

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas - Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:17-cv-00517-JRG	DATE FILED June 21, 2017	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF AGIS Software Development LLC		DEFENDANT ZTE Corporation , et al.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,213,970	July 3, 2012	AGIS Software Development LLC
2 9,408,055	August 2, 2016	AGIS Software Development LLC
3 9,445,251	September 13, 2016	AGIS Software Development LLC
4 9,467,838	October 11, 2016	AGIS Software Development LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: <p style="text-align: center;">Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450</p>	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:17-cv-00515-JRG	DATE FILED June 21, 2017	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF AGIS Software Development LLC		DEFENDANT LG Electronics, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,213,970	July 3, 2012	AGIS Software Development LLC
2 9,408,055	August 2, 2016	AGIS Software Development LLC
3 9,445,251	September 13, 2016	AGIS Software Development LLC
4 9,467,838	October 11, 2016	AGIS Software Development LLC
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Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:17-cv-00513-JRG	DATE FILED June 21, 2017	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF AGIS Software Development LLC		DEFENDANT Huawei Device USA Inc., et al.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,213,970	July 3, 2012	AGIS Software Development LLC
2 9,408,055	August 2, 2016	AGIS Software Development LLC
3 9,445,251	September 13, 2016	AGIS Software Development LLC
4 9,467,838	October 11, 2016	AGIS Software Development LLC
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Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:17-cv-00516-JRG	DATE FILED June 21, 2017	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF AGIS Software Development LLC		DEFENDANT Apple, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,213,970	July 3, 2012	AGIS Software Development LLC
2 9,408,055	August 2, 2016	AGIS Software Development LLC
3 9,445,251	September 13, 2016	AGIS Software Development LLC
4 9,467,838	October 11, 2016	AGIS Software Development LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:17-cv-00514-JRG	DATE FILED June 21, 2017	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF AGIS Software Development LLC		DEFENDANT HTC Corporation
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,213,970	July 3, 2012	AGIS Software Development LLC
2 9,408,055	August 2, 2016	AGIS Software Development LLC
3 9,445,251	September 13, 2016	AGIS Software Development LLC
4 9,467,838	October 11, 2016	AGIS Software Development LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/529,978	10/11/2016	9467838	MOC-001	1092

51414 7590 09/21/2016
 GOODWIN PROCTER LLP
 PATENT ADMINISTRATOR
 100 Northern Avenue
 BOSTON, MA 02210

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):

Malcolm K. Beyer Jr., Jupiter, FL;
 Advanced Ground Information Systems, Inc., Jupiter, FL;
 Christopher R. Rice, Redmond, WA;

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



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

51414 7590 08/31/2016
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
100 Northern Avenue
BOSTON, MA 02210

EXAMINER

OBAYANJU, OMONIYI

ART UNIT PAPER NUMBER

2646

DATE MAILED: 08/31/2016

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

14/529,978 10/31/2014 Malcolm K. Beyer Jr. MOC-001 1092

TITLE OF INVENTION: METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional SMALL \$480 \$0 \$0 \$480 11/30/2016

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

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

HOW TO REPLY TO THIS NOTICE:

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

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

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

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

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

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

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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)

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.

51414 7590 08/31/2016
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
 100 Northern Avenue
 BOSTON, MA 02210

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.
14/529,978	10/31/2014	Malcolm K. Beyer Jr.	MOC-001	1092

TITLE OF INVENTION: METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	11/30/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
OBAYANJU, OMONIYI	2646	455-404200

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.563).
 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, 1 _____
 (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. 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
 Applicant asserting small entity status. See 37 CFR 1.27
 Applicant changing to regular undiscounted fee status.

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

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

Authorized Signature _____ Date _____
 Typed or printed name _____ Registration No. _____



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
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www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 14/529,978, 10/31/2014, Malcolm K. Beyer Jr., MOC-001, 1092
Row 2: 51414, 7590, 08/31/2016, EXAMINER, OBAYANJU, OMONIYI
Row 3: GOODWIN PROCTER LLP, PATENT ADMINISTRATOR, 100 Northern Avenue, BOSTON, MA 02210, ART UNIT, PAPER NUMBER, 2646
Row 4: DATE MAILED: 08/31/2016

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. 14/529,978	Applicant(s) BEYER ET AL.	
	Examiner OMONIYI OBAYANJU	Art Unit 2646	AIA (First Inventor to File) Status Yes

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

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

1. This communication is responsive to 08/12/2016.
 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 90-173. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

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

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

* Certified copies not received: _____.

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

5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material 4. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Examiner's Amendment/Comment 6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 7. <input type="checkbox"/> Other _____. |
|---|--|

/OMONIYI OBAYANJU/
Primary Examiner, Art Unit 2646

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/12/2016 has been entered.

Allowable Subject Matter

Claims 90-173 are allowed.

The following is an examiner's statement of reasons for allowance: According to the Applicant's remarks and/or amendments filed on 08/12/2016, the prior art references (Crowley, Rousu, and Melen) does not teach the at least claim "A computer-implemented method comprising: performing, by a first device: joining a communication network corresponding to a group, wherein joining the communication network comprises transmitting a message including an identifier corresponding to the group; participating in the group, wherein participating in the group includes sending first

location information to a first server and receiving second location information from the first server, the first location information comprising a location of the first device, the second location information comprising one or more locations of one or more respective second devices included in the group; presenting, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates; sending, to a second server, a request for second georeferenced map data different from the first georeferenced map data; receiving, from the second server, the second georeferenced map data; presenting, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates; and identifying user interaction with the interactive display selecting one or more of the second set of user-selectable symbols corresponding to one or more of the second devices and positioned on the second georeferenced map and user interaction with the display specifying an

action and, based thereon, sending third data to the selected one or more second devices via the first server.”

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMONIYI OBAYANJU whose telephone number is (571)270-5885. The examiner can normally be reached on Mon - Fri, 7:30 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, KAMRAN AFSHAR can be reached on 571-272-7796. 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.

/OMONIYI OBAYANJU/
Primary Examiner, Art Unit 2646

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
		14/529,978	BEYER ET AL.
	Examiner	Art Unit	
	OMONIYI OBAYANJU	2646	

All participants (applicant, applicant's representative, PTO personnel):

(1) