 – claim 1) which can be read on "a network interface" and "a content server", these obvious detail features are old and well known in the art (i.e., a network interface, and a content server).

Allen et al. teach a digital information receiving and transmitting apparatus comprises a network interface and a content server in FIG. 1, FIG. 2 and FIG. 3. Allen et al. further teach what is also needed is a system and method for automatically answering video calls in which a television program or other broadcast entertainment program is automatically buffered to allow a user to subsequently view the program in its entirety. Therefore, it would have been obvious to modify the patent claims '087 with a network interface and a content server to enhance a television receiver with video telephone functions, and one having ordinary skill in the art would have been motivated to make such a modification to answer video calls in which a television program or other broadcast entertainment program is automatically buffered to allow a user to subsequently view the program in its entirety, as per the teachings of Allen et al.

In addition, claims 1, 8, and 15 of the instant application appears to be broader in scope than claims 1, 2, and 8 of the patent 8,363,087. As shown above, the claims of the pending application have the similar/word-for-word limitations as the patent claims '087; and omitted many detail features and added a mere field-of-use/extra insignificant solution/features such as "a network interface" and "a content server". Therefore, the claims of the instant application are broader than the patent claims '087.

When claims in the pending application are broader than the ones in the patent, the broad claims in the pending application are rejected under obviousness type double patenting over previously patented narrow claims, In re Van Ornum and Stang, 214 USPQ 761. Also, omission of an element and its function is an obvious expedient if

the remaining elements perform the same functions as before, In re KARLSON (CCPA) 136 USPQQ 184 (1963).

Note: 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.

Allowable Subject Matter

Claims 1-16 would be allowable if a timely filed terminal disclaimer (A web-based eTerminal Disclaimer is recommended) in compliance with 37 CFR 1.321(b), 37 CFR 1.321(c) or 1.321(d) to overcome the rejection based on a nonstatutory double patenting ground, and if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), 2nd paragraph, set forth in this Office action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is listed in attached PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI N. NGUYEN whose telephone number is

(571)270-3141. The examiner can normally be reached on Monday-Thursday 6:30AM - 5PM.

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, Ahmad F. Matar can be reached on (571) 272-7488. 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.

/KHAI N NGUYEN/
Primary Examiner, Art Unit 2652

02/01/2018

Notice of References Cited	Application/Control No. 15/837,402	Applicant(s)/Patent Under Reexamination IWABUCHI ET AL.	
	Examiner KHAI N. NGUYEN	Art Unit 2652	Page 1 of 3

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-5,467,388 A	11-1995	Redd, Jr.; James C.	H04M1/663	379/196
*	B	US-5,473,366 A	12-1995	Imaeda; Eiji	H04M1/6505	348/14.01
*	C	US-5,526,037 A	06-1996	Cortjens; Leo M.	H04N5/23203	348/14.04
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*	E	US-5,710,591 A	01-1998	Bruno; Richard F.	H04M3/42221	348/14.06
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*	G	US-5,778,053 A	07-1998	Skarbo; Rune A.	H04M11/10	348/14.06
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Ｈ０４Ｎ　7/173			Ｈ０４Ｎ　7/173		
5/00			5/00	Ｂ	

審査請求　未請求　請求項の数４　ＯＬ　（全　８　頁）

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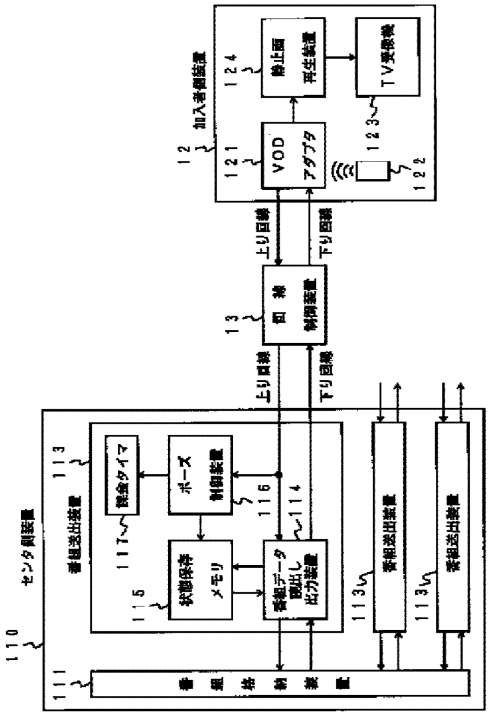
(54)【発明の名称】　ビデオオンデマンドシステムおよびそのセンタ側装置

(57)【要約】
【目的】　加入者側のポーズ操作に応じて番組の提供を一時中断した場合には、その間の回線使用料を加入者側に負担させることができるようにし、これによりセンタ側が被る不利益の低減を図る。
【構成】　センタ側装置１１０の各番組送出装置１３０に課金タイマ１１７を設け、番組送出中に加入者側装置１２においてポーズ操作が行なわれた場合に、センタ側装置１１０において番組送出動作を一時停止するとともに、この一時停止期間中における回線使用量を上記課金タイマ１１７で課金するようにしたものである。



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【特許請求の範囲】
【請求項１】　必要時にセンタ側装置と加入者側装置とを回線を介して接続し、加入者側装置からセンタ側装置に対して放送番組のリクエストを行なうことで、センタ側装置から加入者側装置へ前記リクエストに対応する放送番組を提供するビデオオンデマンドシステムにおいて、
前記加入者側装置は、
前記放送番組の提供中にこの番組の提供の一時中断およびその解除を指示するためのポーズ信号を前記回線を介してセンタ側装置へ送出するポーズ信号送出手段を備え、
かつ前記センタ側装置は、
前記加入者側装置からのポーズ信号を受信し、このポーズ信号の指示に応じて前記回線の接続を保持したまま放送番組の提供を一時中断するポーズ制御手段と、
このポーズ制御手段による放送番組の提供中断期間中に、前記接続保持中の回線に対する課金処理を行なう課金手段とを備えたことを特徴とするビデオオンデマンドシステム。
【請求項２】　課金手段は、前記放送番組の提供中断期間を計時するためのタイマを備え、このタイマによる計時時間を基に課金処理を行なうことを特徴とする請求項１記載のビデオオンデマンドシステム。
【請求項３】　課金手段は、加入者側装置から放送番組中断期間の計時時間情報を受信し、この計時時間情報を基に課金処理を行なうことを特徴とする請求項１記載のビデオオンデマンドシステム。
【請求項４】　必要時にセンタ側装置と加入者側装置とを回線を介して接続し、加入者側装置からセンタ側装置に対して放送番組のリクエストを行なうことで、センタ側装置から加入者側装置へ前記リクエストに対応する放送番組を提供するとともに、この放送番組の提供中にこの番組の提供の一時中断およびその解除を指示するポーズ信号を加入者側装置からセンタ側装置へ送出することで、前記放送番組の提供を一時中断する機能を備えたビデオオンデマンドシステムで使用される前記センタ側装置において、
前記放送番組の提供中断期間中に、接続保持中の回線に対する課金処理を行なう課金手段を備えたことを特徴とするセンタ側装置。
【発明の詳細な説明】
【０００１】
【産業上の利用分野】本発明は、加入者がセンタに対して放送番組のリクエストを行なうことで、センタから加入者へリクエストに応じた番組を個別に提供するビデオオンデマンドシステムに係わり、特に加入者の要求に応じて放送番組の提供を一時中断するポーズ機能を備えたシステムに関する。
【０００２】

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【従来の技術】近時、ＣＡＴＶの普及に伴い、インタラクティブ（双方向）テレビジョン放送が注目されつつある。この放送の一形態として、加入者がセンタに対して放送番組のリクエストを行なうことで、センタから加入者へリクエストのあった番組を個別に提供するシステムが構築されている。一般にこの放送システムはビデオオンデマンド（以下、ＶＯＤと記す）システムと呼ばれている。
【０００３】図３は一般的なＶＯＤシステムの構成を示すもので、１１はセンタ側装置、１２は加入者側装置であり、両装置１１，１２は回線制御装置１３によって管理される公衆回線網等の回線を通じて接続される。
【０００４】センタ側装置１１は、番組格納装置１１１と複数（図では３個）の番組送出装置１１２を備える。番組格納装置１１１は、ハードディスク等の記録媒体にディジタルテレビジョン信号による提供番組の情報データ（以下、番組データと称する）を格納しておくものである。番組送出装置１１２はそれぞれ回線接続要求のあった加入者側装置１２と接続され、当該加入者側装置１２からの番組要求信号に応じて、番組格納装置１１１から対応する番組データを読出して加入者側装置１２に送出する機能を有する。
【０００５】一方、加入者側装置１２は、回線接続要求信号、番組要求信号等の送信、メニュー、番組等のデータ受信を行なうＶＯＤアダプタ１２１と、このＶＯＤアダプタ１２１を遠隔操作するためのリモートコントローラ（以下、リモコンと称する）１２２を備えている。
【０００６】ＶＯＤアダプタ１２１は、ＴＶ（テレビジョン）受像機１２３に接続されており、リモコン１２２の選択操作を判別して、回線制御装置１３への回線接続要求信号の送出、およびセンタ側装置１１への番組要求信号の送出を行なうと共に、センタ側装置１１からのメニューデータや番組データ等を受信して、この受信したメニューや番組に対応するテレビジョン信号をＴＶ受像機１２３に供給するものである。
【０００７】この加入者側装置１２には、予め特定のアドレス（以下、加入者アドレスと称する）が付与されており、センタ側装置はこの加入者アドレスによりデータ送信元を識別してデータ送信先を特定するようにしている。
【０００８】尚、以下の説明ではセンタ側装置から加入者側装置への流れを下り回線、加入者側からセンタ側への流れを上り回線として述べる。上記構成において、一連の処理動作を以下に説明する。
【０００９】先ず、視聴者（加入者）がリモコン１２２より視聴要求操作を行なうと、ＶＯＤアダプタ１２１はこれを判別して、センタ側装置１１を指定する送り先アドレスと自己の加入者アドレスとを付加した回線接続要求信号を上り回線に送出する。回線制御装置１３は、送り先アドレスに基づいてその加入者側装置１２をセンタ

側装置１１に接続する。これによって、回線接続要求信号がセンタ側装置１１に送られる。

【００１０】一方、センタ側装置１１は、回線接続要求信号から加入者アドレスを判別して、番組送出装置１１２の一つを要求のあった加入者側装置１２に割り当て、これによりＶＯＤアダプタ１２１との回線を接続してその通信リンクを確立したのち、要求元の加入者アドレスを付加した番組データを下り回線に送出する。

【００１１】ここで、番組データにはメニューチャンネルが含まれており、このメニューチャンネルには提供可能な番組や選択操作方法等を含むメニューデータが常時乗せられている。ＶＯＤアダプタ１２１は、先ずこのメニューチャンネルのデータを受信してＴＶ受像機１２３にメニュー画面を表示する。

【００１２】視聴者がこのメニュー画面を見て、リモコン１２２により番組の選択操作を行なうと、ＶＯＤアダプタ１２１はこれを判別して番組要求信号を上り回線に送出する。この信号を受けた番組送出装置１１２は、該当する番組データを番組格納装置１１１から読出し、チャンネルを指定して下り回線に送出する。ＶＯＤアダプタ１２１は指定されたチャンネルの番組データを受信し、ＴＶ受像機１２３によりその番組を再生する。これによって、視聴者は選択した番組を視聴することができる。

【００１３】ところで、上記ＶＯＤシステムは、加入者へのサービス機能の一つとしてポーズ機能を備えている。ポーズ機能とは、例えば視聴者がリモコン１２２のポーズボタンを押下したとき、ＶＯＤアダプタ１２１にポーズ信号を送信させ、番組送出装置１１２にその時点の番組データを１フレーム分繰り返し送出させることで、ＴＶ受像機１２３に静止画を表示させる機能である。このポーズ機能を利用することで、例えば番組視聴中に電話機に対する着信が発生して通話を行なう場合に、この通話中に番組の放送を一時中断させることが可能となり、これにより番組のシーンを見逃す心配がなくなる。

【００１４】

【発明が解決しようとする課題】ところが、このようなポーズ機能を備えた従来のビデオオンデマンドシステムには、次のような改善すべき課題があった。すなわち、加入者がポーズ機能を使用して番組の放送を一時中断させた場合、この中断期間では先に述べたように回線は接続されたままの状態を保持する。このため、加入者の都合で放送が一時中断されているにも拘らず、センタ側は上記ポーズによる放送中断期間中の回線使用料を負担しなければならないことになり、これにより不利益を被る。

【００１５】本発明は上記事情に着目してなされたもので、その目的とするところは、加入者側のポーズ操作に応じて番組の提供を一時中断した場合には、その間の回線使用料を加入者側に負担させることができるようにし、これによりセンタ側が被る不利益の低減を図ったビデオオンデマンドシステムおよびそのセンタ側装置を提供することにある。

【００１６】

【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、必要時にセンタ側装置と加入者側装置とを回線を介して接続し、加入者側装置からセンタ側装置に対して放送番組のリクエストを行なうことで、センタ側装置から加入者側装置へ上記リクエストに対応する放送番組を提供するビデオオンデマンドシステムにおいて、上記加入者側装置にポーズ信号送出手段を備え、この手段により上記放送番組の提供中にこの番組の提供の一時中断およびその解除を指示するためのポーズ信号を上記回線を介してセンタ側装置へ送出するようにし、かつ上記センタ側装置にはポーズ制御手段と課金手段とを備え、ポーズ制御手段において上記加入者側装置からのポーズ信号を受信して、このポーズ信号の指示に応じて上記回線の接続を保持したまま放送番組の提供を一時中断するようにし、さらにこのポーズ制御手段による放送番組の提供中断期間中に、上記課金手段により上記接続保持中の回線に対する課金処理を行なうようにしたものである。

【００１７】また本発明は、上記課金手段として、上記放送番組の提供中断期間をタイマにより計時し、このタイマによる計時時間を基に課金処理を行なうことや、加入者側装置から放送番組中断期間の計時時間情報を受信し、この計時時間情報を基に課金処理を行なうことをそれぞれ特徴としている。

【００１８】さらに本発明は、必要時にセンタ側装置と加入者側装置とを回線を介して接続し、加入者側装置からセンタ側装置に対して放送番組のリクエストを行なうことで、センタ側装置から加入者側装置へ上記リクエストに対応する放送番組を提供するとともに、この放送番組の提供中にこの番組の提供の一時中断およびその解除を指示するポーズ信号を加入者側装置からセンタ側装置へ送出することで、上記放送番組の提供を一時中断する機能を備えたビデオオンデマンドシステムで使用される上記センタ側装置において、課金手段を備え、この課金手段において、上記放送番組の提供中断期間中に、接続保持中の回線に対する課金処理を行なうようにしたものである。

【００１９】

【作用】この結果、本発明のビデオオンデマンドシステムおよびそのセンタ側装置によれば、加入者側装置からのポーズ要求に応じて放送番組の提供を一時中断すると、この中断期間における回線使用料が課金されることになる。したがって、加入者の都合により番組の提供を中断している期間の回線使用料を、番組の聴取料に加えて加入者に請求することが可能となり、これによりセン

タ側の負担を軽減することが可能となる。

【００２０】

【実施例】以下、図１および図２を参照してこの発明に係る実施例を詳細に説明する。図１は、本発明の一実施例に係わるＶＯＤシステムの構成を示すものである。なお、図１において前記図３と同一部分には同一符号を付して示し、ここでは異なる部分について説明する。

【００２１】先ず加入者側装置１２には、静止画表示用の画像メモリを有する静止画再生装置１２４が設けられる。また、リモコン１２２にはポーズのための操作ボタン（図示せず）が組み込まれる。ＶＯＤアダプタ１２１には、リモコン１２２からのポーズ操作を判別し、ポーズ開始／解除のためのポーズ信号を上り回線に送出する機能、静止画再生装置１２４にポーズがかかったときの静止画面を表示させる機能が組み込まれる。

【００２２】なおここでは、リモコン１２２に対するポーズ操作としては、ポーズ開始時にはポーズボタンを押下し、ポーズ解除時には再生ボタンを押下するものとして説明する。

【００２３】一方、センタ側装置１１０に用いられる番組送出装置１１２は、番組データ読出し出力装置１１４と、状態保存メモリ１１５と、ポーズ制御装置１１６と、課金タイマ１１７とを備えている。

【００２４】番組データ読出し出力装置１１４は、加入者側から要求のあった番組データを番組格納装置１１１から読出し、この番組データに要求元の加入者アドレスを付加して送出する機能を有する。状態保存メモリ１１５は、ポーズ制御装置１１６においてポーズ開始指示が検出された時点で番組データ読出し出力装置１１４から出力されている番組データ位置を記憶しておくものである。

【００２５】ポーズ制御装置１１６は、加入者側装置１２から送られてくるポーズ信号からポーズ開始指示およびポーズ解除指示を検出する。そして、ポーズ開始指示検出時には、状態保存メモリ１１５に番組データの位置を記憶させる。ポーズ解除検出時には、状態保存メモリ１１５に記憶されている番組データの位置から番組送出を再開させる。

【００２６】課金タイマ１１７は、上記ポーズ制御装置１１６でポーズ開始指示が検出された時点でポーズ期間の計時を開始してその計時時間に対応する回線使用料を課金し、また上記ポーズ制御装置１１６でポーズ終了指示が検出された時点で、上記ポーズ時間の計時を終了して課金動作を終了する。この課金タイマ１１７による課金データはその都度もしくは１通信ごとに図示しない管理・制御装置に転送され、この管理・制御装置において加入者に対する請求処理が行なわれる。

【００２７】次に、以上のように構成されたシステムの動作を説明する。番組再生中において、加入者側装置１２では、ＶＯＤアダプタ１２１によりポーズボタンの押下操作が監視されている。この状態でポーズボタンの押下を検出すると、ＶＯＤアダプタ１２１はポーズ開始指示を上り回線へ送出すると共に、静止画再生装置１２４にポーズ開始時の画面を画像メモリに記憶させ、静止画としてＴＶ受像機１２３に表示させる。

【００２８】続いて、再生ボタンの押下操作を検出すると、ＶＯＤアダプタ１２１はポーズ解除指示を上り回線へ送出すると共に、静止画再生装置１２４に静止画再生状態を解除させ、中断していた番組表示を再開させる。

【００２９】これに対しセンタ側装置１１０では、番組送出中にポーズ制御装置１１６においてポーズ開始指示の到来監視が行なわれている。この状態で、加入者側装置１２からポーズ開始指示が送られてくると、ポーズ制御装置１１６がこれを検出して、その時点における出力中の番組位置（例えば番組ファイル上の位置、タイムコード等）を状態保持メモリ１１５に記憶させ、かつ番組データ読出し出力装置１１４による番組読出し出力動作を停止させる。

【００３０】ところで、上記番組送出中に、課金タイマ１１７では課金タイマ監視動作が行なわれる。図２は、その動作手順および動作内容を示すフローチャートである。すなわち、ポーズ制御装置１１６でポーズ開始指示が検出されてその旨が通知されると、課金タイマ１１７はステップ２ａでこの通知を検出してステップ２ｂに移行し、このステップ２ｂにおいて一時停止時間の計時を開始してこの計時時間に応じた課金処理を行なう。そして、この課金処理を行ないながらステップ２ｃにおいて一時停止の終了監視を行なう。

【００３１】この状態で加入者側装置１２からポーズ解除指示が送られてくると、ポーズ制御装置１１６が番組読出し出力装置１１４に状態保持メモリ１１５の記憶位置から番組送出を再開させる。またそれと共にポーズ制御装置１１６は、ポーズ解除指示の検出通知を課金タイマ１１７に通知する。そうすると課金タイマ１１７は、ステップ２ｃでこの通知を検出して一時停止が終了したと判断し、ステップ２ｄに移行してここで一時停止時間の計時を停止して課金処理を終了する。なお、その課金データは、請求業務処理のために図示しない管理・制御装置に転送される。

【００３２】すなわち、本実施例のシステムでは、加入者によるポーズ操作があったとき、センタ側装置１１０においてポーズ期間中に番組の送出が一時停止されると共に、この一時停止期間に課金タイマ１１７により接続保持中の回線に対する課金処理が行なわれる。このため、ポーズ期間中の回線使用料を後に番組提供料と共に加入者に請求することが可能となり、これによりセンタ側の不合理な負担は軽減される。

【００３３】なお、本発明は上記実施例に限定されるものではない。例えば、上記実施例ではポーズ期間の計時をセンタ側装置１１０の課金タイマ１１７にて行なっ

た。しかし、ポーズ期間の計時を加入者側装置１２において行ない、その計時データを通信終了時などにおいてセンタ側装置１１０に転送して、センタ側装置１１０がこの計時データを基に課金処理を行うようにしてもよい。

【００３４】また、前記実施例では各番組送出装置１３０ごとに課金タイマを設けてポーズ期間中の課金処理を行なうようにしたが、各番組送出装置に対し１個もしくは番組送出装置の設置数よりも少ない数の課金タイマを設け、この少数の課金タイマにおいて上記各番組送出装置におけるポーズ期間の課金処理を統括して行なうようにしてもよい。

【００３５】このように構成すると、課金タイマの設置数を減らすことができる。なお、このようにした場合、課金タイマの設置数よりも多い番組送出装置において同時にポーズ処理が行なわれると課金処理を行なえない回線が発生することになるが、多くの回線で同時にポーズ状態が発生する確率は極めて低いので、実際の運用上では支障ないと考えられる。

【００３６】また、前記実施例ではポーズ期間中の全期間を課金対象時間とした場合について述べたが、ポーズ期間の一部をサービス期間とし、ポーズ期間が一定時間を超えた場合にその超えた時間に対してのみ課金を行なうようにしてもよい。

【００３７】さらに、ポーズ期間中にセンタ側装置から加入者側装置へ課金中である旨のメッセージ情報を転送し、このメッセージ情報を静止画像に重畳させてＴＶ受像機に表示させるようにしてもよい。また、上記メッセージ情報は加入者側装置において発生してＴＶ受像機に表示するようにしてもよい。

【００３８】また前記実施例では、センタ側装置１１０の機能負担を軽減するために、ポーズ期間中には加入者側装置１２において静止画像を生成してＴＶ受像機１２３に表示させるようにしたが、センタ側装置から静止画像データを加入者側装置に伝送して表示させるように構成してもよい。このようにすると、加入者側装置を安価にできる。またその際、センタ側装置から伝送する静止画像データを課金中である旨のメッセージ情報を含んだものにするとよい。

【００３９】さらに、前記実施例では、リモコン１２２で操作を行うものとして説明したが、この操作は本体スイッチでもよいことは勿論である。その他、センタ側装置および加入者側装置の構成や、課金手段における課金処理の手順および内容、回線の種類やその構成等についても、本発明の要旨を逸脱しない範囲で種々変形して実施できる。

【００４０】

【発明の効果】以上詳述したように本発明では、加入者側装置にポーズ信号送出手段を備え、この手段により上記放送番組の提供中にこの番組の提供の一時中断およびその解除を指示するためのポーズ信号を上記回線を介してセンタ側装置へ送出するようにし、かつ上記センタ側装置にはポーズ制御手段と課金手段とを備え、ポーズ制御手段において上記加入者側装置からのポーズ信号を受信して、このポーズ信号の指示に応じて上記回線の接続を保持したまま放送番組の提供を一時中断するとともに、このポーズ制御手段による放送番組の提供中断期間中に、上記課金手段により上記接続保持中の回線に対する課金処理を行なうようにしている。

【００４１】したがって本発明によれば、加入者側のポーズ操作に応じて番組の提供を一時中断した場合には、その間の回線使用料を加入者側に負担させることができるようになり、これによりセンタ側が被る不利益の低減を図ることができるビデオオンデマンドシステムおよびそのセンタ側装置を提供することができる。

【図面の簡単な説明】

【図１】本発明の一実施例に係るビデオオンデマンドシステムの構成を示すブロック図。

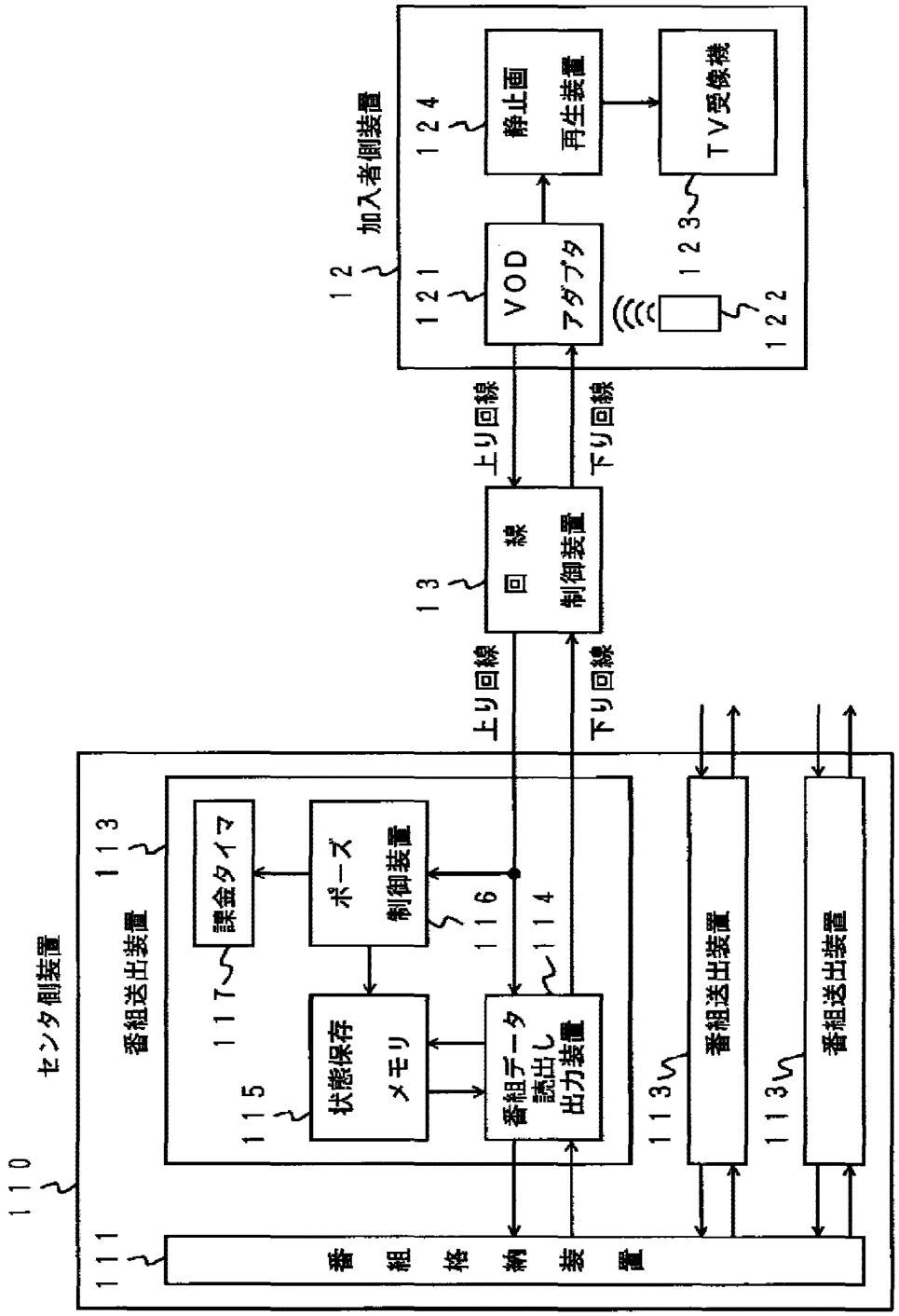
【図２】図１に示したシステムにおける課金処理動作を説明するためのフローチャート。

【図３】従来のビデオオンデマンドシステムの構成を示すブロック図。

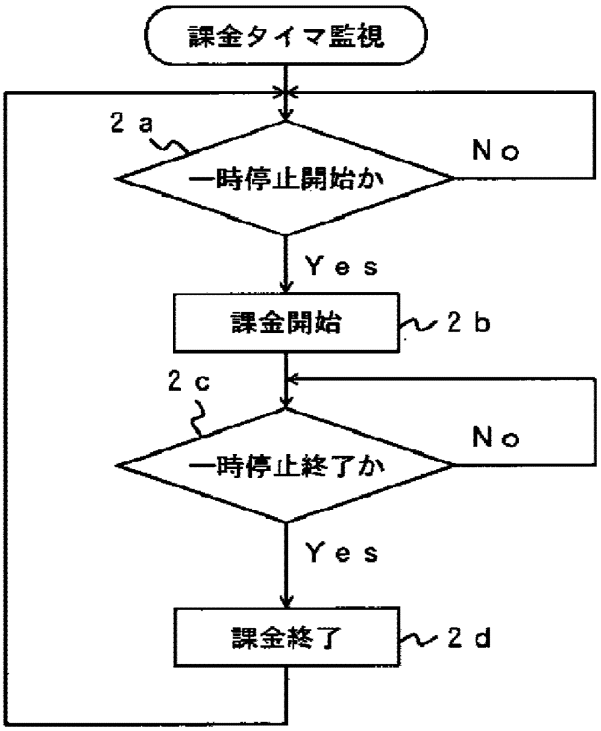
【符号の説明】

１１０…センタ側装置
１１１…番組格納装置
１１３…番組送出装置
１１４…番組データ読出し出力装置
１１５…状態保存メモリ
１１６…ポーズ制御装置
１１７…課金タイマ
１２…加入者側装置
１２１…ＶＯＤアダプタ
１２２…リモートコントローラ（リモコン）
１２３…ＴＶ受像機
１２４…静止画再生装置
１３…回線制御装置

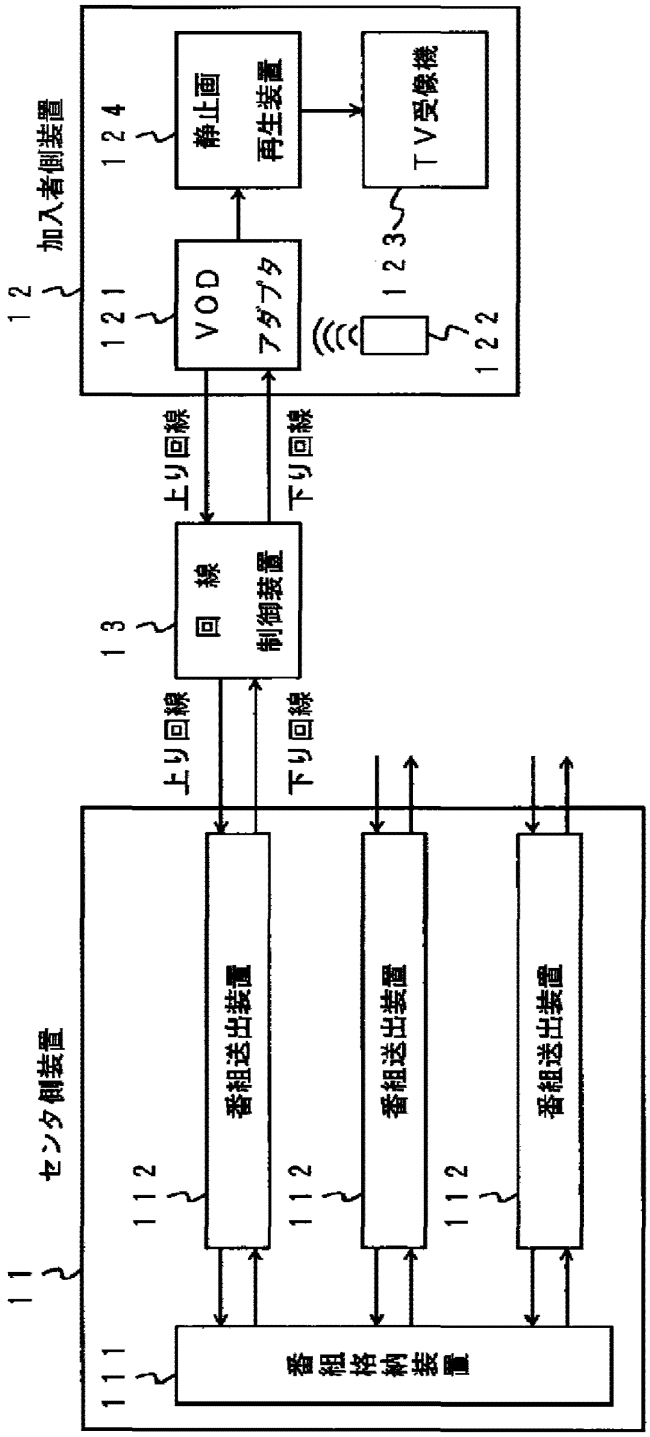
【図1】


センタ側装置
110
番組格納装置
111
番組送出装置
113
課金タイマ
117
ポーズ制御装置
116
状態保存メモリ
115
番組データ読出し出力装置
114
番組送出装置
113
番組送出装置
113
回線制御装置
13
上り回線
下り回線
上り回線
下り回線
加入者側装置
12
VOD アダプタ
121
122
123
静止画再生装置
124
TV受像機

【図２】



【図３】


加入者側装置
12
121
VOD
アダプタ
122
123
TV受像機
124
静止画
再生装置
上り回線
下り回線
13
回線
制御装置
上り回線
下り回線
センタ側装置
11
112
番組送出装置
112
番組送出装置
112
番組送出装置
111
番組格納装置

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	13/723312	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:46
S2	55922	(H04N21/254,42203,4223,431,4788;H04N7/141,142.17318).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:47
S3	2	"8363087".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:48
S4	1	"20100073455".pn. and (network near4 processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:53
S5	1	S1 and (network near4 processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 13:56
S6	0	S1 and (network near2 processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/09 15:13
S7	3	"20070070188".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 14:10
S8	8	("20090251526" "8013938" "20090174762").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:01
S9	3	"20070070188".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:05
S10	112945	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:13
S11	35096	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/12/15 16:13

			DERWENT; IBM_TDB			
S12	286	(S10 S11) and television and (((video near2 demand$3) content) near2 server) and (videophone (video near (telephone phone)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:16
S13	1350	television and (((video near2 demand$3) content) near2 server) and (videophone (video near (telephone phone)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:16
S14	124	S13 and (network near processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:17
S15	87	S14 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:18
S16	28	(video near2 (on-demand$3 demand$3)) and (paus$3 with ((video videophone) near2 call))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:25
S17	17	S16 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:25
S18	15	S17 and ((video content) near2 server) and (videophone (video near (telephone phone)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:30
S19	17	S17 and paus$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:33
S20	15	S18 and paus$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/15 16:33
S22	1	"20130127977".pn. and processor and network	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/17 12:51
S23	4	WO0203683	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/17 18:23
S27	1	(video on-demand) and center and (paus$3 near2 controller) and (charg$3 near2 time$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 12:53
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			EPO; JPO; DERWENT; IBM_TDB			
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S30	35152	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:28
S31	275	(S29 S30) and (camera with (stop$4 halt$3) with (device apparatus endpoint videophone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:30
S32	15	S31 and (camera with (stop$4 halt$3) with instruction with (device apparatus endpoint videophone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:30
S33	8	S32 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:31
S34	218	(camera with (stop$4 halt$3) with instruction with (device apparatus endpoint videophone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:32
S35	125	S34 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:32
S36	117	S35 not S33	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/18 22:33
S37	23	("2007070188" "8013938" "2014009559" "2014009558" "2014015916").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 10:59
S38	15	("20070070188" "8013938" "20140009559" "20140009558" "20140015916").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:01
S40	0	S38 and ((stop$4 halt$3) with camera)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:07
S41	117520	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:08
S42	37197	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/21 11:08

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S43	137	(S41 S42) and ((stop$4 halt$3) with (instruction command$3) with camera)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:10
S44	91	S43 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:10
S45	7	S44 and ((stop$4 halt$3) with (instruction command$3) with camera with (remote$3 farend (far near end)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 11:13
S46	37	(receiv$3 with (stop$4 halt$3) with (instruction command$3) with camera with (remote$3 farend (far near end)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 12:49
S47	23	S46 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/21 12:50
S60	2	14/811048	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:41
S61	6	12/457257	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:43
S62	0	15/215839	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:45
S63	81352	(H04N21/254,42203,4223,431,4788;H04N7/141,142,147,148,17318).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:49
S64	143723	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04N5/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:50
S65	40696	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/25 13:50
S66	33	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20080134278" | "20080172693" | "20080212949" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20130033561" | "5526037" | "5528285" | "5610653" | "5684918" | "6339842" | "6529742" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758").PN.	US-PGPUB; USPAT	OR	ON	2016/10/25 13:50
S67	14	("5710591" "5467388" "6859526" "5771065").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2016/10/26 10:32

			IBM_TDB			
S68	4	"5778053".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/26 10:33
S69	2	(S67 S68) and (encod$3 decod$3 codec) and display$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/26 10:35
S70	81404	(H04N21/254,42203,4223,431,4788;H04N7/141,142,147,148,17318).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:04
S71	143837	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:04
S72	33	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20080134278" | "20080172693" | "20080212949" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20130033561" | "5526037" | "5528285" | "5610653" | "5684918" | "6339842" | "6529742" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758").PN.	US-PGPUB; USPAT	OR	ON	2016/10/29 10:04
S73	87	(S70 S71 S72) and (video with camera with (predeterm$4 period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:04
S74	33	S73 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:05
S75	21	S74 and (video near2 (phone telephone terminal device))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:07
S76	2	S75 and (video with camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:08
S77	32	(video near2 (phone telephone terminal)) and (video with camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:11
S78	11	S77 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:11
S79	6	(videophone video-phone video-telephone) and (video with camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:17
S80	7	(videophone video-phone video-telephone) and (camera with predeterm$4 with (period time) with stop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 10:18
S81	1	S80 and @ad<="20080925"	US-PGPUB; USPAT	OR	ON	2016/10/29 10:18

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S82	26	(US-20070070188-$ or US-20090174762-$ or US-20090251526-$ or US-20070094691-$ or US-20010041053-$ or US-20040128700-$ or US-20130127977-$ or US-20030041333-$ or US-20150334352-$ or US-20100073455-$ or US-20070261091-$ or US-20080309759-$ or US-20050250531-$).did. or (US-8363087-$ or US-8013938-$ or US-5684918-$ or US-9432618-$ or US-9124758-$ or US-5710591-$ or US-5467388-$ or US-5771065-$ or US-6859526-$ or US-5778053-$).did. or (JP-08289280-$).did. or (US-20100073455-$ or US-20070070188-$).did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2016/10/29 11:15
S83	33	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20080134278" | "20080172693" | "20080212949" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20130033561" | "5526037" | "5528285" | "5610653" | "5684918" | "6339842" | "6529742" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758").PN.	US-PGPUB; USPAT	OR	ON	2016/10/29 11:15
S84	15	S82 not S83	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/10/29 11:15
S89	1	15/631298	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 14:41
S90	13	("8363087" "9124758" "9432618" "9723268").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:39
S91	3	"9124758".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:40
S92	5	(S90 S91) and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:48
S93	0	S92 and (echo$3 and cancel$6).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:51
S94	166630	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:53
S95	42924	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 18:53
S96	35584	(S94 S95) and (television and (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:07
S97	17858	S96 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:08
S98	295	S97 and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:09
S99	265	S98 and (television same (video$5 telephone phone))	US-PGPUB; USPAT;	OR	ON	2017/12/16

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			19:10
S100	29102	(S94 S95) and (television same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:11
S101	454	S100 and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:11
S102	265	S101 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:12
S103	15	S102 and ((television near receiver) same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:13
S104	213	S102 and (television same (includ$3 compris$3) same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 19:19
S105	166630	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431,4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S106	42924	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S107	29102	(S105 S106) and (television same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S108	454	S107 and (echo$3 with cancel$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S109	265	S108 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S110	213	S109 and (television same (includ$3 compris$3) same (video$5 telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31
S111	67	S110 and ((echo$3 with cancel$6) same microphone same (speaker loudspeaker))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/16 21:31

S112	45	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20050250531" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20070261091" | "20080134278" | "20080172693" | "20080212949" | "20080309759" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20100073455" | "20130033561" | "20130127977" | "20150334352" | "5467388" | "5526037" | "5528285" | "5610653" | "5684918" | "5710591" | "5771065" | "5778053" | "6339842" | "6529742" | "6859526" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758" | "9432618").PN.	US-PGPUB; USPAT	OR	ON	2017/12/18 12:35
S113	8	S112 and ((echo$3 with cancel$6) same microphone same (speaker loudspeaker))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/18 12:35
S114	2	S113 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/12/18 12:36
S115	45	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20050250531" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20070261091" | "20080134278" | "20080172693" | "20080212949" | "20080309759" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20100073455" | "20130033561" | "20130127977" | "20150334352" | "5467388" | "5526037" | "5528285" | "5610653" | "5684918" | "5710591" | "5771065" | "5778053" | "6339842" | "6529742" | "6859526" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758" | "9432618").PN.	US-PGPUB; USPAT	OR	ON	2018/01/30 12:27
S116	167926	G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191;H04N2007/145;H04N21/254,42203,4223,431.4788;H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185.CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:13
S117	43033	348/14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09,14.1,14.11,14.12,14.13,14.14,15.15,14.16;379/265.03;455/414.1,566;704/270.cds.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:13
S118	26	(US-20070070188-$ or US-20090174762-$ or US-20090251526-$ or US-20070094691-$ or US-20010041053-$ or US-20040128700-$ or US-20130127977-$ or US-20030041333-$ or US-20150334352-$ or US-20100073455-$ or US-20070261091-$ or US-20080309759-$ or US-20050250531-$).did. or (US-8363087-$ or US-8013938-$ or US-5684918-$ or US-9432618-$ or US-9124758-$ or US-5710591-$ or US-5467388-$ or US-5771065-$ or US-6859526-$ or US-5778053-$).did. or (JP-08289280-$).did. or (US-20100073455-$ or US-20070070188-$).did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2018/01/31 14:14
S119	45	("20010041053" | "20020019984" | "20030041333" | "20030206720" | "20040128700" | "20050250531" | "20060041926" | "20060212920" | "20070070188" | "20070094691" | "20070139514" | "20070216760" | "20070233839" | "20070261091" | "20080134278" | "20080172693" | "20080212949" | "20080309759" | "20090013373" | "20090073253" | "20090079813" | "20090174762" | "20090251526" | "20100073455" | "20130033561" | "20130127977" | "20150334352" | "5467388" | "5526037" | "5528285" | "5610653" | "5684918" | "5710591" | "5771065" | "5778053" | "6339842" | "6529742" | "6859526" | "7593031" | "8013938" | "8326355" | "8363087" | "8676273" | "9124758" | "9432618").PN.	US-PGPUB; USPAT	OR	ON	2018/01/31 14:15
S120	23000	(S116 S117 S118 S119) and ((TV television settop (set near top)) same (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:18
S121	18912	S120 and ((TV television settop (set near top)) with (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:19
S122	15097	S120 and ((television settop (set near top)) with (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:19
S123	1007	S120 and ((television settop (set near top)) with (videophone (video near (phone telephone))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:20
S124	90	S123 and (echo$3 with (cancel$3 cancellation cancelation))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:24
S125	50	S124 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:24
S126	465014	((TV television settop (set near top)) same (videophone (video near (phone telephone)) telephone phone))	US-PGPUB; USPAT; USOCR; FPRS	OR	ON	2018/01/31 14:24

			EPO; JPO; DERWENT; IBM_TDB			
S127	23270	S126 and ((TV television settop (set near top)) with (videophone (video near (phone telephone))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:25
S128	206	S127 and (echo$3 with (cancel$3 cancellation cancelation))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:26
S129	131	S128 and @ad<="20080925"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:26
S130	131	(S125 S129)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:26
S132	2	S130 and (stop$3 near4 camera)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:28
S133	2	S130 and (paus$3 with display$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/01/31 14:34
S134	6	"9723268".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2018/02/01 10:26

2/1/2018 11:41:08 AM
C:\Users\knguyen23\Documents\EAST\Workspaces\15_837402_15_631298_CON_15_215839_CON_14_811048_CON_12_457257_CON_13_723312_01_30_2018.wsp

Bibliographic Data

Application No: 15837402

Foreign Priority claimed: ◉ Yes ○ No

35 USC 119 (a-d) conditions met: ☑ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged: /Khai N. Nguyen/ Examiner's Signature | Initials

Title: TELEVISION RECEIVER WITH A TV PHONE FUNCTION

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/11/2017	348	2652	ASA-9567-06
RULE			

APPLICANTS

Maxell, Ltd., Kyoto, JAPAN

INVENTORS

Kazunori IWABUCHI, Yokohama, JAPAN

Hiroki MIZOSOE, Kawasaki, JAPAN

Mutsumi SHIMODA, Kawasaki, JAPAN

Setiawan BONDAN, Yamato, JAPAN

Manabu SASAMOTO, Yokohama, JAPAN

CONTINUING DATA

This application is a CON of 15631298 06/23/2017

15631298 is a CON of 15215839 07/21/2016 PAT 9723268

15215839 is a CON of 14811048 07/28/2015 PAT 9432618

14811048 is a CON of 13723312 12/21/2012 PAT 9124758

13723312 is a CON of 12457257 06/04/2009 PAT 8363087

FOREIGN APPLICATIONS

JAPAN 2008-246232 09/25/2008

IF REQUIRED, FOREIGN LICENSE GRANTED**

01/11/2018

STATE OR COUNTRY

JAPAN

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SUITE 210

ALEXANDRIA, VA 22314

UNITED STATES

FILING FEE RECEIVED

$6,160

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	15/837,402 - GAU: 2652
Filing Date	2017-12-11
First Named Inventor	IWABUCHI, K.
Art Unit	
Examiner Name	/Khai N. Nguyen/
Attorney Docket Number	ASA-9567-06

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8013938		2011-09-06	Shyu	
	2	5526037	B2	1996-06-11	Cortjens, et al.	
	3	6339842		2002-01-15	Fernandez, et al.	
	4	7593031		2009-09-22	Root, et al.	
	5	6529742		2003-03-04	Yang, Jae-Duk	
	6	8326355	B1	2012-12-04	Fujisaki, Iwao	
	7	8676273	B1	2014-03-18	Fujisaki, Iwao	
	8	5684918	A	1997-11-04	Abecassis, Max	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KNN/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	9	5528285	A	1996-06-18	Morikawa; Shigenori	
	10	5610653	A	1997-03-11	Abecassis; Max	
	11	5684918	A	1997-11-04	Abecassis; Max	
	12	8363087	B2	2013-01-29	Iwabuchi; Kazunori	
	13	9124758	B2	2015-09-01	Iwabuchi; Kazunori	
	14	5467388	A	1995-11-14	Redd, Jr.; James C.	
	15	5710591	A	1998-01-20	Bruno; Richard F.	
	16	5771065	A	1998-06-23	Hijikata; Toshiyuki	
	17	5778053	A	1998-07-07	Skarbo; Rune A.	
	18	6859526	B2	2005-02-22	Macklin; Lee Edward	
	19	9432618	B2	2016-08-30	Iwabuchi; Kazunori	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KNN/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070216760	A1	2007-09-20	Kondo, et al.	
	2	20090174762		2009-07-09	Takahashi	
	3	20090073253		2009-03-19	Lee	
	4	20090079813		2009-03-26	Hildreth	
	5	20090251526		2009-10-08	Book	
	6	20070139514		2007-06-21	Marley	
	7	20070070188		2007-03-29	SHYU	
	8	20010041053	A1	2001-11-15	Abecassis, Max	
	9	20030041333	A1	2003-02-27	Allen et al.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KNN/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	10	20040128700	A1	2004-07-01	Pan, Ming-Da	
	11	20070094691	A1	2007-04-26	Gazdzinski, Robert F.	
	12	20090174762	A1	2009-07-09	Takahashi, Junichi	
	13	20090251526	A1	2009-10-08	Book, Michael	
	14	20090013373	A1	2009-01-08	Iizuka, Masaki	
	15	20130033561	A1	2013-02-07	Kwon, et al.	
	16	20010041053	A1	2001-11-15	Abecassis; Max	
	17	20020019984	A1	2002-02-14	Rakib, Selim Shlomo	
	18	20030206720	A1	2003-11-06	Abecassis, Max	
	19	20060041926	A1	2006-02-23	Istvan; Anthony F.	
	20	20060212920	A1	2006-09-21	Yamaguchi; Kohei	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	21	20070233839	A1	2007-10-04	Gaos; Maria	
	22	20080134278	A1	2008-06-05	Al-Karmi; Ashraf K.	
	23	20080172693	A1	2008-07-17	Ludvig; Edward A.	
	24	20080212949	A1	2008-09-04	Wachtfogel; Reuven	
	25	20050250531	A1	2005-11-10	Takebe, Manabu	
	26	20070261091	A1	2007-11-08	Tachikawa; Hirohide	
	27	20080309759	A1	2008-12-18	Wilson; Brian	
	28	20100073455	A1	2010-03-25	Iwabuchi; Kazunori	
	29	20130127977	A1	2013-05-23	Iwabuchi; Kazunori	
	30	20150334352	A1	2015-11-19	Iwabuchi; Kazunori	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2001086475 w/abs	JP	A	2001-03-30	MEGA CHIPS CORP		
	2	2000184346 w/abs	JP	A	2000-06-30	TOSHIBA CORP		
	3	05-056190	JP		1993-03-05	Matsushita Electric Ind Co Ltd.		
	4	09-083983	JP		1997-03-28	Matsushita Electric Ind Co Ltd.		
	5	05-236472	JP		1993-09-10	Kosutemo KK		
	6	07-184174	JP		1995-07-21	Sharp Corp.		
	7	2006-20286	JP		2004-06-02	Kondo et al.		
	8	2003-348510	JP		2003-12-05	Mitsubishi Electric Corp.		
	9	2006-157610	JP		2006-06-15	Toshiba Corp.		
	10	2008-079215	JP		2008-04-03	Seiko Epson Corp.		

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KNN/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	11	08-289280	JP		1996-11-01	Toshiba Corp.		
	12	05-236472	JP	A	1993-09-10	Kosutemu KK		
	13	2007-300594	JP	A	2007-11-15	Amtran Technology Co Ltd.		

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Japanese Office Action received in corresponding Japanese Application No. 2013-230194 dated March 10, 2015	
	2	Japanese Office Action dated August 5, 2014 in corresponding Japanese Application No.: 2013-230194	
	3	Domestic technical journal 2007-00349-006 - Skype realizes handy video call	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/Khai N. Nguyen/	Date Considered	01/30/2018

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KNN/

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15837402	IWABUCHI ET AL.
	Examiner	Art Unit
	KHAI N NGUYEN	2652

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

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

CLAIM		DATE								
Final	Original	02/01/2018								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15837402	IWABUCHI ET AL.
	Examiner	Art Unit
	KHAI N NGUYEN	2652

CPC- SEARCHED		
Symbol	Date	Examiner
G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191	2/1/2018	KNN
H04N2007/145;H04N21/254,42203,4223,431,4788	2/1/2018	KNN
H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W4/18,185	2/1/2018	KNN

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
348	14.01,14.02,14.03,14.04,14.05,14.06,14.07,14.08,14.09, 14.1,14.11,14.12,14.13,14.14,15.15,14.16	2/1/2018	KNN
379	265.03	2/1/2018	KNN
455	414.1,566	2/1/2018	KNN
704	270	2/1/2018	KNN

* 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
East - US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2/1/2018	KNN
East - CPC and USPC searches.	2/1/2018	KNN
NPL search.	2/1/2018	KNN
G01S5/0072;H04M1/72572;H04M2201/40;H04M2250/52;H04M3/4936,5191	2/1/2018	KNN

	/KHAI N NGUYEN/ Primary Examiner.Art Unit 2652

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
H04N2007/145;H04N21/254,42203,4223,431,4788	2/1/2018	KNN
H04N5/272;H04N7/14,141,142,144,147,148,15,152,155,157,17318;H04W 4/18,185 (See search history)	2/1/2018	KNN

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**

	/KHAI N NGUYEN/ Primary Examiner.Art Unit 2652

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SUITE 210
ALEXANDRIA VA 22314

MAILED
JAN 17 2018
OFFICE OF PETITIONS

Doc Code: TRACK1.GRANT

Decision Granting Request for Prioritized Examination (Track I or After RCE)	Application No.: 15/837,402

1. THE REQUEST FILED December 11, 2017 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
(Title)

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/837,402

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))	16 minus 20 =	*			OR	x 80 =	0.00
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	2020

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	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
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.

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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
15/837,402	12/11/2017	2656	2020	ASA-9567-06	16	4

CONFIRMATION NO. 6521

FILING RECEIPT

24956
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

OC000000098533531

Date Mailed: 01/12/2018

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)

Kazunori IWABUCHI, Yokohama, JAPAN;
Hiroki MIZOSOE, Kawasaki, JAPAN;
Mutsumi SHIMODA, Kawasaki, JAPAN;
Setiawan BONDAN, Yamato, JAPAN;
Manabu SASAMOTO, Yokohama, JAPAN;

Applicant(s)

Maxell, Ltd., Kyoto, JAPAN;

Power of Attorney: The patent practitioners associated with Customer Number 24956

Domestic Priority data as claimed by applicant

This application is a CON of 15/631,298 06/23/2017
which is a CON of 15/215,839 07/21/2016 PAT 9723268
which is a CON of 14/811,048 07/28/2015 PAT 9432618
which is a CON of 13/723,312 12/21/2012 PAT 9124758
which is a CON of 12/457,257 06/04/2009 PAT 8363087

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 2008-246232 09/25/2008 No Access Code Provided

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.

If Required, Foreign Filing License Granted: 01/11/2018

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/837,402**

Projected Publication Date: 04/19/2018

Non-Publication Request: No

Early Publication Request: No

Title

TELEVISION RECEIVER WITH A TV PHONE FUNCTION

Preliminary Class

348

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.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

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

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

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 U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

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:	Kazunori IWABUCHI	Nonprovisional Application Number (if known):	
Title of Invention:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION		

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 /John R. Mattingly/	Date December 11, 2017
Name (Print/Typed) John R. Mattingly	Practitioner Registration Number 30293

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.

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.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
	Application Number	
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

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 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Kazunori		IWABUCHI	

Residence Information (Select One) US Residency ● Non US Residency Active US Military Service

City	Yokohama	Country of Residence i	JP

Mailing Address of Inventor:

Address 1	c/o Hitachi, Ltd., Intellectual Property Group
Address 2	6-1 Marunouchi 1-chome, Chiyoda-ku
City	Tokyo
State/Province	
Postal Code	100-8220
Country i	JP

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Hiroki		MIZOSOE	

Residence Information (Select One) US Residency ◉ Non US Residency Active US Military Service

City	Kawasaki	Country of Residence i	JP

Mailing Address of Inventor:

Address 1	c/o Hitachi, Ltd., Intellectual Property Group
Address 2	6-1 Marunouchi 1-chome, Chiyoda-ku
City	Tokyo
State/Province	
Postal Code	100-8220
Country i	JP

Inventor 3 Remove

Legal Name

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
	Application Number	
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

Prefix	Given Name	Middle Name	Family Name	Suffix
	Mutsumi		SHIMODA	

Residence Information (Select One) US Residency ◉ Non US Residency Active US Military Service

City	Kawasaki	Country of Residence [i]	JP

Mailing Address of Inventor:

Address 1	c/o Hitachi, Ltd., Intellectual Property Group		
Address 2	6-1 Marunouchi 1-chome, Chiyoda-ku		
City	Tokyo	State/Province	
Postal Code	100-8220	Country [i]	JP

Inventor 4 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Setiawan		BONDAN	

Residence Information (Select One) US Residency ◉ Non US Residency Active US Military Service

City	Yamato	Country of Residence [i]	JP

Mailing Address of Inventor:

Address 1	c/o Hitachi, Ltd., Intellectual Property Group		
Address 2	6-1 Marunouchi 1-chome, Chiyoda-ku		
City	Tokyo	State/Province	
Postal Code	100-8220	Country [i]	JP

Inventor 5 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Manabu		SASAMOTO	

Residence Information (Select One) US Residency ◉ Non US Residency Active US Military Service

City	Yokohama	Country of Residence [i]	JP

Mailing Address of Inventor:

Address 1	c/o Hitachi, Ltd., Intellectual Property Group		
Address 2	6-1 Marunouchi 1-chome, Chiyoda-ku		
City	Tokyo	State/Province	
Postal Code	100-8220	Country [i]	JP

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
	Application Number	
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

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	24956		
Email Address	ptomail@mmiplaw.ocm	Add Email	Remove Email

Application Information:

Title of the Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION		
Attorney Docket Number	ASA-9567-06	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	10	**Suggested Figure for Publication (if any)**	

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.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
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Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

Please Select One:	● Customer Number	US Patent Practitioner	◯ Limited Recognition (37 CFR 11.9)
Customer Number	24956		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim 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" field blank.

Prior Application Status	Pending				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
	Continuation of	15631298	2017-06-23		
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15631298	Continuation of	15215839	2016-07-21	9723268	2017-08-01
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15215839	Continuation of	14811048	2015-07-28	9432618	2016-08-30
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14811048	Continuation of	13723312	2012-12-21	9124758	2015-09-01
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13723312	Continuation of	12457257	2009-06-04	8363087	2013-01-29

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

PTO/AIA/14 (11-15)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
	Application Number	
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

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)[i] 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).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)
2008-246232	JP	2008-09-25	

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

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.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
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Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

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.

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.

PTO/AIA/14 (11-15)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
	Application Number	
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

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 — Remove

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.

Clear

● 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:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Maxell, Ltd.		
Mailing Address Information For Applicant:			
Address 1	1, Koizumi, Oyamazaki, Oyamazaki-cho Otokuni-gun		
Address 2			
City	Kyoto	**State/Province**	
Country	JP	Postal Code	618-8525
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

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.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
	Application Number	
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

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.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

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 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	/JOHN R. MATTINGLY/			Date (YYYY-MM-DD)	2017-12-11
First Name	JOHN	Last Name	MATTINGLY	Registration Number	30293

Additional Signature may be generated within this form by selecting the Add button. Add

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9567-06
	Application Number	
Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION	

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

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 CooperationTreaty.

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	K. IWABUCHI, et al.
		Confirmation No.: TBD
Serial No.	:	To be assigned
Filed	:	December 11, 2017
For	:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
Group	:	To be assigned
Examiner	:	To be assigned
Docket No.	:	ASA-9567-06
Customer No.:		24956

INFORMATION DISCLOSURE STATEMENT (IDS)
UNDER § 1.97 AND § 1.98

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

December 11, 2017

Sir:

In the matter of the above-identified application, Applicants are submitting herewith a copy, where required, of the documents listed in the attached form PTO/SB/08a. It is requested that the information be considered by the Examiner during prosecution of the application, and that the references be made of record therein.

Applicants note that:

One or more references cited on the attached PTO/SB/08a was cited by or submitted to the U.S. Patent and Trademark Office in parent application No. 15/631,298, filed June 23, 2017, which is relied upon for an earlier filing date under 35 U.S.C. §120. No copies of the references are attached pursuant to 37 CFR §1.98(d).

The Commissioner is authorized to charge any shortage in the fees due, or credit any overpayment, to Deposit Account No. 50-1417.

If the PTO determines that part(s) of the required content is inadvertently omitted, then it is requested that the Applicant(s) be given additional time and specific identification of such omission(s) to enable full compliance.

Respectfully submitted,

MATTINGLY & MALUR, PC

/John R. Mattingly/
John R. Mattingly
Registration No. 30,293
703-684-1120

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	2017-12-11
First Named Inventor	IWABUCHI, K.
Art Unit	
Examiner Name	
Attorney Docket Number	ASA-9567-06

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8013938		2011-09-06	Shyu	
	2	5526037	B2	1996-06-11	Cortjens, et al.	
	3	6339842		2002-01-15	Fernandez, et al.	
	4	7593031		2009-09-22	Root, et al.	
	5	6529742		2003-03-04	Yang, Jae-Duk	
	6	8326355	B1	2012-12-04	Fujisaki, Iwao	
	7	8676273	B1	2014-03-18	Fujisaki, Iwao	
	8	5684918	A	1997-11-04	Abecassis, Max	

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	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	9	5528285	A	1996-06-18	Morikawa; Shigenori	
	10	5610653	A	1997-03-11	Abecassis; Max	
	11	5684918	A	1997-11-04	Abecassis; Max	
	12	8363087	B2	2013-01-29	Iwabuchi; Kazunori	
	13	9124758	B2	2015-09-01	Iwabuchi; Kazunori	
	14	5467388	A	1995-11-14	Redd, Jr.; James C.	
	15	5710591	A	1998-01-20	Bruno; Richard F.	
	16	5771065	A	1998-06-23	Hijikata; Toshiyuki	
	17	5778053	A	1998-07-07	Skarbo; Rune A.	
	18	6859526	B2	2005-02-22	Macklin; Lee Edward	
	19	9432618	B2	2016-08-30	Iwabuchi; Kazunori	

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	Attorney Docket Number	ASA-9567-06

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070216760	A1	2007-09-20	Kondo, et al.	
	2	20090174762		2009-07-09	Takahashi	
	3	20090073253		2009-03-19	Lee	
	4	20090079813		2009-03-26	Hildreth	
	5	20090251526		2009-10-08	Book	
	6	20070139514		2007-06-21	Marley	
	7	20070070188		2007-03-29	SHYU	
	8	20010041053	A1	2001-11-15	Abecassis, Max	
	9	20030041333	A1	2003-02-27	Allen et al.	

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	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	10	20040128700	A1	2004-07-01	Pan, Ming-Da	
	11	20070094691	A1	2007-04-26	Gazdzinski, Robert F.	
	12	20090174762	A1	2009-07-09	Takahashi, Junichi	
	13	20090251526	A1	2009-10-08	Book, Michael	
	14	20090013373	A1	2009-01-08	Iizuka, Masaki	
	15	20130033561	A1	2013-02-07	Kwon, et al.	
	16	20010041053	A1	2001-11-15	Abecassis; Max	
	17	20020019984	A1	2002-02-14	Rakib, Selim Shlomo	
	18	20030206720	A1	2003-11-06	Abecassis, Max	
	19	20060041926	A1	2006-02-23	Istvan; Anthony F.	
	20	20060212920	A1	2006-09-21	Yamaguchi; Kohei	

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	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	21	20070233839	A1	2007-10-04	Gaos; Maria	
	22	20080134278	A1	2008-06-05	Al-Karmi; Ashraf K.	
	23	20080172693	A1	2008-07-17	Ludvig; Edward A.	
	24	20080212949	A1	2008-09-04	Wachtfogel; Reuven	
	25	20050250531	A1	2005-11-10	Takebe, Manabu	
	26	20070261091	A1	2007-11-08	Tachikawa; Hirohide	
	27	20080309759	A1	2008-12-18	Wilson; Brian	
	28	20100073455	A1	2010-03-25	Iwabuchi; Kazunori	
	29	20130127977	A1	2013-05-23	Iwabuchi; Kazunori	
	30	20150334352	A1	2015-11-19	Iwabuchi; Kazunori	

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	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2001086475 w/abs	JP	A	2001-03-30	MEGA CHIPS CORP		
	2	2000184346 w/abs	JP	A	2000-06-30	TOSHIBA CORP		
	3	05-056190	JP		1993-03-05	Matsushita Electric Ind Co Ltd.		
	4	09-083983	JP		1997-03-28	Matsushita Electric Ind Co Ltd.		
	5	05-236472	JP		1993-09-10	Kosutemo KK		
	6	07-184174	JP		1995-07-21	Sharp Corp.		
	7	2006-20286	JP		2004-06-02	Kondo et al.		
	8	2003-348510	JP		2003-12-05	Mitsubishi Electric Corp.		
	9	2006-157610	JP		2006-06-15	Toshiba Corp.		
	10	2008-079215	JP		2008-04-03	Seiko Epson Corp.		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

	11	08-289280	JP		1996-11-01	Toshiba Corp.		
	12	05-236472	JP	A	1993-09-10	Kosutemu KK		
	13	2007-300594	JP	A	2007-11-15	Amtran Technology Co Ltd.		

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Japanese Office Action received in corresponding Japanese Application No. 2013-230194 dated March 10, 2015	
	2	Japanese Office Action dated August 5, 2014 in corresponding Japanese Application No.: 2013-230194	
	3	Domestic technical journal 2007-00349-006 - Skype realizes handy video call	

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Examiner Signature		Date Considered	

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2017-12-11
	First Named Inventor	IWABUCHI, K.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9567-06

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the 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 the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John R. Mattingly/	Date (YYYY-MM-DD)	2017-12-11
Name/Print	John R. Mattingly	Registration Number	30,293

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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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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 record s.

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.

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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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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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Document Description: Power of Attorney

PTO/AIA/82A (07-13)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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 (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	To be assigned
Filing Date	December 11, 2017
First Named Inventor	K. IWABUCHI
Title	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
Art Unit	
Examiner Name	
Attorney Docket Number	ASA-9567-06

SIGNATURE of Applicant or Patent Practitioner

Signature	/JOHN R. MATTINGLY/	Date (Optional)	December 11, 2017
Name	JOHN R. MATTINGLY	Registration Number	30293
Title (if Applicant is a juristic entity)	Attorney		
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 3 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.**

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私はここに、添付の伝送書もしくは下記枠内で特定された出願に対して、現時点より前に与えられたすべての委任状を破棄します。
I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

出願番号 Application Number	出願日 Filing Date

（注記：PTO/AIA82Aに同じ情報が明記されている場合、上の枠内は空欄でも可）
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☑ 私は、下記顧客番号に関連する特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書（PTO/AIA/82A）内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。
I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:
24956

又は
OR

☐ 私は、添付のリスト(PTO/AIA/82C)に記載の特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書（PTO/AIA/82A）内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。（注記：PTO/AIA/82Cを記入すること。）
I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

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TELEVISION RECEIVER WITH A TV PHONE FUNCTION

INCORPORATION BY REFERENCE

This application is a Continuation of U.S. Application No. 15/631,298, filed June 23, 2017, which is a Continuation of U.S. Application No. 15/215,839, filed July 21, 2016, now U.S. Patent No. 9,723,268 which is a Continuation of U.S. Application No. 14/811,048, filed July 28, 2015, now U.S. Patent No. 9,432,618, which is a Continuation of U.S. Application No. 13/723,312, filed December 21, 2012, now U.S. Patent No. 9,124,758, which is a Continuation of U.S. Application No. 12/457,257, filed June 4, 2009, now U.S. Patent No. 8,363,087. The present application claims priority from U.S. Application No. 12/457,257 filed June 4, 2009, now U.S. Patent No. 8,363,087, which claims priority from Japanese application JP2008-246232 filed on September 25, 2008, the content of which is hereby incorporated by reference into this application.

BACKGROUND OF THE INVENTION

Field of the Invention

The present technology relates to a television (TV) receiver set with TV phone functionality added thereto, which is arranged to have a video telephone call enabling means to thereby make it possible to perform video/voice-based telecommunication with another machine. This technology also relates to a TV phone system using videophone function-added TV receivers of this type.

Description of the Related Art

A telephone communication system and TV broadcast system are independently established systems. Traditionally, a telephone equipment and TV receiver set

are quite different apparatuses. In cases where a telephone receives an incoming call and generates a ring sound or melody (calling sound) signaling the incoming call, a called party fails to hear this sound from time to time. A technique for avoiding this risk is disclosed, for example, in JP-A-5-56190. With this technique, a telephone is communicatively connected by a signal transmission line to a TV receiver, wherein the TV receiver is arranged so that upon receipt of an incoming call at the telephone, the TV receiver displays a phone call arrival message on its display screen.

Alternatively, a video telephone apparatus is also known, which is arranged to enable a user to make a phone call with a distant party at the other end of a line by transmission and reception of video images and voices. This type of videophone typically has a camera, microphone, loudspeaker and image display device and is designed to transmit toward the distant party's videophone video and voice signals that are obtained by the camera and microphone of the videophone on the self side, receive video and voice signals from the distant party's videophone, and display this video by the image display device while reproducing the voice by the speaker. In a case where transmission is done to the distant party's videophone, a video image and voice are subjected to compression processing (encoding) for transmission while

simultaneously performing expansion processing (decoding) of a video and voice that are received from the distant party's videophone, and reproducing them at the image display device and speaker (for detail, see JP-A-9-83983).

SUMMARY OF THE INVENTION

In the prior known technique as disclosed in JP-A-5-56190, the TV receiver and the videophone are arranged so that these are discrete devices which operate independently of each other. Upon receipt of an incoming telephone call at the videophone during watching a TV broadcast program by the TV receiver, a message which notifies arrival of such phone call is displayed on the TV receiver's display screen so that a user easily knows that there is an incoming phone call. In this event, the user must walk to a place at which this videophone is put and perform manual operations for startup of talking with a caller on the videophone. This is a time-consuming and troublesome work for the user who is watching his or her preferred TV broadcast program.

In the case of not only starting a telephone call but also ending the phone call, the user is required to perform a manual operation for the phone call completion (e.g., putting a transceiver handset on a base unit or "cradle"). This operation also is performed at the location in which the videophone is placed.

In this way, traditionally, when there is an

incoming phone call during watching a TV broadcast program by TV receiver, the user must move from a place at which he or she was there until then and perform manual operations for startup and completion of the phone call. These operations are time-consuming and troublesome works to the user.

To provide a solution to the above-stated problem, this technology provides a new and improved TV receiver with TV function(referred to as videophone function-added TV receiver hereafter) set having videophone call handling functionality, which performs both the reception of a digital broadcast program signal and the transmission and reception of a videophone signal between itself and another videophone function-added TV receiver at the other end of a communication line, wherein the videophone function-added TV receiver is characterized by having a decoder which decodes a received digital broadcast program signal and videophone signal, a display panel to which is supplied a video signal that is decoded by the decoder and which visually displays it on a screen, a loudspeaker module to which is supplied an audio/voice signal which is decoded by the decoder, a camera, a microphone, and an encoder which encodes output signals of the camera and microphone.

Another feature of the videophone function-added TV receiver lies in that it further includes an encoder

which generates a videophone signal to be transmitted for videophone communications and a means for detecting completion of a videophone signal decoding operation of the decoder and for stopping an encoding operation of the encoder for generation of the videophone signal.

This technology also provides a video telephone system using a plurality of videophone function-added TV receiver sets which are linked together via a network for enabling users to make videophone calls between these videophone function-added TV receivers, wherein each videophone function-added TV receiver includes a decoder which has a videophone-use decode function for decoding a videophone signal from another videophone function-added TV receiver at the other end of a line and a TV program-use decode function for decoding a digital broadcast program received, a display panel which displays a video signal that is decoded by the decoder, a loudspeaker to which is supplied an audio signal that is decoded by the decoder, a camera, a microphone, an encoder which has a videophone-use encode function for encoding a video signal from the camera and an audio signal from the microphone to thereby generate a videophone signal to be sent forth toward a videophone function-added TV receiver of a distant party at the other end of a line in a videophone call session, a means for stopping a decoding operation of the decoder by means of the videophone-use decode function

in responding to either a stop operation or the end of a videophone signal from the videophone function-added TV receiver of the distant party in the videophone call session, and a means for detecting completion of the videophone signal decoding operation performed by the decoder and for stopping the encoding operation of the encoder, wherein in case one of the videophone function-added TV receivers which are presently involved in a videophone communication session experiences termination of the decode operation of the decoder by means of the videophone-use decode function thereof in response to execution of the stop operation, when the encoding operation of the encoder is stopped in responding thereto, the videophone function-added TV receiver of the distant party, e.g., a calling party or a called party at the other end of the line, is such that the decoder stops its decoding operation by means of the videophone-use decode function thereof to thereby force the encoder to stop its encoding operation by means of the videophone-use encode function in response to the stop of the decoding operation.

This technology also provides a video telephone system using a plurality of videophone function-added TV receiver sets which are linked together via a network for enabling users to make videophone calls between these videophone function-added TV receivers, wherein each

videophone function-added TV receiver includes a decoder which has a videophone-use decode function for decoding a videophone signal from another videophone function-added TV receiver at the other end of a line and a TV program-use decode function for decoding a digital broadcast program received, a display panel which displays a video signal that is decoded by the decoder, a loudspeaker to which is supplied an audio signal that is decoded by the decoder, a camera, a microphone, an encoder which has a videophone-use encode function for encoding a video signal from the camera and an audio signal from the microphone to thereby generate a videophone signal to be sent forth toward a videophone function-added TV receiver of a distant party at the other end of a line in a videophone call session, a means for stopping a decoding operation of the decoder by means of the videophone-use decode function in responding to either a stop operation or the end of a videophone signal from the videophone function-added TV receiver of the distant party in the videophone call session, a means for detecting completion of the videophone signal decoding operation performed by the decoder and for stopping the encoding operation of the encoder, and a means for detecting completion of the videophone signal decoding operation of the decoder and for sending a stop command signal to the videophone function-added TV receiver of the distant party at the

other end of the line, wherein in case one of the videophone function-added TV receivers which are presently involved in a videophone communication session experiences termination of the decode operation of the decoder by means of the videophone-use decode function thereof in response to execution of the stop operation, when the encoding operation of the encoder is stopped in responding thereto, and also when the stop command signal is sent to the videophone function-added TV receiver of the distant party, this distant party's videophone function-added TV receiver operates so that the decoder stops its decoding operation by means of the videophone-use decode function thereof in response to receipt of the stop command signal and, in response to this decode operation stop, the decoder stops the decoding operation by means of the videophone-use decode function thereof.

This technology also provides a video telephone system using a plurality of videophone function-added TV receiver sets which are linked together via a network for enabling users to make videophone calls between these videophone function-added TV receivers, wherein each videophone function-added TV receiver includes a decoder which has a videophone-use decode function for decoding a videophone signal from another videophone function-added TV receiver at the other end of a line and a TV program-use decode function for decoding a digital broadcast

program received, a display panel which displays a video signal that is decoded by the decoder, a loudspeaker to which is supplied an audio signal that is decoded by the decoder, a camera, a microphone, an encoder which has a videophone-use encode function for encoding a video signal from the camera and an audio signal from the microphone to thereby generate a videophone signal to be sent forth toward a videophone function-added TV receiver of a distant party at the other end of a line in a videophone call session, a means for stopping an encoding operation by means of the videophone-use encode function of the encoder in response to a stop operation of a videophone call, a means for detecting completion of an encoding operation of a video signal from the camera and an audio signal from the microphone to be performed by the encoder and for stopping the decoding operation by means of the videophone-use decode function of the decoder, and a means for detecting completion of the encoding operation of the encoder and for sending a stop command signal to a videophone function-added TV receiver of a distant party at the other end of a line, wherein in case one of the videophone function-added TV receivers which are presently involved in a videophone communication session experiences termination of the encode operation of the encoder by means of the videophone-use encode function thereof in response to execution of a stop operation, when the

decoding operation of the decoder is stopped in responding thereto, and also when the stop command signal is sent to the videophone function-added TV receiver of the distant party, this distant party's videophone function-added TV receiver is such that the encoder stops its encoding operation by means of the videophone-use encode function thereof in response to receipt of the stop command signal and, in response to the stop of this encode operation, the decoder stops the decoding operation by means of the videophone-use decode function thereof.

This technology also provides a videophone function-added television receiver having a video camera detachably connected to an apparatus main body, wherein the TV receiver includes in the apparatus main body a decoder which has a television program-use decode function for decoding a digital broadcast program signal received and a videophone-use decode function for decoding a video telephone signal as received in a videophone call session, and a processor for control of each component, wherein

the video camera has a camera, a microphone, a storage device which stores therein a video signal from the camera and an audio signal from the microphone, and an encoder to which are supplied a video signal as output from the camera and an audio signal as output from the microphone and which encoder has a videophone-use encode function of encoding the video signal and the audio signal

into a video telephone signal to be transmitted to a videophone function-added television receiver of a distant party in a videophone call session and a video recording-use encode function for encoding the video signal and the audio signal into a video signal to be recorded in the storage device, and wherein in a state that the video camera is connected to the apparatus main body, when the decoder is in a state that it operates to perform the videophone-use decode function, the processor sets the encoder in a state that it operates to perform the videophone-use encode function thereof, resulting in the decoder being switched from the operation state of the videophone-use decode function to an operation state of the television program-use decode function and, alternatively, when the video camera is in a state that it is disconnected from the apparatus main body, the processor sets the encoder in a state that it operates to perform the video recording-use encode function.

In the videophone function-added television receiver, the video camera is a separate equipment independent of the apparatus main body and is detachably coupled to the apparatus main body.

Alternatively, in the videophone function-added television receiver, the video camera is internally mounted in the apparatus main body.

This technology also provides a videophone

system using a plurality of videophone function-added TV receivers of the type stated above, which are linked together via a network for enabling users to make a videophone call between any two of the videophone function-added TV receivers, wherein the system includes a means for stopping an encoding operation by means of a videophone-use encode function of an encoder in response to a stop operation of a videophone call, a means for detecting completion of an encoding operation of a video signal from a camera and an audio signal from a microphone to be performed by the encoder and for stopping a decoding operation by means of a videophone-use decode function of a decoder, and a means for detecting completion of the encoding operation of the encoder and for sending a stop command signal to a videophone function-added TV receiver of a distant party at the other end of a line, wherein in case one of the videophone function-added TV receivers which are presently involved in a videophone communication session experiences termination of the encode operation of the encoder by means of the videophone-use encode function thereof in response to execution of a stop operation, when the decoding operation of the decoder is stopped in responding thereto, and also when the stop command signal is sent to the videophone function-added TV receiver of the distant party, this distant party's videophone function-added TV receiver is such that the encoder stops

its encoding operation by means of the videophone-use encode function thereof in response to receipt of the stop command signal and, in response to this encode operation stop, the decoder stops the decoding operation by means of the videophone-use decode function thereof.

This technology also provides a videophone function-added TV receiver, wherein a decoder includes a first decoder operative to decode the received digital broadcast program signal and a second decoder for decoding the video telephone signal, wherein a display panel performs two-window display for simultaneously displaying on one screen a video image based on the digital broadcast program signal decoded by the first decoder and a video image based on the video telephone signal decoded by the second decoder, wherein an echo canceller is provided to receive an audio signal as output from the microphone and an input audio signal of the speaker, and wherein an echo signal due to unwanted mixture of audio sounds from the speaker into the audio signal as output from the microphone is canceled by the echo canceller using the input audio signal of the speaker and is then supplied to an encoder.

The technology further provides a videophone system using videophone function-added TV receivers of the type stated supra, wherein a decoder includes a first decoder operative to decode the received digital broadcast

program signal and a second decoder for decoding the video telephone signal, wherein a display panel performs two-window display for simultaneously displaying on one screen a video image based on the digital broadcast program signal decoded by the first decoder and a video image based on the video telephone signal decoded by the second decoder, wherein an echo canceller is provided to receive an audio signal as output from the microphone and an input audio signal of the speaker, and wherein an echo signal due to mixture of audio sounds from the speaker into the audio signal as output from the microphone is canceled by the echo canceller using the input audio signal of the speaker and is then supplied to an encoder.

With the above-stated arrangement, it is possible to provide a TV receiver with increased usability for users. For example, video image displaying for a videophone call is performed using the display screen and loudspeaker module which are inherently used for digital TV broadcast programs; so, it is possible for a user to start a phone call and finish the call without having to move from a place at which s/he is enjoying a digital TV broadcast program. This saves the user's labor for such moving action. Additionally, upon completion of the phone call, the decoder and encoder are automatically rendered inoperative without requiring the user to perform manual operations. This results in a decrease in labor for such

operations. It is also possible to prevent a calling party from becoming aware of the digital TV broadcast program which is watched by the user.

Other objects, features and advantages of the invention will become apparent from the following description of the embodiments of the invention taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a diagram showing a perspective view of exterior appearance of a videophone function-added television (TV) receiver set in accordance with a first embodiment.

Fig. 2 is a block diagram showing a practical example of an electrical/electronic circuit configuration of the videophone function-added TV receiver of the first embodiment shown in Fig. 1.

Fig. 3 is a system diagram showing one embodiment of a video telephone system using videophone function-added TV receivers.

Fig. 4 is a plan view of an example of operation part of a remote control in Figs. 1 and 2.

Fig. 5 is a diagram showing, in table form, processing procedures in a video-on-demand (VOD) function mode and videophone function mode of the videophone function-added TV receiver shown in Figs. 1 and 2.

Fig. 6 is a diagram showing one example of inbound call handling processing in a case where there is a call-in of the videophone function-added TV receiver shown in Fig. 1 or Fig. 2.

Figs. 7A and 7B are flow charts showing practical examples of forced start/stop control operations of a decoder and encoder, which are executed by respective processors upon startup and completion of a phone call between the videophone function-added TV receivers shown in Fig. 3.

Fig. 8 is a diagram showing a perspective view of outer appearance of a videophone function-added TV receiver in accordance with a second embodiment.

Fig. 9 is a block diagram showing a practical example of a circuit configuration of the videophone function-added TV receiver of the second embodiment shown in Fig. 8.

Fig. 10 is a flowchart showing a procedure for connect control of a video camera of Fig. 9 to be performed by a processor in videophone function mode.

Fig. 11 is a flowchart showing a procedure for select control of an operation mode of the video camera in Fig. 9.

Fig. 12 is a block diagram showing a practical example of a circuit configuration of a videophone function-added TV receiver in accordance with a third

embodiment.

Fig. 13 is a diagram for explanation of leakage of audio sounds from a pair of loudspeakers to a microphone in the videophone function-added TV receiver shown in Fig. 12.

Figs. 14 is a diagram schematically showing waveforms of some major signals for explanation of an operation of an echo canceller shown in Fig. 12.

DESCRIPTION OF THE EMBODIMENTS

Currently preferred embodiments will be described with reference to the accompanying figures of the drawing below.

Fig. 1 is a diagram showing a perspective view of exterior appearance of a television (TV) receiver set with additional video telephone functionality in accordance with a first embodiment. The videophone function-added TV receiver is designated by reference numeral 1, which has a display screen 2, loudspeaker module 3, video camera 4, microphone 5, communications network cable 6, and wireless remote control device 7.

As shown in Fig. 1, the loudspeaker module 3 includes a couple of spaced-apart speakers, which are mounted in a front panel of housing of the videophone function-added TV receiver 1 at right and left side corners below the display screen 2. The camera 4 is

embedded in the front panel at a center position of lower side which is midway between the right and left speakers. This camera 4 has its image pickup lens which is exposed to outside. The microphone 5 is built in the front panel of housing at an upper center position above the display screen 2. This first embodiment is the one that has a built-in video camera in the housing of videophone function-added TV receiver 1.

The videophone function-added TV receiver 1 also has an antenna (not shown) for enabling it to receive digital broadcast programs and, simultaneously, is linked by the network 6 to a video-on-demand (VOD) server, thereby enabling it to receive services (downloads) of any available contents from this VOD server——say, VOD contents. The videophone function-added TV receiver 1 is also linked by the network 6 to other videophone function-added TV receivers and thus is capable of performing video telephone communications with these TV receivers.

The videophone function-added TV receiver 1 of Fig. 1 is controlled by the remote control 7 and, by a manual operation of this remote control, receives digital broadcast programs, downloads VOD contents and/or makes a videophone call with another videophone function-added TV receiver.

Note here that in the case of considering the height due to recent growth in size of TV receivers, when

a user watches the display screen while he or she sits on a sofa in a room, such as a family room, if the camera 4 is disposed on upside of the display screen 2, the camera 4 looks down the user and, in this state, captures or "shoots" an image of the user. Accordingly, when the videophone function-added TV receiver 1 is used as a videophone, a video image of the user who bends down his or her head is transmitted to and displayed at a videophone function-added TV receiver of a distant party at the other end of a communication line. It is generally not commeasurable to display the image of a calling or called party who looks down in a videophone call session. Consequently, in this embodiment, the camera 4 is disposed on the lower side of the display screen 2.

The speakers 3 are located in close proximity to the camera 4. In order to prevent deterioration of performance of the microphone 5 otherwise occurring due to unwanted mixture of vibrations (audio/voice sounds) of the speakers 3 into the microphone 5, this microphone 5 is spaced apart from the speakers 3 and is disposed at the center position above the display screen 2.

Fig. 2 is a block diagram showing a practical example of electrical/electronic circuit configuration of the TV phone function-added TV receiver 1 of the first embodiment shown in Fig. 1. As shown herein, this TV receiver includes the display panel 8, an antenna 9, TV

broadcast tuner 10, decoder 11, processor 12, hypertext makeup language (HTML) browser 13, inbound call detection device 14, network interface (I/F) 15, remote control signal receiver 16, storage unit 17 such as a hard disk drive (HDD) or solid-state disk (SSD) using nonvolatile semiconductor memory or else, and encoder 18. Note that those corresponding to the parts or components of Fig. 1 are denoted by the same reference numerals.

In Fig. 2, the videophone function-added TV receiver 1 of this embodiment has a similar configuration of standard TV receiver set and additionally has several components including the network I/F 15 for communication with external equipment via the network 6, the camera 4 and microphone 5 plus inbound call detector 14 for videophone communications, and the HTML browser 13 for VOD contents downloading.

The videophone function-added TV receiver 1 has a TV program viewing function for permitting a user to watch a TV program by receiving a digital broadcast program signal by the antenna 9 in response to a manual operation of the remote control 7 and for displaying video image information of such broadcast program on the display screen 2 of display panel 8 while at the same time outputting its audio information from the speakers 3, a video telephone function for transmitting a videophone signal containing therein both video image information

captured by the camera 4 and audio information that was input from the microphone 5 toward another similar videophone function-added TV receiver of a distant party at the other end of a line (referred to hereinafter as the other-side videophone function-added TV receiver), not shown, via the network 6 that is linked to the videophone function-added TV receiver 1 and receiving a videophone signal from this other-side videophone function-added TV receiver via the network 6 and also displaying its video image information on the display screen 2 of display panel 8 while simultaneously outputting its audio information from the speakers 3 to thereby perform videophone telecommunication with the distant party at the other end of the line, and a VOD function for requesting a server (not shown) to provide desired contents of a moving picture and/or text data via the network 6 and acquiring moving-picture contents to be provided from this server via the network 6 in reply to this request and then displaying such moving picture information on the display screen 2 while outputting its audio information from the speakers 3. These functions are selectable by manual operation of the wireless remote control 7.

An operation signal from the remote control 7 which indicates an instruction operation thereof is received at the remote control signal receiver 16 and then supplied to the processor 12. This processor 12 performs

control of respective units in accordance with the operation signal supplied. When execution of TV program viewing function is instructed by the remote control 7, the processor 12 sets up a mode for executing the TV broadcast program viewing function (referred to as TV broadcast program viewing function mode hereinafter). When execution of the video telephone function is instructed by the remote control 7, the processor 12 sets up a mode for executing the video telephone function (referred to as videophone function mode hereafter). When execution of the VOD function is instructed by the remote control 7, the processor 12 sets up a mode for executing the VOD function (referred to as VOD function mode hereafter).

An explanation will next be given of a system with reference to Fig. 3, in which system the videophone function-added TV receiver 1 is used.

Fig. 3 is a diagram schematically showing a principal configuration of one embodiment of a video telephone system using videophone function-added TV receivers. This system includes the videophone function-added TV receiver 1, another (distant party's) videophone function-added TV receiver 1' on the other end of a communication line, a telephone server 20 and VOD server 21. Parts corresponding to those of Fig. 2 are designated by the same reference numeral.

As shown in Fig. 3, the videophone function-added TV receivers 1 and 1', telephone server 20 and VOD server 21 are communicatively linked together via the network 6. Although a large number of similar videophone function-added TV receivers are connected to the network 6, only two videophone function-added TV receivers 1 and 1' are shown in Fig. 3 for the purpose of convenience in illustration, wherein one of them is assumed to be a certain user's videophone function-added TV receiver 1 whereas the other of them is the "other-side" videophone function-added TV receiver 1' of a distant party at the other end of a line which performs videophone communication with the "self-side" videophone function-added TV receiver 1.

It should be noted that the other-side videophone function-added TV receiver 1' is similar in configuration to the videophone function-added TV receiver 1. Although its configuration is not specifically illustrated herein, the other-side videophone function-added TV receiver 1' has similar parts or components similar to those of Fig. 2, which will be denoted by corresponding reference numerals with an apostrophe (') being added thereto, such as decoder 11', encoder 18', etc. Also note that although the explanation below is mainly directed to the videophone function-added TV receiver 1, the same goes with the other-side videophone

function-added TV receiver 1'.

When the videophone function-added TV receiver 1 is set in the TV broadcast program viewing function mode, a digital broadcast program signal which is received at an antenna that is not depicted (i.e., the antenna 9 of Fig. 2) is subjected to decode processing, thereby enabling such TV program to be viewed by human eyes. When the videophone function-added TV receiver 1 is set in the videophone function mode, the videophone function-added TV receiver 1 and other-side videophone function-added TV receiver 1' are linked together by the telephone server 20 so that these are communicable with each other via the network 6. When the videophone function-added TV receiver 1 is in the VOD function mode, the videophone function-added TV receiver 1 is linked via the network 6 to the VOD server 21 so that requested contents are provided from the VOD server 21 to the videophone function-added TV receiver 1 in response to a request from the videophone function-added TV receiver 1.

Fig. 4 is a plan view of an example of the wireless remote control 7 shown in Figs. 1 and 2. This remote control 7 has on its front panel several manual operation buttons, including a "Power" button 7a, "TV" button 7b, "VOD" button 7c, "Phone" button 7d, "Program Guide" button 7e, "Search" button 7f, "Title List" button 7g, "Timer Rec" button 7h, up-down/right-left arrow

buttons 7i in cross-like layout, "Enter" button 7j, sound volume adjustment buttons 7k, channel select buttons 7l, "Video Rec" button $7m_1$, "Play" button $7m_2$, "Pause" button $7m_3$, "REW" button $7m_4$, "FF" button $7m_5$ and "Stop" button 7n.

As shown in Fig. 4, the TV remote control 7 has several kinds of operation buttons for control of the videophone function-added TV receiver 1 (Fig. 2), including the power button 7a for turning power on and off, the "Program Guide" button 7e for causing an online digital broadcast program guide table to be displayed on the display screen 2 of display panel 8 (Fig. 2), the "Search" button 7f, the "Title List" button 7g for display of a list of titles of recorded digital broadcast programs or a list of titles of available contents in the VOD server 21 (Fig. 3), the "Timer Rec" button 7h for setup of timer recording of digital broadcast programs, the set of cross-like layout arrow buttons 7i for operations of movement of a cursor to be displayed on the display screen 2 of display panel 8, the "Enter" button 7j for selection and determination of an item in the title list or else being displayed on the display screen 2 of display panel 8, the sound volume buttons 7k for manual adjustment of a sound level of the speakers 3 (Fig. 2), the channel select buttons 7l for designating a reception channel of digital broadcast program, the "Video Rec" button $7m_1$ for setting

the timer recording of a digital broadcast program(s), the "Play" button $7m_2$ for playback of any one of digital broadcast programs recorded, the "Pause" button $7m_3$ for temporary stop of the playback of a digital broadcast program being viewed, the "REW" button $7m_4$ for fast reserve move or "rewind" of a present playback part of recorded digital broadcast program, the "FF" button $7m_5$ for fast forward move or "advance" of a present playback part of recorded digital broadcast program, and the "Stop" button 7n for stopping the playback of a recorded digital broadcast program.

In addition to these manual operation buttons, the TV remote control 7 further has the "TV" button 7b for setting the videophone function-added TV receiver 1 in the TV broadcast program viewing function mode, the "VOD" button 7c for setting the videophone function-added TV receiver 1 in the VOD function mode, and the "Phone" button 7d for setting the videophone function-added TV receiver 1 in the videophone function mode. These function modes are reset whenever the power button 7a is manually operated to turn power off. When the power button 7a is operated to turn power on, the videophone function-added TV receiver 1 is automatically set in the TV broadcast program viewing function mode in a similar way to standard TV receivers so that it becomes in the state that a digital broadcast program is received of the

channel that has been set immediately before the last power-off.

Note here that the "TV" button 7b is for receiving a digital broadcast program and displaying it on the display screen 2 of display panel 8 when an image other than that of the received digital broadcast program is visualized on the display screen 2 of display panel 8 in an operation mode except the videophone function mode and the VOD function mode (i.e., the TV broadcast program viewing function mode), such as during recording/playback of a digital broadcast program or when a TV program guide or a list of titles of recorded digital broadcast programs is being displayed thereon.

Also note that the videophone function mode and VOD function mode are such that each mode is reset in response to an operation of the "Stop" button 7n, resulting in the mode being changed to the TV broadcast program viewing function mode to thereby establish a state that a digital broadcast program received is displayed on the display screen 2 of display panel 8.

An explanation will next be given of each of the above-stated functions of the videophone function-added TV receiver 1 shown in Fig. 2 to be selected in response to a manual operation of the remote control 7 while referring to Figs. 3 and 4 also.

In Fig. 2, when the "Power" button 7a of TV

remote control 7 is manually operated to turn on the power of videophone function-added TV receiver 1 and get this TV receiver started, or alternatively, when the "TV" button 7b of remote control 7 is depressed while the videophone function-added TV receiver 1 is presently in the above-stated operation state, an operation signal of this remote control 7 is received by the RC signal receiver 16 and supplied to the processor 12. The processor 12 performs decision processing based on this operation signal to determine that the TV broadcast program viewing function mode is required from the remote control 7. At this time, the processor 12 renders the broadcast tuner 10, decoder 11, display panel 8 and speakers 3 operative, thereby setting up a state for execution of the TV broadcast program viewing function which enables reception of a digital broadcast program signal to be watched. In this case, when the user wants to watch his or her desired digital broadcast program, the user depresses the channel select button 7l of remote control 7 to thereby designate a channel of such program whereby the processor 12 controls the broadcast tuner 10 so that this tuner 10 is set in a state for selecting this designated channel.

An encoded digital TV broadcast program signal, such as image compression or the like, being applied to a moving picture of a broadcast program which is received by the antenna 9 and the channel of which is selected by the

broadcast tuner 10 is supplied to the decoder 11 and applied decoding processing, such as image expansion or else, to thereby obtain a video signal of the image (e.g., moving picture or still image) along with an audio signal thereof. This video signal is supplied to the display panel 8 so that the image of the selected TV broadcast program is visually displayed on the display screen 2 while at the same time letting the audio signal be fed to the speakers 3 for output of audio sounds of this TV broadcast program.

The decoder 11 has a function of decoding the video signal and audio signal of a received digital broadcast program signal (referred to as TV program-use decode function hereinafter), a function of decoding an incoming video telephone signal from the other-side videophone function-added TV receiver 1' (Fig. 3), which signal is received at the network I/F 15 (referred to hereinafter as videophone-use decode function), and a function of decoding VOD contents of images (moving pictures or still images) and audio sounds which are supplied from the VOD server 21 (Fig. 3) and received by the network I/F 15. Any one of these functions is switchable under control of the controller 12 in responding to receipt of an instruction signal from the TV remote control 7, which indicates the user's desired function mode that is set through manual operations of the

remote control 7.

When the videophone function-added TV receiver 1 is presently set in the TV broadcast program viewing function mode, the decoder 11 is set by the processor 12 in the state for execution of the TV program-use decode function; so, it decodes a received digital broadcast program signal from the broadcast tuner 10. In this state, when the "Rec" button $7m_1$ (Fig. 4) of remote control 7 is manually operated, the processor 12 controls the storage unit 17, causing it to perform video-recording of the digital broadcast program signal being received. In this TV broadcast program viewing function mode, when the "Tile List" button 7g (Fig. 4) of remote control 7 is depressed, a list of the tiles of recorded digital programs in the storage unit 17 is displayed on the display screen 2 of display panel 8. In this case, when a desired recorded program is selected from this recorded program title list through manual operation of the arrow buttons 7i and "Enter" button 7j (Fig. 4) and then the "Play" button $7m_2$ of remote control 7 is pressed, a recorded program signal that is selected from among those being stored in the storage unit 17 is played back and decoded by the decoder 11, resulting in a video signal being supplied to the display panel 8 while letting an audio signal be fed to the speakers 3.

When the "VOD" button 7b (Fig. 4) of the remote

control 7 is operated, the decoder 11 executes the VOD-use decode function under control of the processor 12; then, the HTML browser 13 is rendered operative, followed by setup of the VOD function mode.

Then, the VOD contents from the VOD server 21 (Fig. 3) which are received at the network I/F 15 are such that moving-picture image contents and still image contents plus audio contents thereof are decoded by the decoder 11 and then supplied to the display panel 8 and speakers 3, resulting in visualization and reproduction of these contents. Text data in the VOD contents is supplied to the HTML browser 13 and converted into data displayable on the display screen 2 and then supplied to the display panel 8. It is noted that although not specifically depicted herein, the contents to be provided from the VOD server 21 are supplied to the decoder 11 and/or the HTML browser 13 for viewing/listening and playback at the user's desired time and also supplied to the display panel 8 and speakers 3 for enabling the contents to be reproduced thereby.

Additionally, when the "VOD" button 7b of the remote control 7 is depressed, a request signal is transmitted from the processor 12 to the VOD server 21 through the network I/F 15 and network 6. In responding thereto, data of titles of all contents available from the VOD server 21 are provided. The title data is passed to

the HTML browser 13 through the network I/F 15 whereby a title list window image or "menu" is generated and supplied to the display panel 8. When the user's preferred contents are designated from this menu window by manual operations of the cross-like layout arrow buttons 7i and "Enter" button 7j, the processor 12 issues and sends a request of the contents to the VOD server 21 via the network I/F 15 and network 6. With this procedure, the VOD contents requested are provided from the VOD server 21 and are processed in the way stated supra so that the contents are displayed on the display screen 2 of display panel 8 while letting audio sounds thereof be output from the speakers 3.

After completion of the VOD contents, in case the user further wants to get another kind of VOD contents, when the "Title List" button 7g (Fig. 4) is depressed in the state that the VOD function mode is set (i.e., none of the "TV" button 7b and "Phone" button 7d are pressed), a request signal is sent to the VOD server 21 via the network I/F 15 and network 6 in the above-stated way. In response thereto, data of titles of all the contents available from the VOD server 21 are provided. The title data is supplied to the HTML browser 13 via the network I/F 15 whereby a title list window is generated and supplied to the display panel 8. By selecting a desired title of contents using the remote

control 7 in the way stated previously, the requested contents are provided from the VOD server 21 and then displayed on the display screen 2 of display panel 8 while letting audio sounds be played back by the speakers 3.

When the "Videophone" button 7c (Fig. 4) of the remote control 7 is depressed, the decoder 11 is set in a state for execution of the videophone-use decode function under setup control of the processor 12. Simultaneously, the processor 12 renders the camera 4 and microphone 5 plus encoder 18 operative and sets up the videophone function mode. Note that the inbound call detector 14 is always in the state capable of detecting an incoming telephone call from the other-side videophone function-added TV receiver 1' (Fig. 3) even when the videophone function-added TV receiver 1 is in the power-off state.

Then, a video signal by means of image pickup of the camera and an audio signal indicative of voice sounds as input to the microphone 5 are supplied to the encoder 18 and subjected to compression processing (encoding) which is pursuant to videophone telecommunications so that a videophone signal which is obtained thereby is sent from the network I/F 15 via network 6 to the other-side videophone function-added TV receiver 1' (Fig. 3). A videophone signal from the other-side videophone function-added TV receiver 1' is received by the network I/F 15 and supplied to the decoder 11 so that a video signal and

audio signal thereof are subjected to expansion processing (decoding), causing such decoded signals to be supplied to display panel 8 and speakers 3. This enables videophone telecommunication between the videophone function-added TV receiver 1 and the other-side videophone function-added TV receiver 1'.

Alternatively, when there is an incoming phone call from the other-side videophone function-added TV receiver 1', this call-in is detected by the inbound call detector 14; then, this detection result is notified to the processor 12. In responding thereto, the processor 12 renders the camera 4 and microphone 5 plus encoder 18 operative to thereby set up the videophone function mode, resulting in setup of the state that enables videophone communication with the other-side videophone function-added TV receiver 1'.

The encoder 18 has a function of applying videophone telecommunication-related encode processing to a video signal from the camera 4 and an audio signal from the microphone 5 (referred to as videophone-use encode function hereinafter) and a function of performing encode processing that is similar to the encoding of digital broadcast program signals (referred to hereafter as videorecording-use encode function), wherein these encode functions are switchable by control of the remote control 7.

When the "Phone" button 7d of the remote control 7 is manually operated resulting in setup of the videophone function mode, the processor 12 that detected this mode setup causes the encoder 18 to be set in the state that it executes the videophone-use encode function so that a videophone signal is generated to thereby enable videophone telecommunication with the other-side videophone function-added TV receiver 1' in the way stated supra. Now, suppose that the videophone function-added TV receiver 1 is in the TV broadcast program viewing function mode (thus, the decoder 11 is in the state for execution of the TV program-use decode function). When an appropriate button of the remote control 7 for image pickup instruction is manually operated for example, the encoder 18 is controlled so that the videorecording-use encode function is set up so that the camera 4 and microphone 5 are rendered operative. A video signal from the camera 4 and an audio signal from the microphone 5 in this case are encoded by the encoder 18 by means of the videorecording-use encode function in a similar way to the digital broadcast program signal received. The encoded signal is stored in the storage unit 17 as a videorecording signal. When this videorecord signal being stored in the storage unit 17 is selected using the above-stated title list, and then the "Play" button $7m_2$ (Fig. 4) of the remote control 7 is depressed, this videorecord

signal is read out of the storage unit 17, supplied to the decoder 11 and decoded thereat, resulting in such video signal being supplied to the display panel 8 while letting its associative audio signal be fed to the speakers 3. In this case, the videophone function mode is not set yet; so, the video signal and audio signal from this encoder 18 are not supplied to the network I/F 15. Thus, the information of a situation in front of the videophone function-added TV receiver 1 is acquired by the camera 4 and microphone 5. This information is temporarily stored in the storage unit 17 in a manner that the information is later browsable by the videophone function-added TV receiver 1.

Fig. 5 is a diagram showing, in contradistinction, the processing procedures of the VOD function mode and videophone function mode.

Firstly, the processing procedure of VOD function mode will be described. In Fig. 5, suppose that the videophone function-added TV receiver 1 is now in the power-off state. The power button 7a (Fig. 4) of the remote control 7 is manually operated, causing the TV receiver 1 to be set in the power-on state (at item No. 1). This operation is not necessary when the TV receiver has already been set in the power-on state.

Next, when the "VOD" button 7c of remote control 7 is pressed, the processor 12 detects this button

operation and gets the HTML browser 13 started (at item #2).

The processor 12 also issues and sends a request for contents to the VOD server 21 (Fig. 3) via the network I/F 15 and network 6 in the way stated above. In responding thereto, list information of the titles of VOD contents available from this VOD server 21 are provided, as the information for an operation screen or "window," to the videophone function-added TV receiver 1 via the network 6 and network I/F 15. At the videophone function-added TV receiver 1, this list information is supplied to the HTML browser 13 so that a menu (list) window of such VOD contents is prepared and displayed on the display screen 2 of display panel 8 as an operation window. When the user selects and determines from this menu window his or her desired title of VOD contents through manual operations of the cross-like layout of arrow buttons 7i and "Enter" button 7j (at item #3), the processor 12 sends information as to this selection and decision to the VOD server 21 for requesting download of the selected VOD contents. In response thereto, the VOD server 21 performs checking of the playback right of this user. If this check is completed successfully, accounting/billing processing against the VOD contents is performed. Then, a notice of allowance is issued regarding the provision of the VOD contents to the videophone function-added TV

receiver 1, followed by startup of download of the VOD contents (at item #4 in Fig. 5).

Upon receipt of this notice of allowance at the videophone function-added TV receiver 1, the processor 12 sets the decoder 11 in the VOD-use function mode and then causes an operation in this mode to get started. This results in the VOD function mode being set up so that the VOD contents to be downloaded from the VOD server 21 are supplied from the network I/F 15 to the decoder 11. Then, a decoded moving-picture/still-image signal is supplied to the display panel 8, and simultaneously, a decoded audio signal is fed to the speakers 3, resulting in the VOD contents being displayed and played back (at item #5).

When the user depresses the "Stop" button 7n of the remote control 7 such as due to completion of the playback of the VOD contents, the decoder 11's VOD-use decode function execution state is forced to go off and then switched to the TV program-use decode function execution state. Simultaneously, the processor 12 renders the HTML browser 13 inoperative (at item #6).

With this procedure, the VOD function mode comes to an end, causing the videophone function-added TV receiver 1 to be set in the TV broadcast program viewing function mode (item #7).

An explanation will next be given of the processing procedure in the videophone function mode.

Now, suppose in Fig. 5 that the videophone function-added TV receiver 1 is in the power-off state. By manually operating the power button 7a (Fig. 4) of remote control 7, the TV receiver 1 is set in the power-on state (at item #1). This operation is unnecessary when the TV receiver has already been set in the power-on state.

Then, when the "Phone" button 7d of remote control 7 is depressed, the processor 12 detects it and renders the HTML browser 13 operative (item #2).

In response to the startup of the HTML browser 13, a list window of registered phone numbers is prepared from the phone number data being stored in a memory and supplied to the display panel 8 for visual display on the display screen 2. From this phone number list window, the phone number of a person with whom the user wants to have a chat over the videophone is selected and determined through manual operations of the cross-like arrow buttons 7i and "Enter" button 7j (at item #3).

Upon determination of the phone number of such call destination, the processor 12 performs call request to the call destination——in this case, the other-side videophone function-added TV receiver 1' in Fig. 3——via the network I/F 15 and network 6 and, at the same time, reads a calling message window data from the memory for letting it be displayed on the display screen 2 and also renders the camera 4, microphone 5 and encoder 18

operative under control of the processor 12 (item #4).

Upon receipt of a reply from the other-side videophone function-added TV receiver 1' at the network I/F 15 via the network 6, such as the Internet, the processor 12 switches the operation mode of the decoder 11 to a state capable of executing the videophone-use decode function and then causes such operation to start. Whereby, a video telephone signal from the self-side apparatus (i.e., videophone function-added TV receiver 1), which signal is output from the encoder 18, is sent from the network I/F 15 via the network 6 to the other-side videophone function-added TV receiver 1' whereas a videophone signal from the other-side videophone function-added TV receiver 1' is received by the network I/F 15 via network 6 and decoded by the decoder 11, resulting in a video signal being supplied to the display panel 8 and an audio signal being fed to the speakers 3. In this way, videophone telecommunication is performed between the self-apparatus (i.e., videophone function-added TV receiver 1) and the other-side videophone function-added TV receiver 1' (at item #5).

After completion of the videophone call, when the user depresses the "Stop" button 7n of the remote control 7, the processor 12 renders the decoder 11 and HTML browser 13 inoperative. As the decoder 11 goes off, the processor 12 renders the camera 4 and microphone 5

plus encoder 18 inoperative (at item #6). Thus, the video phone function mode is terminated (item #7).

In the TV program-use decode function mode in which the videophone function-added TV receiver 1 receives a digital broadcast program, when the "Phone" button 7d of remote control 7 is pressed causing it to be switched to this videophone-use decode function mode, the processor 12 is responsive to completion of a videophone call by manual operation of the "Stop" button 7n of remote control 7, for providing control so that the decoder 11 changes its operation mode from the videophone-use decode function execution mode to the state for execution of the TV program-use decode function and then returns to the digital broadcast program reception state. In this case also, the decoder 11's videophone-use decode function execution is stopped; so, the processor 12 renders the camera 4 and microphone 5 plus encoder 18 inoperative.

In this way, in case the videophone function-added TV receiver 1 is in the TV broadcast program viewing function mode, when the function of the decoder 11 is switched from the TV program-use decode function to the videophone-use decode function in response to the user's manual operation of the "Phone" button 7d of remote control 7, the processor 12 may be arranged to render the storage unit 17 operative and permit the presently received digital broadcast program signal to be received

continuously while letting the storage unit 17 continue videorecording until this digital broadcast program signal reception is ended. With such the arrangement, it is possible for the user to enjoy later the remaining part of a digital broadcast program that s/he failed to watch due to arrival of the incoming videophone call.

Fig. 6 is a diagram showing one example of incoming telephone call processing in the case where there is a call-in of the TV phone function-added TV receiver 1.

In Fig. 6, in case there is an incoming phone call from the other-side videophone function-added TV receiver 1', the inbound call detector 14 detects this in-call and notifies it to the processor 12. Upon receipt of this in-call notice, the processor 12 performs a control operation as will be described below in accordance with a present state of the videophone function-added TV receiver 1 and sets the videophone function-added TV receiver 1 in the videophone function mode. Below is an explanation of the incoming call reception processing in a way pursuant to a present state of the videophone function-added TV receiver 1.

(1) Power Off: This is a case where the videophone function-added TV receiver 1 is the power off state when there is an incoming telephone call from the other-side videophone function-added TV receiver 1'. In this case, the processor 12 receives an inbound call

arrival notice from the inbound call detector 14 and determines whether the power is on or off. If the TV receiver 1 is in the off state, the power is turned on (automatic power-on).

In this case, the processor 12 turns the power on and judges the in-call notice is equivalent to that issued when the "Phone" button 7d of the remote control 7 is manually operated and then executes the "Phone Processing" shown in Fig. 5 from the item #2 thereof (phone processing). Then, after video/voice-based telecommunication is completed in response to a manual operation of either the "Stop" button 7n of the remote control 7 or a "Stop" button 7n' of a wireless remote control device 7' of the other-side videophone function-added TV receiver 1', if no videophone signal is received within a predetermined length of time period, the processor 12 determines that the videophone function mode is ended and then deactivates the videophone-use decode function of the decoder 11 and, at the same time, renders the camera 4 and microphone 5 plus encoder 18 inoperative at the item #6 of the "Phone Processing" shown in Fig. 5.

In this case, the decoder 11 stops its operation of the videophone-use decode function and, subsequently, is set in a state that the TV program-use decode function is made active——in other words, its function is switched from the videophone-use decode function to the TV program-

use decode function, resulting in the decoder 11 being changed into the TV program-use decode function mode for reception of a digital broadcast program (TV watching).

In this way, when there is an incoming videophone call from the other-side videophone function-added TV receiver 1' while the videophone function-added TV receiver 1 is in the power off state, this videophone function-added TV receiver 1 is automatically set in the power-on state, causing it to be set in the videophone function mode to thereby establish the state enabling the user to talk with a calling party over the videophone. Thereafter, when the phone call is finished, the decoder 11 is switched from the videophone-use decode function to the TV program-use decode function, resulting in transfer to the TV program viewing function mode for letting the user watch his or her preferred digital broadcast program received.

(2) During TV Watching: This is a case where there is an incoming telephone call from the other-side videophone function-added TV receiver 1' while the videophone function-added TV receiver 1 is presently in the videophone function mode. In this case, the processor 12 receives an inbound call notice from the inbound call detector 14 and, at the same time, controls the storage unit 17 so that a digital broadcast signal being received is sequentially stored in this storage unit 17 (automatic

videorecording start).

Simultaneously, the processor 12 renders the camera 4 and microphone 5 plus encoder 18 operative as has been explained using Fig. 5 and switches the function of decoder 11 from the TV program-use decode function to the videorecording-use decode function. As a result, video telecommunication with the other-side videophone function-added TV receiver 1' is performed (phone processing).

After completion of the phone call by manual operation of the "Stop" button 7n of the remote control 7 or the "Stop" button 7n' of remote control 7' of the other-side videophone function-added TV receiver 1', when any videophone signal is not received within a prespecified length of time period, the processor 12 determines that the videophone function mode is ended and thus deactivates the videophone-use decode function of the decoder 11 and, at the same time, renders the camera 4 and microphone 5 plus encoder 18 inoperative such as at the item #6 in the "Phone Processing" shown in Fig. 5.

In this case, the decoder 11 halts the videophone-use decode function in the way stated supra, resulting in activation of the TV program-use decode function——that is, the videophone-use decode function is switched to the TV program-use decode function. Then, the processor 12 controls the storage unit 17 so that playback of the received digital broadcast program signal gets

started from its videorecording start part after the beginning of the above-stated phone call. This reproduced digital broadcast program signal is supplied to the decoder 11 and decoded thereby and then supplied to the display panel 8 and speakers 3, thereby enabling the user to enjoy it from the part which was interrupted by the above-noted phone call session (automatic playback start).

Note here that even when such automatic playback of the contents stored in the storage unit 17 is performed in this way, it sometimes happens that the digital broadcast program being presently received does not come to an end. If this is the case, the videorecording of this broadcast program signal is continued without interruption. The end of the digital broadcast program is acquirable from TV program guide information or else.

(3) During VOD Contents Watching: This is a case where a telephone call arrives from the other-side videophone function-added TV receiver 1' at the videophone function-added TV receiver 1 that is set in the VOD function mode. In this case, the processor 12 is operatively responsive to receipt of an inbound call notice from the inbound call detector 14, for pausing an operation of the VOD server 21 (automatic pause).

Then, as explained in Fig. 5, the processor 12 renders the camera 4 and microphone 5 plus encoder 18 operative and switches the function of decoder 11 from the

VOD-use decode function to the videophone-use decode function. This permits execution of a telephone call with the other-side videophone function-added TV receiver 1' (phone processing).

After completion of the phone call by depression of the "Stop" button 7n of the remote control 7 or the "Stop" button 7n' of remote control 7' of the other-side videophone function-added TV receiver 1', when no videophone signal is received within a prespecified length of time period, the processor 12 judges that the TV broadcast program viewing function mode is ended and thus deactivates the videophone-use decode function of the decoder 11 and, at the same time, renders the camera 4 and microphone 5 plus encoder 18 inoperative such as at the item #6 in the "Phone Processing" shown in Fig. 5.

In this case, the decoder 11 stops the videophone-use decode function in the above-stated way, resulting in reactivation of the VOD-use decode function—— that is, the videophone-use decode function is switched to the VOD-use decode function. Then, the processor 12 restarts the reception of the download contents from VOD server 21. This received signal indicative of VOD contents is supplied to the decoder 11 and decoded thereby and then supplied to the display panel 8 and speakers 3, thereby enabling the user to enjoy it from the part which was interrupted by the above-noted videophone call session

(pause cancel).

(4) Others: Other modes includes, for example, an operation mode which is responsive to an image pickup instruction operation using the remote control 7, for activating the camera 4 and microphone 5 and for letting the encoder 18 perform the videorecording-use encode function to thereby cause the encoder 18 to encode a video signal obtained from the camera 4 and an audio signal from the microphone 5. When it is set in an image-capturing/storage mode for causing the storage unit 17 to store therein an image pickup signal thus obtained thereby, in case there is an incoming call from the other-side videophone function-added TV receiver 1', the camera 4 and microphone 5 plus encoder 18 are held in the activation state under control of the processor 12 and, simultaneously, the videorecording-use encode function is switched to the videophone-use encode function while deactivating the storage operation of the storage unit 17 (present state saving).

Then, as previously stated, the videophone function-added TV receiver 1 is set in the videophone function mode under control of the processor 12, thereby permitting telecommunication with the other-side videophone function-added TV receiver 1' (phone processing).

Upon completion of the phone call, the

videophone function mode is cancelled under control of the processor 12 in the way stated supra. Simultaneously, while retaining the camera 4 and microphone 5 in the activated state, the function of encoder 18 is switched from the videophone-use encode function to the videorecording-use encode function, followed by causing the videorecording operation of the storage unit 17 to restart. This leads to restart of the operation for storage in the storage unit 17 while the encoder 18 encodes the video signal from camera 4 and the audio signal from microphone 5 (recovery to saved state).

In this way, when there is a telephone call while the videophone function-added TV receiver 1 is in the power-off state, videophone telecommunication becomes enabled. Upon completion of the call, the TV receiver is automatically switched to the state that permits the user to watch a digital broadcast program received. When the videophone function-added TV receiver 1 is in other modes, the TV receiver becomes in the videophone telecommunication capable state in quick response to such call-in. After completion of this videophone call, the TV receiver returns to its original state in the previous mode just before reception of the incoming call, followed by restart of the previous operation. Accordingly, after the phone call session, it is possible for the user to continuously use the videophone function-added TV receiver

1 in its original state without having to manually operate the remote control 7 for causing it to recover to the state before the call-in.

It should be noted here that after the phone call is ended in response to depression of the "Stop" button 7n' of the other-side videophone function-added TV receiver 1', if no videophone signal is received within a predetermined length of time period, the processor 12 determines that the videophone function mode is ended. That is, the processor 12 continues to monitor arrival of a videophone signal from the network I/F 15 in the videophone function mode. When such state is continued for the predetermined length of time since the failure to receive any signal, it judges that the videophone function mode is completed. The same goes with other videophone function-added TV receivers of distant parties, such as the other-side videophone function-added TV receiver 1'.

In this way, whenever an incoming phone call is received from a distant party at the other end of a line, the TV receiver 1 is automatically set in the videophone function mode without requiring the user to perform manual operations. When any videophone signal is no longer received, a decision is made to regard it as completion of the videophone function mode so that the videophone function mode is automatically ended without requiring any user's manual operations.

Figs. 7A and 7B are flowcharts showing practical examples of forced start/stop control operations of the decoder and encoder, which are executed by respective processors upon start/end of a telephone call between the videophone function-added TV receivers 1 and 1' shown in Fig. 3.

It is noted that although the processing procedure in the videophone function mode shown in Fig. 5 and the incoming phone call handling processing shown in Fig. 6 indicate processing operations in the videophone function-added TV receivers 1 and 1', respectively, Figs. 7A-7B are diagrams showing flows of processing operations between the videophone function-added TV receivers 1 and 1' in phone call starting and ending events.

Also note that while the explanation using Figs. 7A-7B is under an assumption that each of the videophone function-added TV receivers 1 and 1' is arranged to have the structure and configuration shown in Figs. 1-2, equivalent elements of the other-side videophone function-added TV receiver 1' are denoted by similar reference numerals with an apostrophe (') added thereto, such as decoder 11', processor 12', etc.

Fig. 7A shows forced startup control operations of the decoders 11 and 11' and encoders 13 and 13' of the videophone function-added TV receivers 1 and 1' in a phone

call starting event, wherein an operation of the self-side videophone function-added TV receiver 1 of Fig. 3 is shown on the left side of Fig. 7A whereas an operation of the other-side videophone function-added TV receiver 1' of Fig. 3 is shown on the right side of Fig. 7A.

When the "Phone" button 7d of the remote control 7 for the videophone function-added TV receiver 1 is manually operated (at step 700), the HTML browser 13 gets started (step 701). The processor 12 sends an instruction from the network I/F 15 via network 6 to the other-side videophone function-added TV receiver 1' for rendering its decoder 11' operative (step 702). In the other-side videophone function-added TV receiver 1', this instruction is received at the network I/F 15'. Based on this instruction, the processor 12' renders the decoder 11' operative, thereby enabling execution of its videophone-use decode function (step 800). When the decoder 11' is activated in a mode for performing the videophone-use decode function, the processor 12' notifies, from the network I/F 15' via network 6, the self-side videophone function-added TV receiver 1 of the fact that the decoder 11' started up in the videophone-use decode function mode (step 801).

Upon receipt of this notice, the self-side videophone function-added TV receiver 1 operates so that its processor 12 renders the encoder 18 operative in the

videophone-use encode function mode (at step 703 in Fig. 7A). Then, it activates the decoder 11 in the videophone-use decode function mode (step 704). Next, the processor 12 sends an instruction from the network I/F 15 via network 6 to the other-side videophone function-added TV receiver 1' for causing its encoder 18' to start up (step 705). In the other-side videophone function-added TV receiver 1', this instruction is received by the from the network I/F 15' and, in responding thereto, the processor 12' renders the encoder 18' operative to thereby enable execution of the videophone-use encode function (step 802). When the encoder 18' is activated in the videophone-use encode function mode, the processor 12' notifies, from the network I/F 15' via network 6, the self-side videophone function-added TV receiver 1 of the fact that the encoder 18' started up in the videophone-use encode function mode (step 803). This results in establishment of a state enabling videophone communication between the self-side videophone function-added TV receiver 1 and the other-side videophone function-added TV receiver 1' (step 706).

In the case where videophone communication is started between the self-side videophone function-added TV receiver 1 and the other-side videophone function-added TV receiver 1' in this way, when an instruction for phone call startup is sent through manual operations of the

remote control 7 to one of the videophone function-added TV receivers, i.e., self-side videophone function-added TV receiver 1, several steps of operations are performed which follow: firstly, the decoder 11' is automatically rendered operative in the other-side videophone function-added TV receiver 1'; then, the decoder 11 and encoder 18 of the self-side videophone function-added TV receiver 1 are automatically activated in this order of sequence, thereby quickly enabling execution of a phone call from the self-side videophone function-added TV receiver 1 on the calling party side to the other-side videophone function-added TV receiver 1' on the called party side; next, the encoder 18' of other-side videophone function-added TV receiver 1' is activated to thereby enable execution of the phone call from the other-side videophone function-added TV receiver 1', which receives the call from the self-side videophone function-added TV receiver 1 and responds thereto, to the self-side videophone function-added TV receiver 1 whereby the videophone call handing is smoothly performed since the "Phone" button 7d of the remote control 7 was depressed.

Fig. 7B shows forced stop control operations of the decoders 11 and 11' and encoders 13 and 13' of the videophone function-added TV receivers 1 and 1' in a videophone call ending event, wherein an operation of the self-side videophone function-added TV receiver 1 of

Fig. 3 is shown on the left side of Fig. 7B whereas an operation of the other-side videophone function-added TV receiver 1' of Fig. 3 is shown on the right side of Fig. 7B.

When the "Stop" button 7n of the remote control 7 for the videophone function-added TV receiver 1 is depressed (at step 710), the processor 12 performs deactivation processing of the decoder 11 (step 711). In this case, the decoder deactivation processing may be the one that actually renders the decoder 11 inoperative as has been described using Figs. 5-6 or, alternatively, may be the one that causes decoder 11 to switch from the videophone-use decode function to the VOD-use decode function.

Then, the processor 12 sends a stop instruction notice from the network I/F 15 via network 6 to the other-side videophone function-added TV receiver 1' (at step 712 in Fig. 7B) and performs halt processing of the encoder 18 (step 713) whereby the phone call at the self-side videophone function-added TV receiver 1 is ended (step 716).

On the other hand, the halt(stop) instruction notice from the processor 12 to the other-side videophone function-added TV receiver 1' (at step 712) is the one that performs deactivation instruction of the decoder 11' in the other-side videophone function-added TV receiver 1'

(step 714) and deactivation instruction of the encoder 18' therein (step 715). In the other-side videophone function-added TV receiver 1', when the processor 12' receives this instruction for stopping the decoder 11', deactivation processing of decoder 11' is performed (step 810). When the processor 12' receives the instruction for stopping the encoder 18', deactivation processing of encoder 18' is performed (step 811). This results in the videophone call being completed.

Additionally, when the communication is ended at the other-side videophone function-added TV receiver 1' also, the decoder 11' is deactivated in a similar way to the case of the self-side videophone function-added TV receiver 1 in some cases and the processing for switching from the videophone-use decode function to any one of the TV program-use decode function or VOD-use decode function is performed in other cases, resulting in the encoder 18' being rendered inoperative.

In this way, by the user's manual operation of the "Stop" button 7n of the remote control 7 on the side of self-side videophone function-added TV receiver 1, the following processing operations are performed: first, the decoder 11 of self-side in videophone function-added TV receiver 1 is deactivated, thereby preventing on-screen display and playback of video images and voice sounds of the phone call from the other-side videophone function-

added TV receiver 1'; then, the encoder 18 is deactivated so that the video/voice information from the self-side videophone function-added TV receiver 1 is no longer displayed at the other-side videophone function-added TV receiver 1' in an automated way. Thus, it is possible to prevent unwanted visualization of an image on the distant party side even after the phone call was ended and also void undesired displaying of an image on the self side on the screen on the distant party side after completion of the phone call. In addition, as the technique is employed for sending the stop instructions of the decoder 11' and encoder 18' to the other-side videophone function-added TV receiver 1' from the self-side videophone function-added TV receiver 1, the other-side videophone function-added TV receiver 1' which receives the phone call from the self-side videophone function-added TV receiver 1 is such that the decoder 11' and encoder 18' are deactivated without requiring call ending operations using the remote control 7'. This makes it unnecessary for the user to perform manual operations for the call completion and thus avoids risks otherwise occurring due to the user's forgetting to perform such manual operations.

Note that although this practical example is arranged so that in the case of completion of the videophone function mode the decoder 11' and encoder 18' in the other-side videophone function-added TV receiver 1'

are deactivated in response to receipt of the stop command from the self-side videophone function-added TV receiver 1 (at steps 714 and 715 in Fig. 7B), this may be modified so that the self-side videophone function-added TV receiver 1 is configured to send a command for deactivation of the decoder 11' to the other-side videophone function-added TV receiver 1' whereas this other-side TV receiver 1' is arranged so that its processor 12' detects deactivation of the decoder 11' and then renders the encoder 18' inoperative.

Alternatively, although the decoder 11, 11' halts the videophone-use decode function when no videophone signals are supplied thereto, the processor 12, 12' may be designed to detect such videophone-use decode function deactivation of decoder 11, 11' and then renders the encoder 18, 18' inoperative. In this case, the videophone-use decode function of decoder 11 is deactivated in response to completion of a videophone call, e.g., a manual operation of the "Stop" button 7n of the remote control 7 on the videophone function-added TV receiver 1 side; in responding thereto, the encoder 18 also is rendered inoperative, resulting in no videophone signal being sent from the videophone function-added TV receiver 1 to the other-side videophone function-added TV receiver 1'. Then, the decoder 11' in the other-side videophone function-added TV receiver 1' halts its

videophone-use decode function due to the fact that no videophone signals are sent from the videophone function-added TV receiver 1; in response thereto, the processor 12' renders the encoder 18' inoperative. With such the arrangement, the videophone function mode is automatically quitted in the other-side videophone function-added TV receiver 1' even when no manual operations are performed for completion of this mode. In case the above-noted halt operation is done at the other-side videophone function-added TV receiver 1' also, similar mode deactivation is automatically performed at the videophone function-added TV receiver 1.

Still alternatively, although the encoder 18, 18' of videophone function-added TV receiver 1, 1' for performing videophone communication halts the videophone-use encode function in response to deactivation of the videophone-use decode function of decoder 11, 11' of the distant party's videophone function-added TV receiver 1', 1 that provides a videophone signal, the processor 12, 12' may be arranged to detect such videophone-use encode function deactivation of encoder 18, 18' and then halts the videophone-use decode function of decoder 11, 11'. In this case, when the videophone-use decode function of decoder 11 is halted in response to a manual operation of the "Stop" button 7n of the remote control 7 on the videophone function-added TV receiver 1 side as an example

after having ended the videophone communication, the encoder 18' on the other-side videophone function-added TV receiver 1' side is rendered inoperative; upon detection of this deactivation, the processor 12' halts the videophone-use decode function of the decoder 11'. This results in the videophone function mode being automatically quitted at the other-side videophone function-added TV receiver 1' without requiring the user to manually perform a videophone function mode completion operation. In case a videophone call completion operation is done using the remote control 7' on the other-side videophone function-added TV receiver 1' side also, the videophone function mode is automatically ended at the self-side videophone function-added TV receiver 1.

Fig. 8 is a diagram showing a perspective view of exterior appearance of a TV receiver set with additional videophone functions in accordance with a second embodiment, wherein reference numeral 1a designates an apparatus main body, numeral 30 denotes a video camera, and 31 indicates a connection cable. Constituent elements corresponding to those shown in Fig. 1 are indicated by the same reference numerals, and a detailed explanation thereof is eliminated herein.

The second embodiment shown in Fig. 8 is arranged so that the video camera 30 is detachably connected by the connection cable 31 to the apparatus main

body 1a of videophone function-added TV receiver 1. This video camera 30 is independently usable when disconnected from the apparatus main body 1a of videophone function-added TV receiver 1 and is also usable as a videophone equipment together with the apparatus main body 1a when linked by the connection cable 31 to the apparatus main body 1a of videophone function-added TV receiver 1.

In case the video camera 30 is coupled to the apparatus main body 1a by the connection cable 31 for use as part of the videophone equipment, this video camera is put at a lower location in front of the display screen 2 of apparatus main body 1a. In view of this, a couple of built-in loudspeakers 3 are mounted at specific positions above the display screen 2 in order to minimize unwanted mixture of audio sounds from a microphone (not shown) of the video camera 30 into these speakers 3.

It is noted that the apparatus main body 1a and the video camera 30 may be separately purchasable products or, alternatively, may be a set of products bundled together at the time of purchase.

Fig. 9 is a block diagram showing a practical example of circuit configuration of the second embodiment of the TV phone function-added TV receiver shown in Fig. 8, which includes a camera 32, microphone 33, encoder 34, storage device 35, decoder 36, and camera connection interface (I/F) 37. Components corresponding to those

shown in Figs. 2 and 8 are designated by the same reference numerals, and a detailed explanation thereof is omitted herein.

As shown in Fig. 9, the video camera 30 has in its housing the camera 32, microphone 33, encoder 34, storage device 35 and decoder 36.

The encoder 34 has a videophone-use encode function and videorecording-use decode function. In a case where a videophone call is done by connecting the video camera 30 via connection cable 31 to apparatus main body 1a, the encoder 34 operates in a mode of the videophone-use encode function. In case the video camera 30 is disconnected from the apparatus main body 1a for independent use, the video camera 30 is set in a function mode (imaging/recording function mode) for storing in the storage device 35 a video signal from the TV built-in camera 32 and an audio signal from the microphone 33. At this time, the encoder 34 executes the encode function for the recording, that is, the videorecording-use decode function.

The decoder 36 of video camera 30 is the one that decodes a playback signal from the storage device 35.

When the video camera 30 is coupled via the connection cable 31 to the apparatus main body 1a, the encoder 34 of video camera 30 is connected by this cable 31 to the camera link I/F 37, and the decoder 36 is

connected to the display panel 8. Although not specifically illustrated, the connection cable 31 has therein a control signal line(s) for supplying control signals that control respective parts of the video camera 30 from the processor 12 to the video camera 30 and a power supply line for feeding electrical power from the apparatus main body 1a to video camera 30.

When the apparatus main body 1a is in the power-on state, a connection state notifying signal which indicates whether the video camera 30 is connected or not is supplied to the processor 12 from the camera link I/F 37 that is provided within the apparatus main body 1a for connection of the video camera 30.

When the video camera 30 is connected to the apparatus main body 1a while the apparatus main body 1a is set in the power-on state by a manual operation of the "Power" button 7a of the remote control 7 or, alternatively, when the apparatus main body 1a, which has been turned off at the time point that the video camera 30 is connected to the apparatus main body 1a, is turned on by depression of the "Power" button 7a of remote control 7, a connection state notice signal indicative of connection of the video camera 30 is supplied from the camera link I/F 37 to processor 12.

The video camera 30 has its processor and an operation unit provided with several operation buttons,

such as a power button, videorecording button, playback button, stop button and others, although these are not illustrated. The video camera 30 also has a built-in power supply unit; so, this camera is usable for video image capturing purposes even after disconnection from the apparatus main body 1a of videophone function-added TV receiver 1. The video camera 30 further includes a monitor display and loudspeaker(s), although not specifically depicted.

When the video camera 30 is used by disconnecting it from the apparatus main body 1a, the encoder 34 is set in a cumulative videorecording mode for execution of the videorecording-use decode function, which is an initial or "default" function. More specifically, when using the video camera 30 in the cumulative videorecording mode, power-on of the video camera 30 results in the camera 32 starting an image pickup operation to generate a video signal, which is supplied to the monitor so that a presently captured state is displayed on its screen. Simultaneously, the encoder 34 is set in a state for execution of the videorecording-use encode function. Then, when the record button of the video camera 30 is depressed, a video signal from the camera 32 and an audio signal from the microphone 33 are encoded by the encoder 34 and cumulatively recorded in the storage device 35 as a video shot signal. When the stop

button is pressed, this cumulative videorecording operation is halted. When the playback button is pressed, the video shot signal being stored in the storage unit 35 is played back and displayed on the monitor screen of the video camera 30.

When the "Power" button 7a (Fig. 4) of the wireless remote control 7 is depressed after having connected the video camera 30 by connection cable 31 to apparatus main body 1a of videophone function-added TV receiver 1, the apparatus main body 1a is turned on; simultaneously, the video camera 30 also is rendered operative due to the fact that a power supply voltage is supplied thereto from the apparatus main body 1a through connection cable 31.

In the power-on state of the apparatus main body 1a, when the "Play" button $7m_2$ (Fig. 4) of remote control 7 is depressed, the processor 12 sends a playback control signal to the processor of the video camera 30 whereby the video camera 30 operates to read the video signal being stored in the storage device 35 and then supply it to the display panel 8 and speakers 3 for playback required. In case a digital broadcast program signal being stored in the storage device 17 is played back, the "TV" button 7b (Fig. 4) of remote control 7 is pressed to set the videophone function-added TV receiver 1 in the TV broadcast program viewing function mode; thereafter, the

"Play" button $7m_2$ of remote control 7 is manually operated.

In the state that the video camera 30 is coupled to the apparatus main body 1a, when "Phone" button 7d of the remote control 7 is depressed, the apparatus main body 1a is such that the decoder 11 and HTML browser 13 get started in a similar way to the above-stated first embodiment so that the decoder 11 is set in the state for execution of the videophone-use decode function. When the video camera 30 is turned on due to power feed, the encoder 34 is set in a state of live output mode for execution of the videophone-use encode function under control of the processor 12. Whereby, the videophone function-added TV receiver 1 is set in the videophone function mode.

This live output mode is the mode for supplying an output signal (video shot signal) of the encoder 34 to the apparatus main body 1a while minimizing the length of its transmission time. In this mode, a video signal from the camera 32 and audio signal from microphone 33 are encoded by the encoder 34 and directly supplied to the camera link I/F 37 of apparatus main body 1a without passing through the storage device 35.

In the videophone function mode, the video signal from the camera 32 and audio signal from microphone 33 are encoded by the encoder 34 that is set in the

videophone-use encode function mode and then supplied to the apparatus main body 1a as a videophone signal. This signal is received by the camera link I/F 37 in apparatus main body 1a and then supplied to network I/F 15 and thereafter sent via network 6 to a videophone function-added TV receiver set 1' of a distant party at the other end of a line——say, "other-side" videophone function-added TV receiver. A videophone signal from this other-side videophone function-added TV receiver 1' is received by the network I/F 15 and decoded by the decoder 11 and then fed to the display panel 8 and speakers 3 in a similar way to the first embodiment stated supra.

In case there is an incoming call from the other-side videophone function-added TV receiver 1' also, a similar operation to that of the first embodiment is performed although the second embodiment is such that the video camera 30 is rendered operative under control of the processor 12, thereby setting its encoder 34 in the live output mode for execution of the videophone-use encode function.

In case the videophone function mode is terminated, the "Stop" button 7n of remote control 7 is depressed in a similar way to the above-stated first embodiment. Whereby, the processor 12 halts the HTML browser 13 and, at the same time, disables the videophone-use decode function of decoder 11 for switching it to

another decode function. In addition, the processor 12 turns the video camera 30 off to stop the operation of video camera 30.

Regarding the VOD function mode of the videophone function-added TV receiver 1, this is similar to that of the first embodiment stated supra.

Fig. 10 is a flowchart showing the connect control that is performed by the processor 12 in the videophone function mode of the video camera 30 shown in Fig. 9.

As shown herein, when the apparatus main body 1a of videophone function-added TV receiver 1 is powered on by a manual operation of the "Power" button 7a of the remote control 7 (at step 1000), verification is made to determine whether the video camera 30 is connected to this apparatus main body 1a (step 1001). When it is detected using a connection state notice signal from the camera link I/F 37 that the video camera 30 is not yet coupled to the apparatus main body 1a or, alternatively, is disconnected therefrom (step S1002), the processor 12 disables the use of the videophone function mode and causes a message of this content to be displayed on the display screen 2 of display panel 8 (step 1004). Alternatively, when it is detected based on the connection state notice signal that the video camera 30 is connected to the apparatus main body 1a or detected that the

disconnected video camera 30 is now coupled thereto (step 1002), the processor 12 enables the power supply voltage to be fed to the video camera 30 and forces its encoder 34 to go into the videophone-use encode function executable mode (i.e., enables it to operate in the live output mode) (step 1003), thereby setting the videophone function-added TV receiver 1 in a state that it is usable in the videophone function mode (step 1005). In this state, when the "Phone" button 7d of the remote control 7 is manually operated, or alternatively, when there is an incoming call from the other-side videophone function-added TV receiver 1', the videophone function mode is set up in the way stated previously, resulting in the TV receiver 1 becoming capable of making a videophone call with the other-side videophone function-added TV receiver 1'.

Fig. 11 is a flowchart showing select control of an operation mode of the video camera 30 in Fig. 9.

As shown herein, when the video camera 30 is powered on (at step 1100), the built-in processor of video camera 30 checks whether an instruction for setup of the videophone function mode is received from the apparatus main body 1a of videophone function-added TV receiver 1 (step 1101).

As previously stated, the power-on of video camera 30 at the step 1100 is performed by manual operation of the "Power" button at the operation unit of

this video camera 30 when the video camera 30 is not connected to the apparatus main body 1a; when video camera 30 is connected to the apparatus main body 1a, the power-on is done in response to receipt of an instruction signal from the processor 12 of apparatus main body 1a, which signal is generated in response to receipt of a videophone function mode setup instruction due to depression of the "Phone" button 7d of remote control 7.

The checking of the videophone function mode setup instruction from the apparatus main body 1a at the step 1101 is for verifying whether this instruction is sent from the processor 12 of apparatus main body 1a via the camera link I/F 37, and when such videophone function mode setup instruction is received from the remote control 7 to the videophone function-added TV receiver 1, the processor 12 outputs a videophone function mode setup instruction signal to the video camera 30 via camera link I/F 37, which signal is for causing video camera 30 to execute the live output.

Then, in the video camera 30, when it is made sure by its processor as a result of the checking at the step 1101 that there is the videophone function mode setup instruction from the apparatus main body 1a (i.e., if YES at step 1102), this processor sets the operation mode of encoder 34 to the live output mode for execution of the videophone-use encode function (step 1103).

Alternatively, when it is affirmed that there is no such videophone function mode setup instruction from the apparatus main body 1a (i.e., if NO at step 1102), this case is any one of the following events: no videophone function mode setup instruction is sent from the remote control 7 to videophone function-added TV receiver 1; and the video camera 30 is disconnected from apparatus main body 1a. If this is case, at the video camera 30, its processor sets the encoder 34 in the cumulative videorecording mode for execution of the videorecording-use encode function (step 1104).

In this way, in the video camera 30, whether the apparatus main body 1a side is in a phone call enable state or in an out-of-call state is recognized. In accordance with this recognition result, the operation mode of encoder 34 is set up, followed by execution of compression processing (encoding) of moving-picture images on a per-image basis.

Although here the video camera 30 is arranged so that a notice from the processor 12 which is issued due to setup of the apparatus main body 1a in the videophone function mode is used to recognize whether the apparatus main body 1a side is in the phone call enable state or in the call disable state, in view of the fact that when the apparatus main body 1a and the video camera 30 are connected together by the connection cable 31 the

connection state notice signal is supplied from the camera link I/F 37 to processor 12 to thereby recognize that the video camera 30 was linked to apparatus main body 1a, another arrangement is employable for causing the processor 12 in such event to notify this state to the video camera 30 to thereby determine whether the apparatus main body 1a is presently set in the call enable state or call disable state and for setting the encoder 34 in the live output mode for execution of the videophone-use encode function. With this arrangement, whenever the apparatus main body 1a is set in the videophone function mode, the video camera 30 is forced to quickly operate in the videophone function mode.

The above-stated operations should not be limited only to the video camera which is detachably connected to the apparatus main body 1a of videophone function-added TV receiver 1. For example, in case the videophone function-added TV receiver 1 of Fig. 9 is modified to internally contain the camera 32, microphone 33, encoder 34 and storage device 35 in the apparatus main body 1a, these camera 32, microphone 33, encoder 34 and storage device 35 may be arranged to perform the operations shown in Fig. 11, wherein the encoder 34 may be designed to go into the live output mode in the videophone function mode and operate in the cumulative videorecording mode when the TV receiver operates in modes other than the

videophone function mode.

Examples of the connection cable 31 are the currently available standard video cables including, but not limited to, a high-definition multimedia interface (HDMI) signal cable and a digital video interface (DVI) signal cable.

This second embodiment also is the one that is similar in arrangement to the videophone function-added TV receiver 1 of the first embodiment shown in Fig. 2 when looking at an entirety of videophone function-added TV receiver 1 (the camera 32, microphone 33 and encoder 34 in video camera 30 are equivalent respectively to the camera 4, microphone 5 and encoder 18 in Fig. 2). Its operation in each mode is the one that executes a corresponding one of the operations shown in Figs. 5 to 7. Additionally, although the other-side videophone function-added TV receiver 1' is such that its decoder 11' and encoder 34' are rendered inoperative in responding to receipt of a deactivation instruction from the self-side videophone function-added TV receiver 1 (at steps 714 and 715 in Fig. 7B), this TV receiver may be modified so that when the decoder 11' is halted in response to receipt of a deactivation instruction of such decoder 11' as sent from the self-side videophone function-added TV receiver 1, the processor 12' detects this operation halt and then stops the encoder 34'.

In addition, in view of the fact that the decoder 11, 11' stops the videophone-use decode function when no videophone signal is supplied thereto, the second embodiment may be arranged in a similar manner to the first embodiment stated supra in a way which follows: upon completion of a videophone call, the videophone-use decode function of decoder 11 is deactivated by, for example, manual operation of the "Stop" button 7n of remote control 7 on the videophone function-added TV receiver 1 side; then, the encoder 18 also is rendered inoperative subsequently, resulting in no videophone signal being sent from the videophone function-added TV receiver 1 to other-side videophone function-added TV receiver 1' whereby the decoder 11' deactivates the videophone-use decode function; in responding thereto, the processor 12' renders the encoder 18' inoperative. Even in case the above-stated deactivation operation is done on the other-side videophone function-added TV receiver 1' side, similar mode deactivation is automatically performed on the videophone function-added TV receiver 1 side.

Although the encoder 18, 18' of videophone function-added TV receiver 1, 1' that performs videophone communication is arranged to halt the videophone-use encode function in response to deactivation of the videophone-use decode function of the decoder 11', 11 of its associative videophone function-added TV receiver 1',

1, the decoder 11, 11' may be modified to halt the videophone-use decode function in response to deactivation of the videophone-use encode function of encoder 18, 18' as detected by the processor 12, 12'. In this case, upon completion of a videophone call, when the videophone-use decode function of decoder 11 is halted by depression of the "Stop" button 7n of the remote control 7 on the videophone function-added TV receiver 1 side as an example, the encoder 18' of the other-side videophone function-added TV receiver 1' is rendered inoperative; upon detection of this deactivation by the processor 12', the decoder 11' is caused to stop the videophone-use decode function. With this arrangement, the videophone function mode is automatically ended in the other-side videophone function-added TV receiver 1' even when no videophone function mode completion operations are performed. In case the stop operation is done using the remote control 7' on the other-side videophone function-added TV receiver 1' side also, the videophone function mode is automatically ended in the self-side videophone function-added TV receiver 1 in a similar way.

Fig. 12 is a block diagram showing a circuit configuration of a videophone function-added TV receiver set in accordance with a third embodiment, which includes a decoder 38 and an echo canceller 39. Components corresponding to those shown in Fig. 1 are denoted by the

same reference numerals, and detailed explanations thereof are eliminated herein.

This third embodiment of Fig. 12 is different from the videophone function-added TV receiver 1 of the first embodiment shown in Fig. 2 in that the decoder 11 has only the TV program-use decode function and thus is for exclusive use in the TV broadcast program viewing function mode and in that the decoder 38 is additionally provided, which is for use in the videophone function mode and VOD function mode. This decoder 38 is connected to the network I/F 15. Also provided is the echo canceller 39 which removes or "cancels" an audio signal of a digital broadcast program signal of speakers 3 from an audio signal as output from microphone 5.

In the third embodiment also, it is possible by the above-stated operation of the wireless remote control 7 to individually set up any one of the TV broadcast program viewing function mode and videophone function mode and VOD function mode in a similar way to the first embodiment shown in Fig. 2. When it is set in the TV broadcast program viewing function mode, the decoder 11 is rendered operative under control of the processor 12 whereby a digital broadcast program signal from broadcast tuner 10 is decoded by the decoder 11 so that its video signal is supplied to the display panel 8 while letting an audio signal be fed to the speaker unit 3. In either the

videophone function mode or the VOD function mode, the decoder 38 is set by the processor 12 in an operation mode for execution of either the videophone-use decode function or VOD-use decode function whereby any one of a videophone call signal from the other-side videophone function-added TV receiver 1' which is received by the network I/F 15 or VOD contents is supplied to the decoder 38 and then decoded thereby (text information of VOD data is converted by HTML browser 13 into a video signal) so that its video signal is supplied to the display panel 8 with an audio signal being fed to the speaker 3.

Additionally in the third embodiment, the digital broadcast program signal and any one of the videophone call signal and VOD contents are simultaneously receivable and decodable in response to a manual operation of the remote control 7 to thereby enable these different video images to be displayed on the screen of the display panel 8——that is, these images are displayable on two separate windows on the display screen. The manual operation of remote control 7 in this case is as follows. The remote control 7 with the arrangement shown in Fig. 4 has a button for displaying two windows on one screen, i.e., "Two-Window Display" button. For example, this "Two-Window Display" button is pushed when the TV broadcast program viewing function mode is set up by depression of the "TV" button 7b; then, either the "Phone"

button 7d or the "VOD" button 7c is pushed to thereby set up the two-window display mode so that two-window display is performed.

In this two-window display mode, audio signals that are output from the decoder 11 and decoder 38 are simultaneously supplied to the speakers 3 in response to the manual operation of a select button (not shown in Fig. 4) that is provided at the remote control 7.

Incidentally, in the two-window display mode for displaying both a received digital broadcast program and a videophone signal at a time, audio/voice sounds from the speakers 3 can be taken into the microphone 5 and thus undesirably mixed into a telephone voice signal being input to the microphone 5, although each speaker 3 is spaced apart from the microphone 5 to have a certain degree of distance therefrom in a similar manner to the first embodiment shown in Fig. 1. In this case, a voice signal that is supplied to the speakers 3 contains an audio signal of the received digital broadcast program signal from the decoder 11 so that a signal which is derived from audio components of the digital broadcast program is superimposed with an output audio signal of the microphone 5. When this signal is transmitted to the other-side videophone function-added TV receiver 1', a distant party at the other end of a line becomes harder to catch the intended voice. In another case, the audio

sounds of the digital broadcast program that is received by the videophone function-added TV receiver 1 is leaked into the presently linked other-side videophone function-added TV receiver 1'. This poses problems as to privacy infringement and security impingement.

Fig. 13 is a diagram showing an exemplary two-window display state of the third embodiment, wherein the speaker unit 3 consists of a right-side speaker 3R and left-side speaker 3L and wherein a digital broadcast program display window 40 and a videophone-use window display 41 are simultaneously displayed on the display screen 2 on a side-by-side way. Components corresponding to those of Fig. 1 are indicated by the same reference numerals, and detailed explanations thereof are eliminated herein.

In the case of the two-window display mode shown in Fig. 13, the digital broadcast program viewing window 40 is displayed on one side——here, the left-hand side——whereas the videophone image window 41 which visualizes the image of a calling or called person is displayed on the other side——here, the right-hand side. In this case, audio sounds A and B that are produced from the right-side speaker 3R and left-side speaker 3L of the speaker unit 3 provided in the self-side videophone function-added TV receiver 1 are also picked up by the microphone 5, which is mounted in the display panel housing.

Note here that although in this example the digital broadcast program viewing window 40 is displayed on the left side of the display screen 2 whereas the videophone image window 41 is displayed on the right side thereof, the display positions of these windows may be laterally exchanged with each other. Additionally, these windows may be differed in size from each other. An example is that the digital broadcast program viewing window 40 is enlarged whereas the videophone image window 41 is made smaller.

To avoid the mixture or "invasion" of audio sounds of speakers 3R and 3L into the microphone 5, the third embodiment is arranged to have the echo canceller 30 as shown in Fig. 12. The voice signal sensed by the microphone 5 is supplied to this echo canceller 39; simultaneously, the audio signal of the received digital broadcast program as output from the decoder 11 is supplied to the echo canceller 39. At this time, the echo canceller 39 performs cancel processing to thereby remove from the output voice signal of the microphone 5 the audio signal of the digital broadcast program from the speakers 3 (i.e., right and left speakers 3R and 3L) which is mixed thereinto by use of the output audio signal of the decoder 11, and then outputs an echo-cancelled audio signal, which is supplied to the encoder 18.

Figs. 14 shows waveform diagrams of some major

signals for explanation of the operation of the echo canceller 39.

More specifically, Fig. 14(a) shows an audio signal "A" which is output from the decoder 11 to the right-side speaker 3R, and Fig. 14(b) shows an audio signal B that is output from the decoder 11 to the left-side speaker 3L. Fig. 14(c) shows an output audio signal of the microphone 5, which is a videophone voice signal C with the audio signals A and B being superimposed thereon. The echo canceller 39 functions to subtract and remove from this output signal of the microphone 5 both the audio signal A being output from the decoder 11 to the right speaker 3R and the audio signal B being output to the left speaker 3L. With this TV sound canceling operation, only the audio signal C of the telephone voice as input to the microphone 5 is output from the echo canceller 39 as shown in Fig. 14(d) and then supplied to the encoder 18.

In this way, even when both the received digital broadcast program's video image and the image of a distant party at the other end of a line are simultaneously displayed side-by-side on the display screen while letting respective audio/voice sounds be output from the speakers 3, it is possible to limit an audio signal being picked up by the microphone 5 and sent to the distant party to the telephone voice signal only. This makes it possible to smoothly perform videophone telecommunication without

impairing the privacy and security as to the presently watched digital broadcast program.

Although the third embodiment is configured to perform operations in respective modes which are equivalent to those shown in Figs. 5 to 7 in a similar way to the first embodiment stated supra and is designed so that the decoder 11' and encoder 34' in the other-side videophone function-added TV receiver 1' are rendered inoperative in response to receipt of a deactivation command from the self-side videophone function-added TV receiver 1 (at steps 714 and 714 in Fig. 7B), the embodiment may be modified so that the self-side videophone function-added TV receiver 1 sends a command for deactivation of the decoder 11'. In this case, when the decoder 11' is deactivated in response to this command, the processor 12' detects it and then renders the encoder 34' inoperative.

In addition, in view of the fact that the decoder 11, 11' stops the videophone-use decode function when no videophone signal is supplied thereto, the second embodiment may be arranged in a similar manner to the first embodiment stated supra in a way which follows: upon completion of a videophone call, the videophone-use decode function of decoder 11 is deactivated by, for example, manual operation of the "Stop" button 7n of remote control 7 on the videophone function-added TV receiver 1 side;

then, the encoder 18 also is rendered inoperative subsequently, resulting in no videophone signal being sent from the videophone function-added TV receiver 1 to other-side videophone function-added TV receiver 1' whereby the decoder 11' deactivates the videophone-use decode function; in responding thereto, the processor 12' renders the encoder 18' inoperative. Even in case the above-stated deactivation operation is done on the other-side videophone function-added TV receiver 1' side, similar mode deactivation is automatically performed on the videophone function-added TV receiver 1 side.

Although the encoder 18, 18' of videophone function-added TV receiver 1, 1' that performs videophone communication is arranged to halt the videophone-use encode function in response to deactivation of the videophone-use decode function of the decoder 11', 11 of its associative videophone function-added TV receiver 1', 1, the decoder 11, 11' may be modified to halt the videophone-use decode function in response to deactivation of the videophone-use encode function of encoder 18, 18' as detected by the processor 12, 12'. In this case, upon completion of a videophone call, when the videophone-use decode function of decoder 11 is halted by depression of the "Stop" button 7n of the remote control 7 on the videophone function-added TV receiver 1 side as an example, the encoder 18' of the other-side videophone

function-added TV receiver 1' is rendered inoperative; upon detection of this deactivation by the processor 12', the decoder 11' is caused to stop the videophone-use decode function. With this arrangement, the videophone function mode is automatically ended in the other-side videophone function-added TV receiver 1' even when no videophone function mode completion operations are performed. In case the stop operation is done using the remote control 7' on the other-side videophone function-added TV receiver 1' side also, the videophone function mode is automatically ended in the self-side videophone function-added TV receiver 1 in a similar way.

Further note that although this third embodiment is arranged so that the camera 4 and microphone 5 plus encoder 18 are internally built in the housing of videophone function-added TV receiver 1, the embodiment may be modified in a similar manner to the second embodiment shown in Fig. 9 so that it uses a detachable video camera in the apparatus main body of the videophone function-added TV receiver 1, which camera is used in a similar way to the video camera 30 of the second embodiment.

It should be further understood by those skilled in the art that although the foregoing description has been made on embodiments of the invention, the invention is not limited thereto and various changes and

modifications may be made without departing from the spirit of the invention and the scope of the appended claims.

Claims

1. A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:

a network interface configured to receive first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface and second digital information from the another communication apparatus;

a camera configured to generate video information which is included in third digital information;

a display configured to display digital information; and

a processor;

wherein when the processor receives an inbound videophone call notice while displaying the first digital information on the display, the processor pauses the displaying of the first digital information and renders the camera operative;

wherein the processor outputs the third digital information to the another communication apparatus and displays the second digital information of the videophone call on the display; and

wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and stops the camera.

2. The communication apparatus according to claim 1,

wherein after the videophone call is finished, the processor restarts the displaying of the first digital information.

3. The communication apparatus according to claim 2, further comprising a microphone configured to generate audio information which is included in the third digital information.

4. The communication apparatus according to claim 3,

wherein when the processor receives the inbound videophone call notice while displaying the first digital information on the display, the

processor switches a function of processing video information of the first digital information to a function of processing video information of the second digital information of the videophone call.

5. The communication apparatus according to claim 4,

wherein when the processor receives an input for making an outbound videophone call to the another communication apparatus, the processor renders the camera and microphone operative and displays information indicating the outbound videophone call on the display calling message.

6. The communication apparatus according to claim 5, further comprising an echo canceller which cancels an audio signal of the first digital information from an audio signal that is output from the microphone.

7. The communication apparatus according to claim 6,

wherein the processor processes the first digital information with an HTML browser.

8. A method for transmitting and receiving digital information for a communication apparatus,

wherein the communication apparatus comprises a camera, a network interface, a display and a processor; and

wherein the method is executed by the processor,

the method comprising the steps of:

displaying first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface;

upon receiving an inbound videophone call notice while playing the first digital information,

pausing the displaying of the first digital information;

rendering the camera operative;

receiving second digital information from the another communication apparatus via the network interface;

generating video information which is included in third digital information by the camera;

displaying the second digital information on the display; and

outputting the third digital information to an another communication apparatus;

upon receiving an input for stopping the videophone call,

stopping output of the third digital information; and

stopping the camera.

9. The method according to claim 8, further comprising the step of:

restarting the displaying of the first digital information after the videophone call is finished.

10. The method according to claim 9,

wherein the communication apparatus further comprises a microphone, and

the method further comprising the step of:

generating audio information which is included in the third digital information by the microphone.

11. The method according to claim 10, further comprising the step of:

upon receiving the inbound videophone call notice while displaying the first digital information,

switching a function of processing video information of the first digital information to a function of processing video information of the second digital information of the videophone call.

12. The method according to claim 11, further comprising the steps of:

upon receiving an input for making an outbound videophone call to the another communication apparatus,

rendering the camera and microphone operative; and

displaying information indicating the outbound videophone call on the display at the same time.

13. The method according to claim 12,

wherein the communication apparatus further comprising an echo

canceller,

the method further comprising the step of:

cancelling an audio signal of the first digital information form an audio signal that is output from the microphone by the echo canceller.

14. The method according to claim 13, further comprising the step of:

processing the first digital information with an HTML browser.

15. A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:

a network interface configured to receive first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface and second digital information from the another communication apparatus;

a camera configured to generate video information which is included in a third digital information;

a display configured to display digital information; and

a processor;

wherein when the processor receives an inbound videophone call notice while displaying the first digital information on the display, the processor renders the camera operative;

wherein the processor outputs the third digital information to the another communication apparatus, displays the first digital information on the display and displays the second digital information of the videophone call on the display, simultaneously; and

wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and stops the camera.

16. A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:

a network interface configured to receive first digital information which is received from a contents server which is coupled to the

communication apparatus via the network interface and second digital information from the another communication apparatus;

a camera configured to generate video information which is included in third digital information;

a microphone configured to generate audio information which is included in the third digital information;

a display configured to display digital information; and

a processor;

wherein when the processor receives an inbound videophone call notice while storing a video signal from the camera and storing an audio signal from the microphone, the processor pauses the storing of the video signal and audio signal the image pickup signal and renders the camera operative;

wherein the processor outputs the third digital information to the another communication apparatus and displays the second digital information of the videophone call on the display; and

wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and restarts to store the video signal and the audio signal.

ABSTRACT OF THE DISCLOSURE

A videophone system includes a processor which selectively sets a television (TV) broadcast program viewing function mode and videophone function mode in response to manual operation of a remote control, a decoder which performs, in the TV program view mode, a TV program-use decode function for decoding a broadcast program signal received from a TV tuner to thereby display it on a display screen while producing audio sounds by loudspeakers and which performs, in the videophone function mode a videophone-use decode function for decoding a videophone signal received from a distant party to thereby display on the screen an image of the distant party using the screen and speakers, and an encoder which performs a videophone-use encode function for encoding a video signal from a camera and a voice signal from a microphone to generate a videophone signal, which is sent to the distant party via a network.

申請データシート(37 CFR 1.76)を使った実用及び意匠登録出願宣言書(37 CFR 1.63)

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

発明の名称 Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION

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As the below named inventor, I hereby declare that:

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I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

発明者の正式氏名:
LEGAL NAME OF INVENTOR: Kazunori IWABUCHI

署名:
Signature: Kazunori Iwabuchi

日付(任意):
Date (Optional): Jan. 21, 2013

備考:出願データシート(PTO/AIA/14 あるいはその同等用紙)は、発明の自主独立体全体の命名を含め、本用紙に添付すること。なお残余の発明者ごとにこの用紙の写しを使用する。

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発明者の正式氏名:
LEGAL NAME OF INVENTOR: Hiroki MIZOSOE

署名:
Signature: Hiroki Mizosoe

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Date (Optional): Jan 16, 2013

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発明者の正式氏名:
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Signature: Mutsumi Shimoda

日付(任意):
Date (Optional): Jan. 18. 2013

備考:出願データシート(PTO/AIA/14 あるいはその同等用紙)は、発明の自主独立体全体の命名を含め、本用紙に添付すること。なお残余の発明者ごとにこの用紙の写しを使用する。

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I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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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.

私は、特許請求の範囲を含む上記の明細書を確認し内容を理解しています。

I have reviewed and understand the contents of the above-identified application, including the claims.

私は、連邦規則法典第 37 編規則 1.56 に定義されている、特許性について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

発明者の正式氏名:

LEGAL NAME OF INVENTOR: Setiawan BONDAN

署名:

Signature:

日付(任意):

Date (Optional): Jan. 16, 2013

備考:出願データシート(PTO/AIA/14 あるいはその同等用紙)は、発明の自主独立体全体の命名を含め、本用紙に添付すること。なお残余の発明者ごとにこの用紙の写しを使用する。

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional copy of the present form for each additional inventor.

申請データシート(37 CFR 1.76)を使った実用及び意匠登録出願宣言書(37 CFR 1.63)

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

発明の名称 Title of Invention	TELEVISION RECEIVER WITH A TV PHONE FUNCTION

下記発明者である私は、つぎのことがらを宣言します。

As the below named inventor, I hereby declare that:

本宣言は

This declaration is directed to:

☐ 添付されている、あるいは
The attached application, or

_____に、米国出願あるいは PCT 国際出願番号_____として出願されているものに宛てられています。

☒ United States application or PCT international application number 13/723312 fled on December 21, 2012 .

上記の出願は私自身、あるいは私が権限を譲与したものによって行われたものです。

The above-identified application was made or authorized to be made by me.

私は本出願書中にあらわれるもともとの発明者、あるいはもともとの共同発明者です。

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

私は本宣言書において故意に虚偽の申し立てを行った場合は 18 U.S.C. 1001 により、罰金あるいは最高五(5)年の禁固刑、あるいはその両方による罰則の対象となることを認めます。

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I have reviewed and understand the contents of the above-identified application, including the claims.

私は、連邦規則法典第 37 編規則 1.56 に定義されている、特許性について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

発明者の正式氏名:
LEGAL NAME OF INVENTOR: Manabu SASAMOTO

署名:
Signature: Manabu Sasamoto

日付(任意):
Date (Optional): 1/16/13

備考:出願データシート(PTO/AIA/14 あるいはその同等用紙)は、発明の自主独立体全体の命名を含め、本用紙に添付すること。なお残余の発明者ごとにこの用紙の写しを使用する。

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional copy of the present form for each additional inventor.

CERTIFICATE OF TRANSLATION

I, the below-named translator, of 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan hereby declare that I am conversant with the Japanese and English languages and that to the best of my knowledge and belief the attached Declaration includes a true and accurate translation into English of the Japanese text contained in the Declaration.

Dated July 17, 2014 Signature of Translator:

Takeshi Kanai

FIG.1

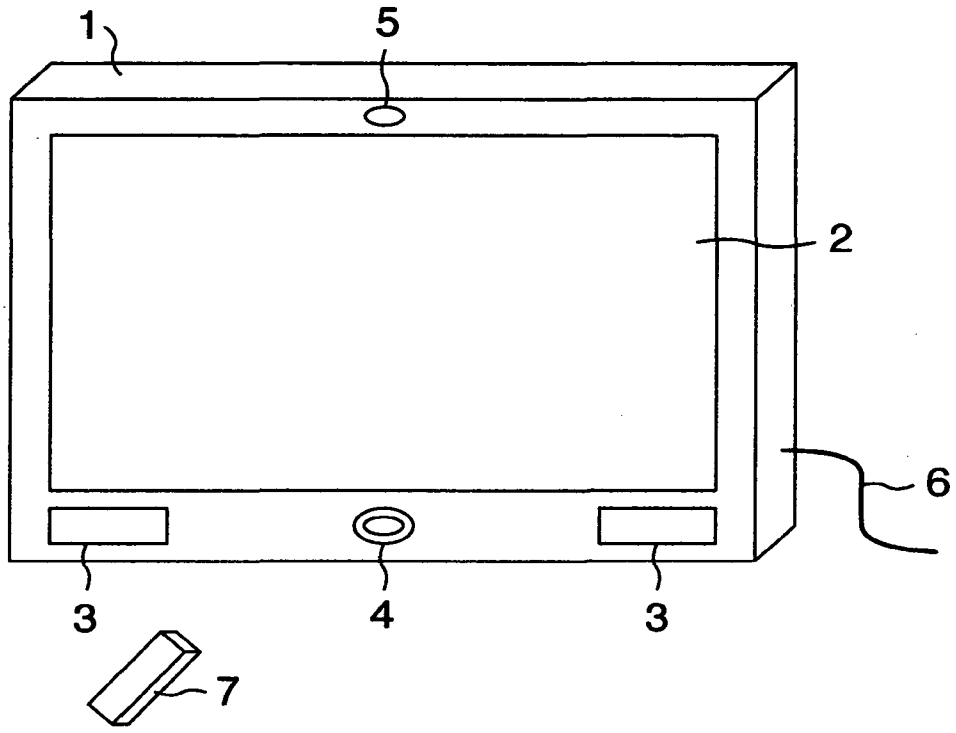


FIG.2

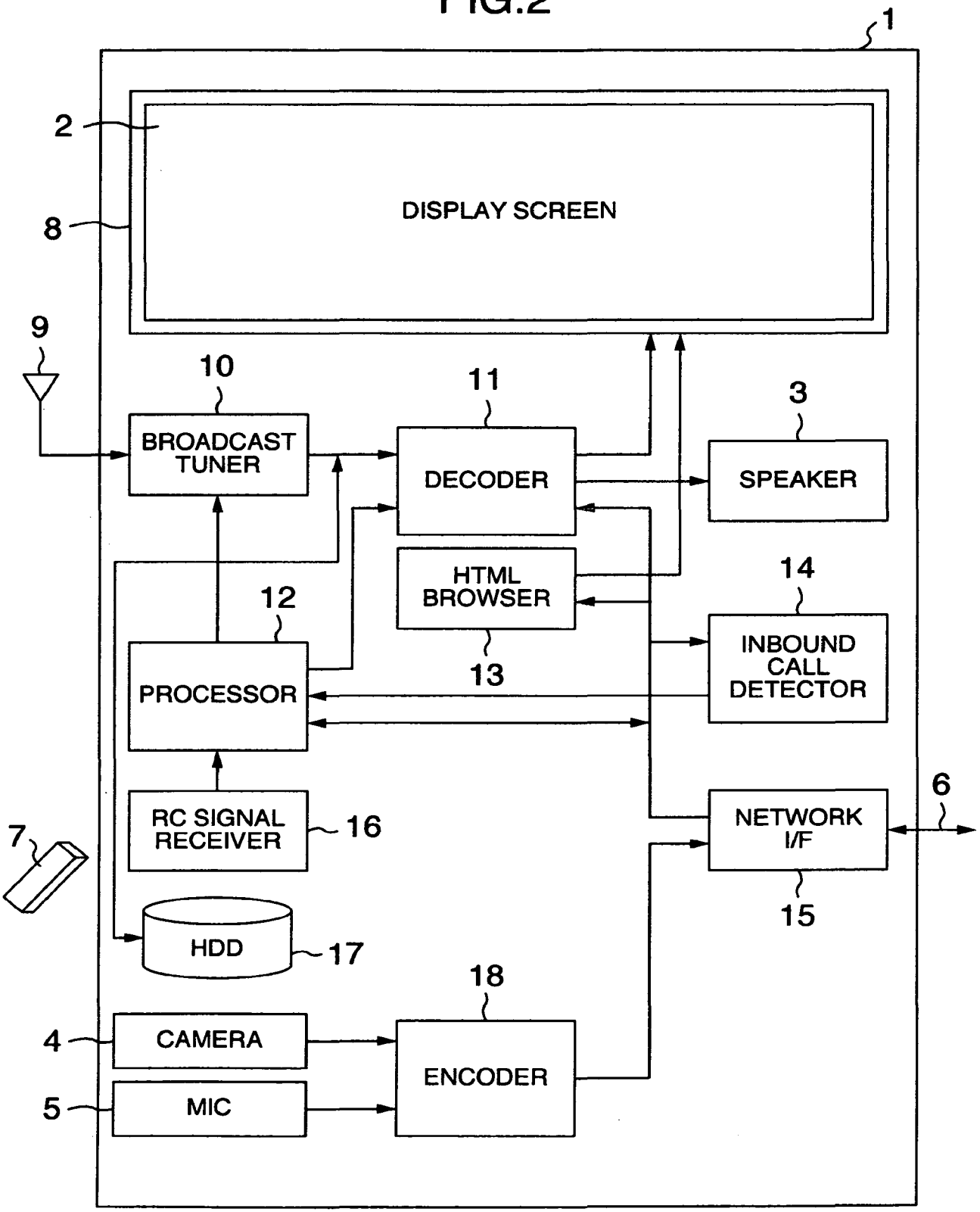

1
2
DISPLAY SCREEN
8
9
10
BROADCAST TUNER
11
DECODER
3
SPEAKER
HTML BROWSER
14
12
INBOUND CALL DETECTOR
13
PROCESSOR
6
RC SIGNAL RECEIVER
16
NETWORK I/F
7
15
HDD
17
18
4
CAMERA
ENCODER
5
MIC

FIG.3

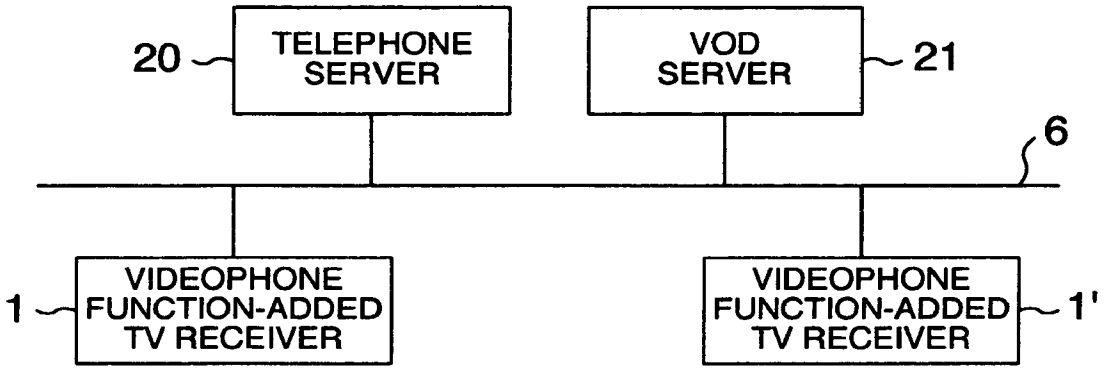

20
TELEPHONE SERVER
VOD SERVER
21
6
1
VIDEOPHONE FUNCTION-ADDED TV RECEIVER
VIDEOPHONE FUNCTION-ADDED TV RECEIVER
1'

FIG.4

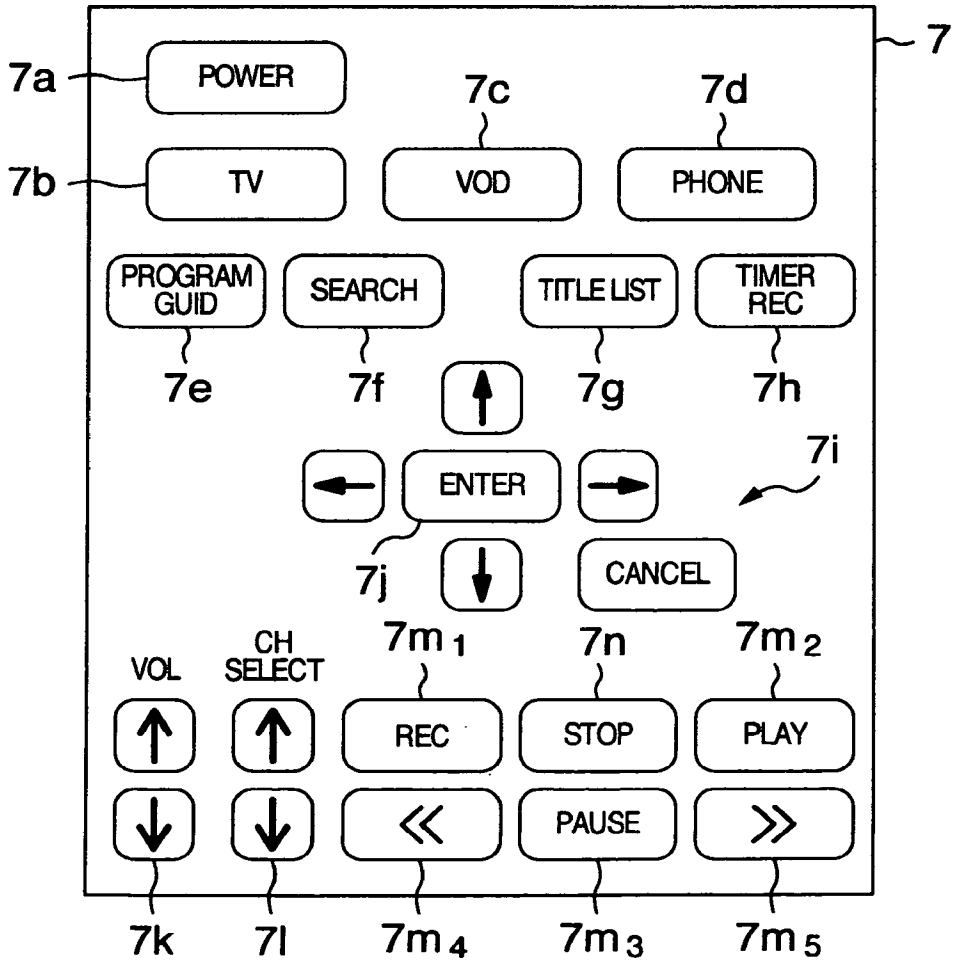

7
7a
POWER
7c
7d
7b
TV
VOD
PHONE
PROGRAM GUID
SEARCH
TITLE LIST
TIMER REC
7e
7f
7g
7h
7i
ENTER
7j
CANCEL
VOL
CH SELECT
7m1
7n
7m2
REC
STOP
PLAY
PAUSE
7k
7l
7m4
7m3
7m5

FIG.5

ITEM #	VOD PROCESSING	PHONE PROCESSING	REMARKS
1	PW BUTTON DEPRESSED	PW BUTTON DEPRESSED	
2	• VOD BUTTON DEPRESSED • BROWSER START	• PHONE BUTTON PRESSED • BROWSER START	SERVER SENDS OPERATION SCREEN
3	TITLE SELECTED & DECIDED	CALL DESTINATION SELECTED & DECIDED	
4	CHECK CHARGE & PLAYBACK RIGHT	• DISPLAY CALLING MESSAGE • ACTIVATE CAMERA, MIC & ENCODER	
5	• SWITCH DECODER INPUT • DECODER OPERATION START • PLAYBACK	• SWITCH DECODER INPUT • DECODER OPERATION START • TALKING BY PHONE	
6	• STOP BUTTON DEPRESSED • DECODER STOP • BROWSER STOP	• STOP BUTTON DEPRESSED • DECODER STOP • BROWSER STOP • CAMERA, MIC & ENCODER DEACTIVATED	SAME BUTTON OPERATION AS DECODER IS DEACTIVATED
7	PLAYBACK END	CALL END	

FIG.6

	PW OFF	DURING TV WATCHING	DURING VOD WATCHING	OTHERS
CALL ARRIVED	• AUTO-PW ON • CALL HANDLING • TV WATCHING	• AUTO-VIDEOREC START • CALL HANDLING • AUTO-PLAY START	• AUTO-PAUSE • CALL HANDLING • PAUSE RESET	• PRESENT STATE SAVE • CALL HANDLING • RECOVER TO SAVED STATE

FIG.7A

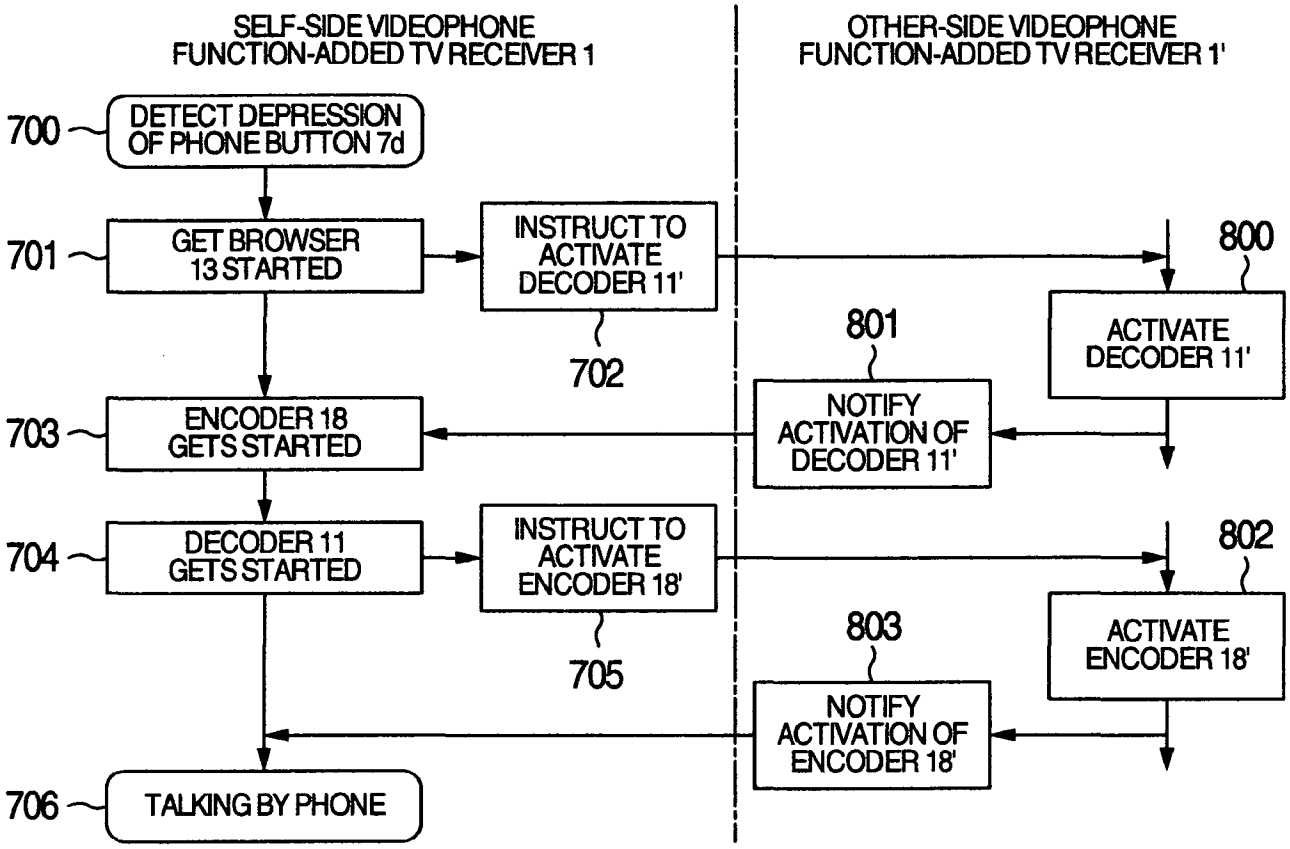

SELF-SIDE VIDEOPHONE FUNCTION-ADDED TV RECEIVER 1
OTHER-SIDE VIDEOPHONE FUNCTION-ADDED TV RECEIVER 1'
700
DETECT DEPRESSION OF PHONE BUTTON 7d
701
GET BROWSER 13 STARTED
INSTRUCT TO ACTIVATE DECODER 11'
702
800
ACTIVATE DECODER 11'
801
NOTIFY ACTIVATION OF DECODER 11'
703
ENCODER 18 GETS STARTED
704
DECODER 11 GETS STARTED
INSTRUCT TO ACTIVATE ENCODER 18'
705
802
ACTIVATE ENCODER 18'
803
NOTIFY ACTIVATION OF ENCODER 18'
706
TALKING BY PHONE

FIG.7B

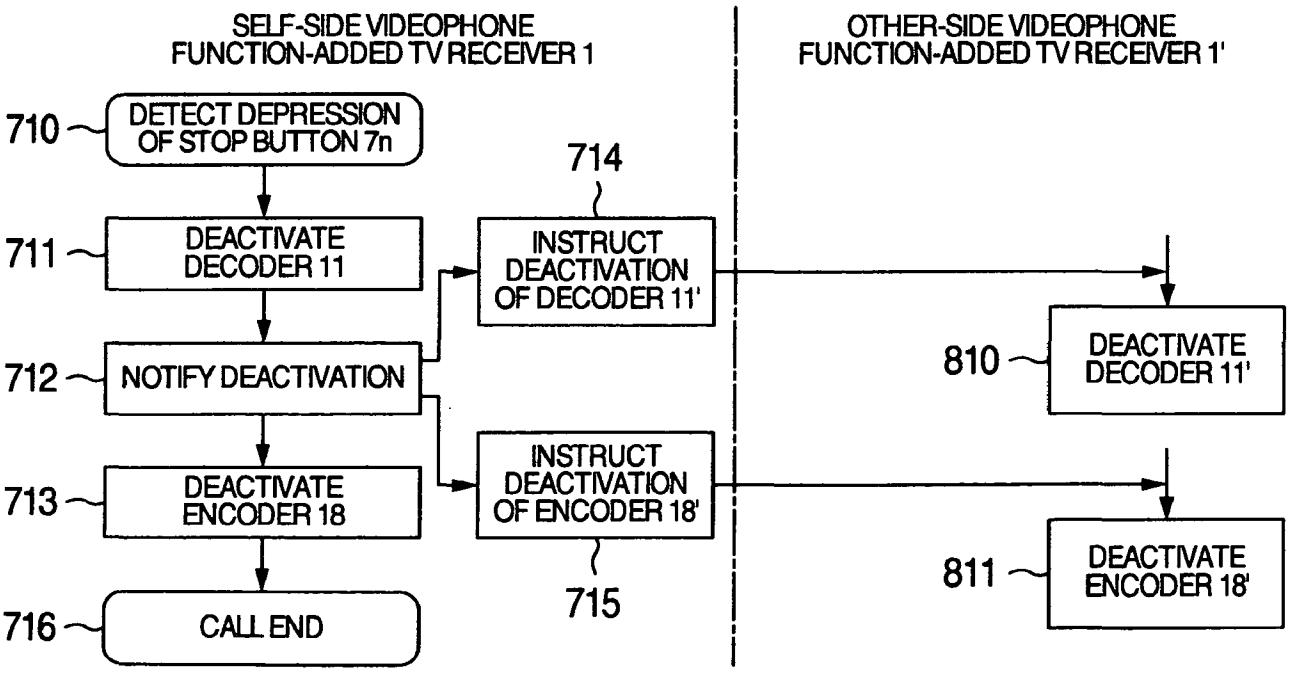

SELF-SIDE VIDEOPHONE FUNCTION-ADDED TV RECEIVER 1
OTHER-SIDE VIDEOPHONE FUNCTION-ADDED TV RECEIVER 1'
710
DETECT DEPRESSION OF STOP BUTTON 7n
714
711
DEACTIVATE DECODER 11
INSTRUCT DEACTIVATION OF DECODER 11'
810
DEACTIVATE DECODER 11'
712
NOTIFY DEACTIVATION
713
DEACTIVATE ENCODER 18
INSTRUCT DEACTIVATION OF ENCODER 18'
715
811
DEACTIVATE ENCODER 18'
716
CALL END

FIG.8

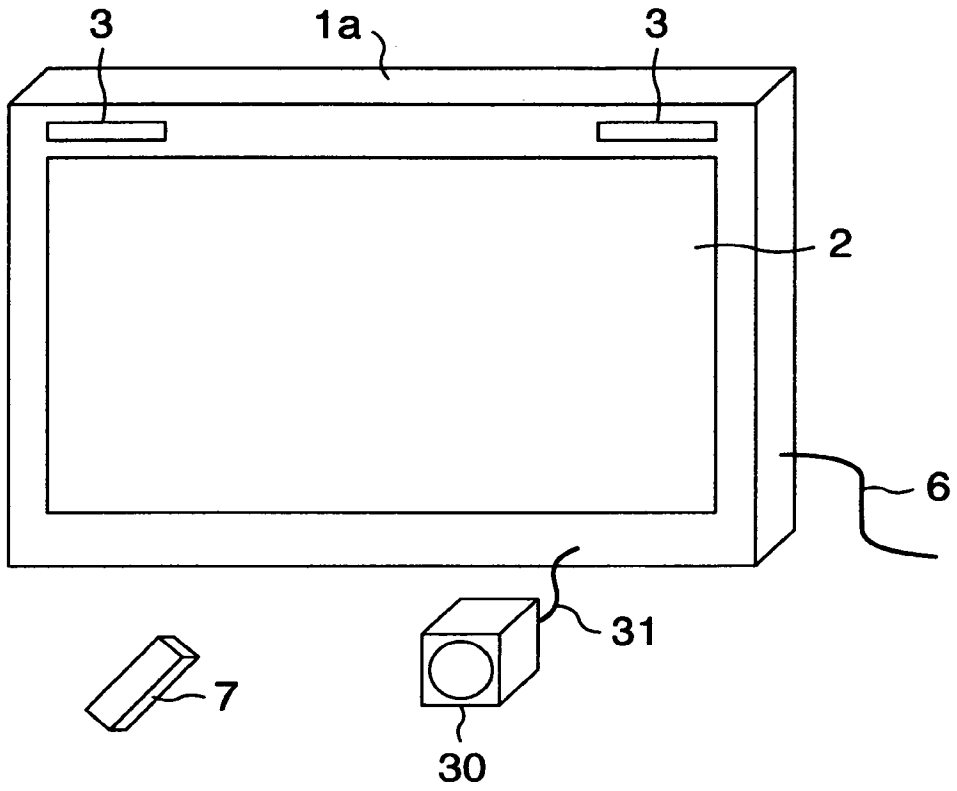


FIG.9

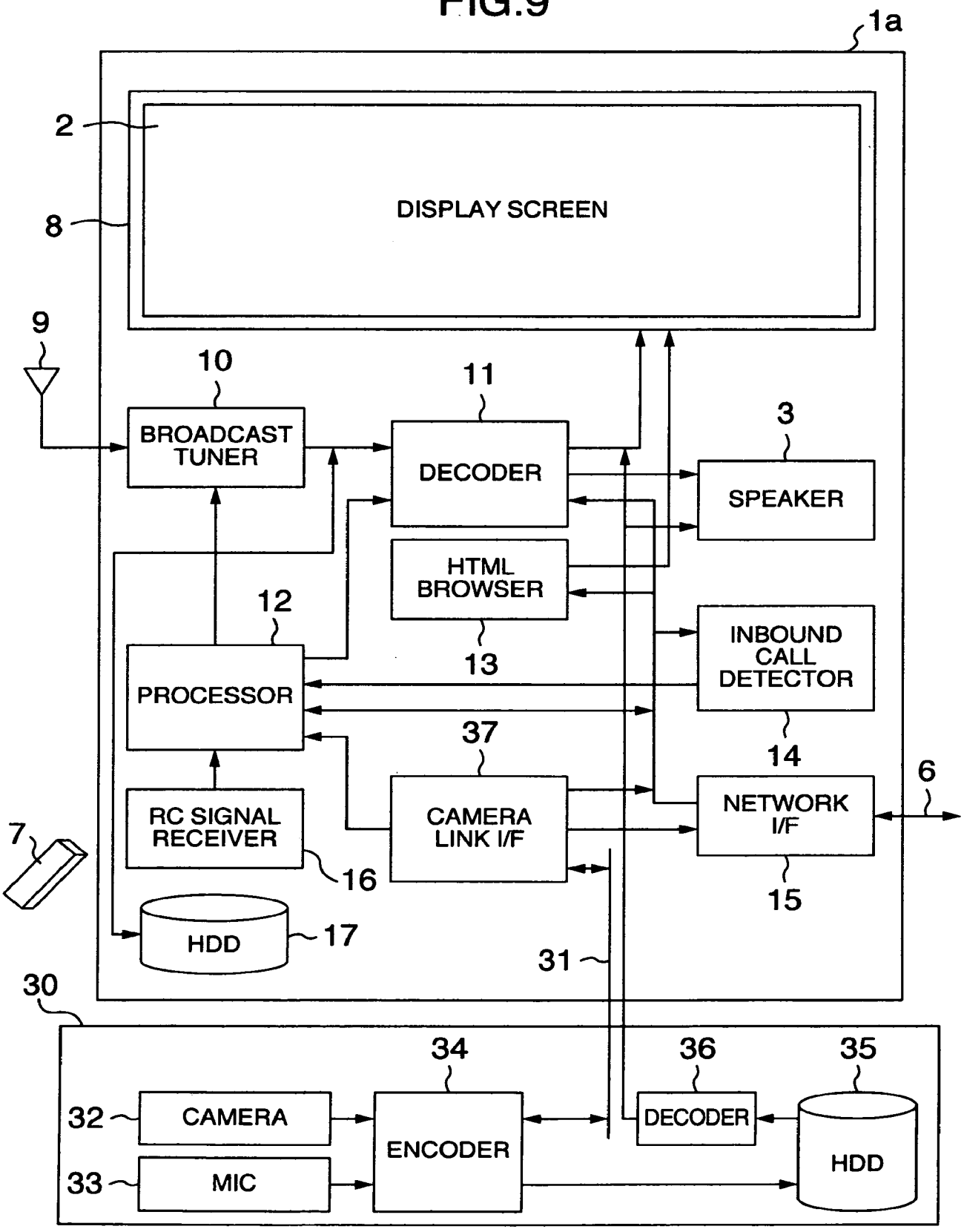

1a
2
DISPLAY SCREEN
8
9
10
BROADCAST TUNER
11
DECODER
3
SPEAKER
HTML BROWSER
12
13
PROCESSOR
INBOUND CALL DETECTOR
14
37
6
RC SIGNAL RECEIVER
CAMERA LINK I/F
NETWORK I/F
7
16
15
HDD
17
31
30
34
36
35
32
CAMERA
ENCODER
DECODER
HDD
33
MIC

FIG.10

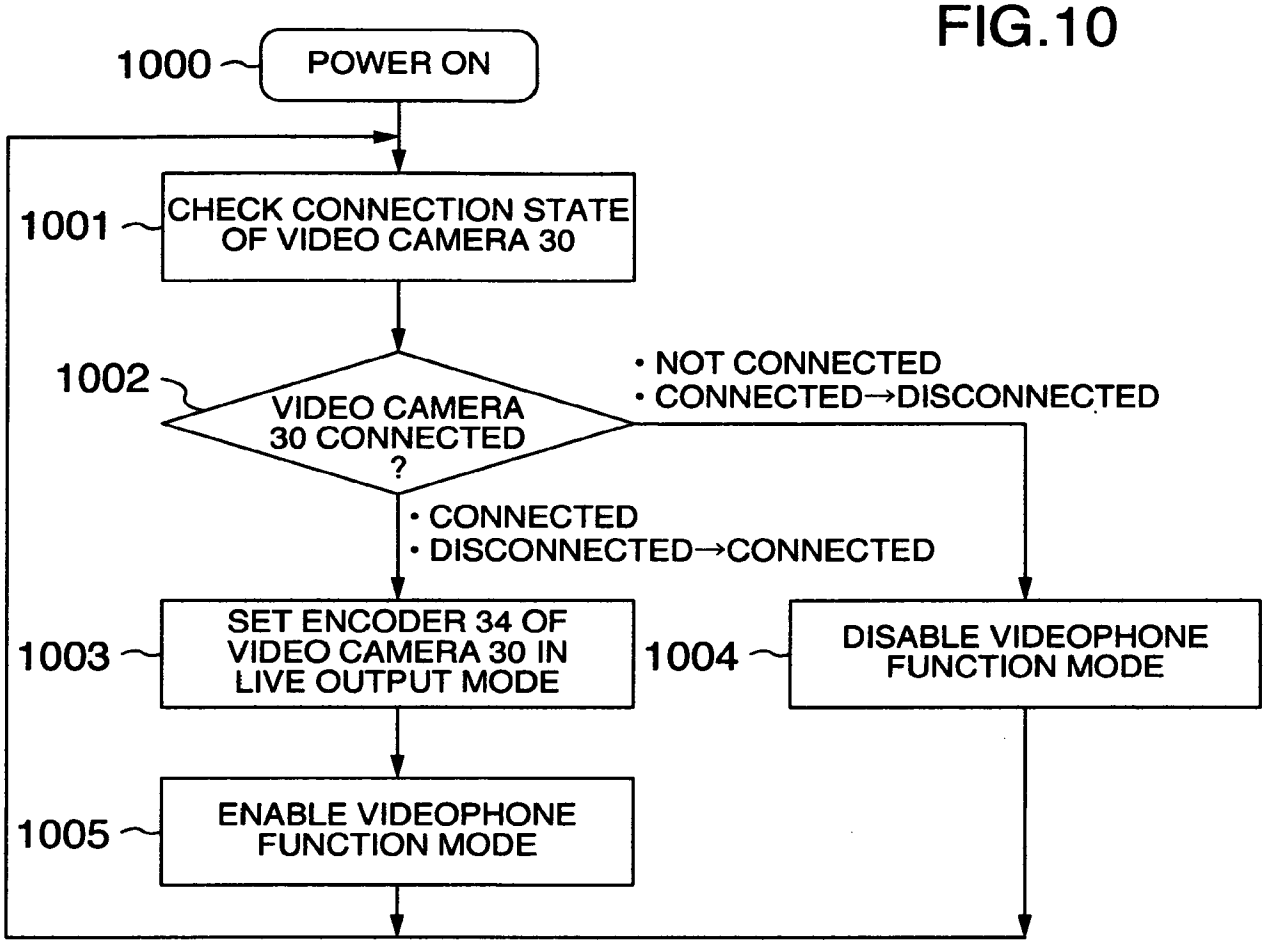

1000
POWER ON
1001
CHECK CONNECTION STATE OF VIDEO CAMERA 30
1002
VIDEO CAMERA 30 CONNECTED ?
• NOT CONNECTED
• CONNECTED→DISCONNECTED
• CONNECTED
• DISCONNECTED→CONNECTED
1003
SET ENCODER 34 OF VIDEO CAMERA 30 IN LIVE OUTPUT MODE
1004
DISABLE VIDEOPHONE FUNCTION MODE
1005
ENABLE VIDEOPHONE FUNCTION MODE

FIG.11

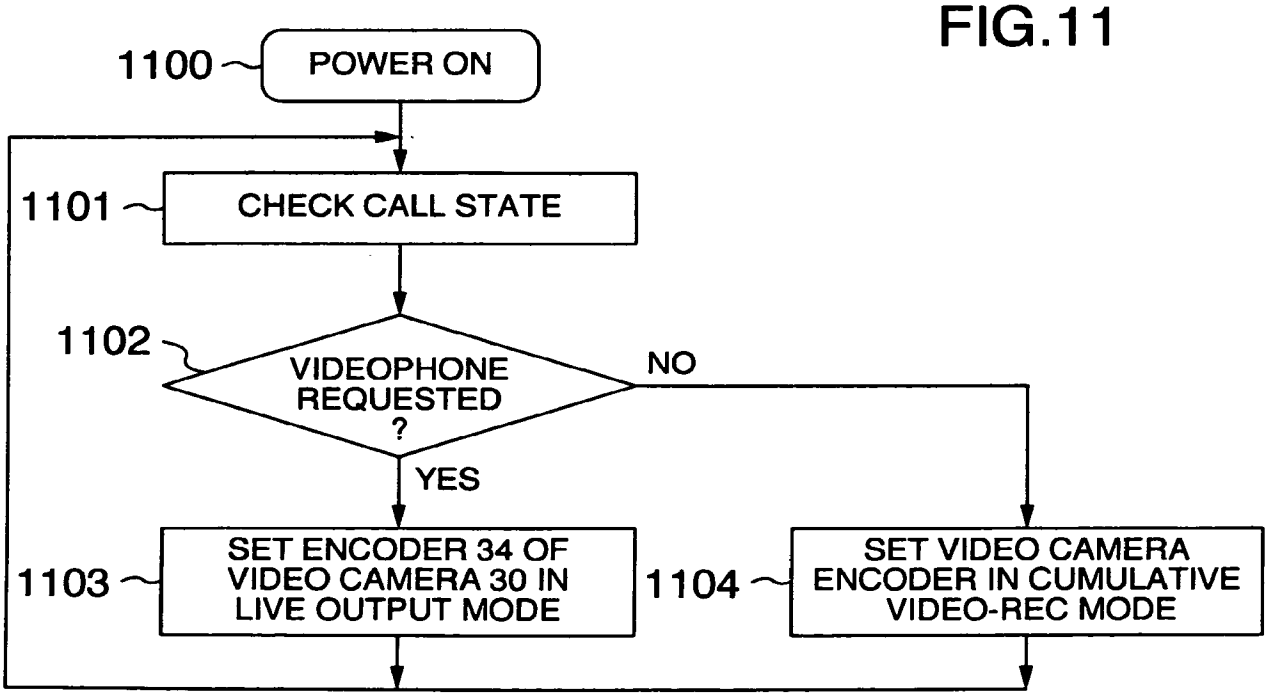

1100
POWER ON
1101
CHECK CALL STATE
1102
VIDEOPHONE REQUESTED ?
NO
YES
1103
SET ENCODER 34 OF VIDEO CAMERA 30 IN LIVE OUTPUT MODE
1104
SET VIDEO CAMERA ENCODER IN CUMULATIVE VIDEO-REC MODE

FIG.12

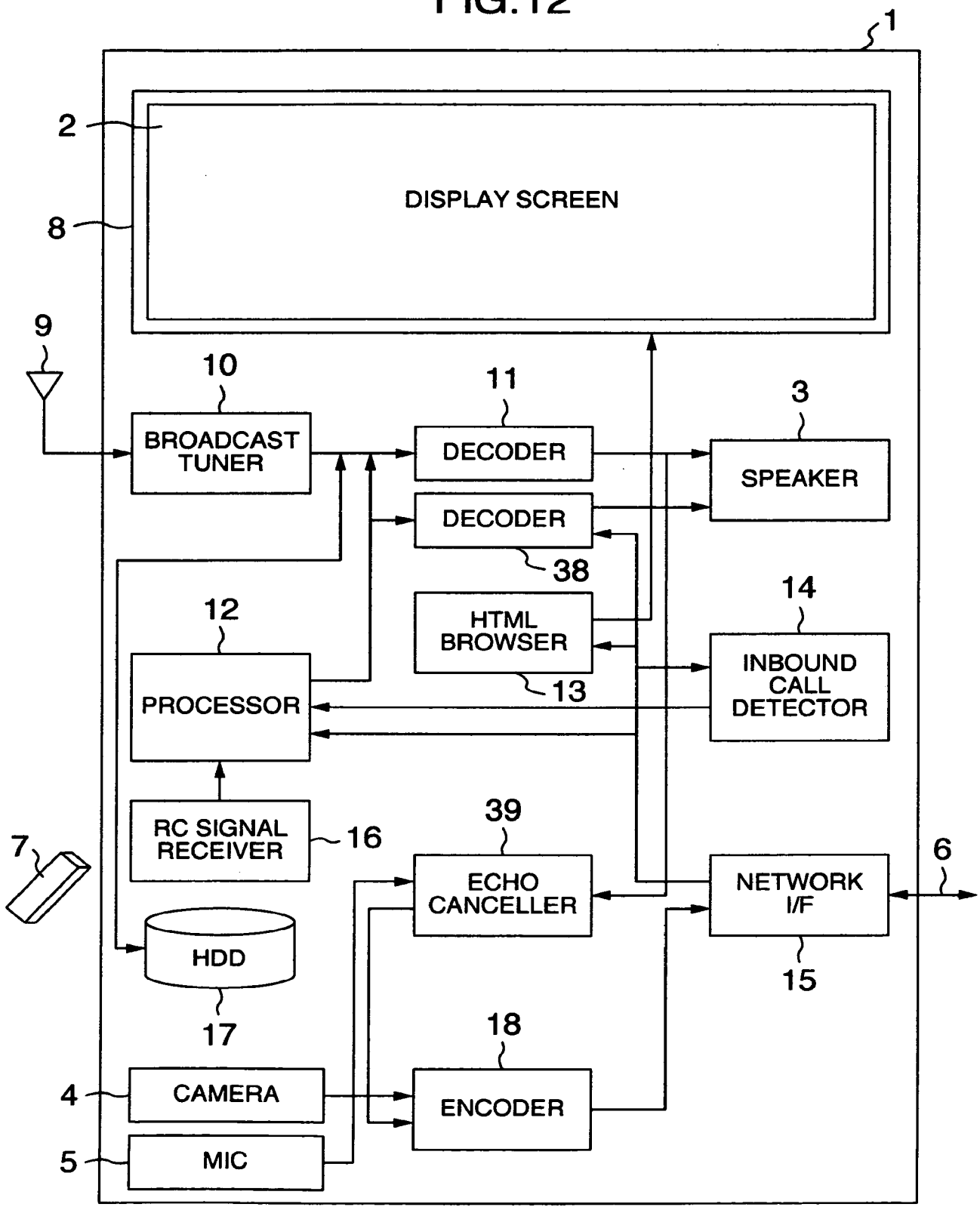

1
2
DISPLAY SCREEN
8
9
10
BROADCAST TUNER
11
DECODER
DECODER
38
3
SPEAKER
12
PROCESSOR
HTML BROWSER
13
14
INBOUND CALL DETECTOR
RC SIGNAL RECEIVER
16
7
39
ECHO CANCELLER
NETWORK I/F
6
15
HDD
17
18
4
CAMERA
ENCODER
5
MIC

FIG.13

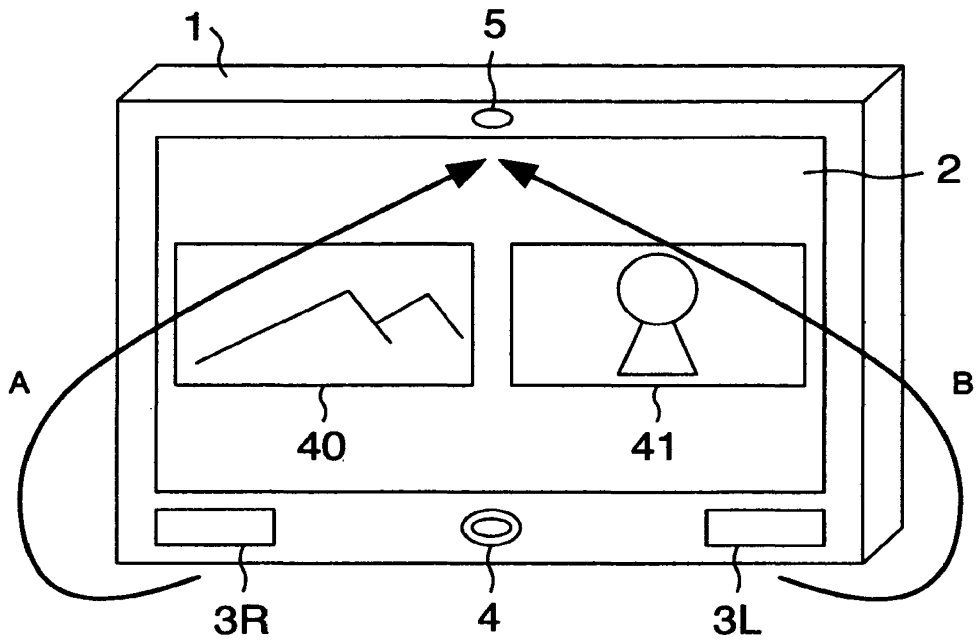
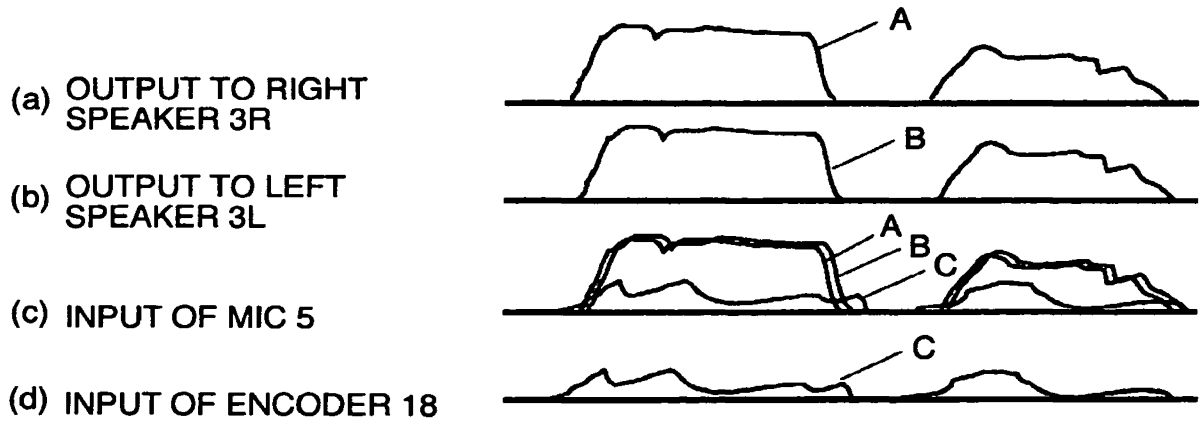

1
5
2
A
B
40
41
3R
4
3L

FIG.14


(a) OUTPUT TO RIGHT SPEAKER 3R
(b) OUTPUT TO LEFT SPEAKER 3L
(c) INPUT OF MIC 5
(d) INPUT OF ENCODER 18
A
B
A
B
C
C

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Filer:	John Roberts Mattingly/Krista Hargrove
Attorney Docket Number:	ASA-9567-06

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:				
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	420	420
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
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 ($)	**6160**

Electronic Acknowledgement Receipt

EFS ID:	31182478
Application Number:	15837402
International Application Number:	
Confirmation Number:	6521
Title of Invention:	TELEVISION RECEIVER WITH A TV PHONE FUNCTION
First Named Inventor/Applicant Name:	Kazunori IWABUCHI
Customer Number:	24956
Filer:	John Roberts Mattingly
Filer Authorized By:	
Attorney Docket Number:	ASA-9567-06
Receipt Date:	11-DEC-2017
Filing Date:	
Time Stamp:	14:48:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$6160
RAM confirmation Number	121217INTEFSW14493100
Deposit Account	501417
Authorized User	John Mattingly

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

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	TrackOne Request	9567-06-Trac1.pdf	119233 8579b956e665a810387dc2101115d2d1ba494813	no	2
Warnings:					
Information:					
2	Application Data Sheet	9567-06-ADS.pdf	1793739 3bd20f8999b71e0c1206800d1c9f4a650ec5f032	no	10
Warnings:					
Information:					
3	Transmittal Letter	9567-06-IDS.pdf	16173 01fe595c3114deb4abe3d0a530b30d0b66e7aa85	no	2
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Form (SB08)	9567-06-sb08.pdf	614416 0fc447103208792809e2e7057a995ee1e0e5efc7	no	9
Warnings:					
Information:					
5	Power of Attorney	9567-06-POA.pdf	435452 36d688fa8c257547b992dbde92e36819780f7a34	no	4
Warnings:					
Information:					
6		9567-06-application.pdf	4037589 6866799db1d57de31b0e7933d018d3ad2083d8f8	yes	91
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**		**End**

	Specification		1		85
	Claims		86		90
	Abstract		91		91
Warnings:					
Information:					
7	Oath or Declaration filed	9567-06-dec.pdf	568455 ef56aff390b45ed39f7548bd1767bc50577641fe	no	6
Warnings:					
Information:					
8	Drawings-only black and white line drawings	9567-06-drawings.pdf	180711 dcaee10cdc88c63f249c2cc011a29ba07b80af33	no	10
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	41933 093d78cc20d849f58e0abb77736f9fab107aa9e1	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	7807701		

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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.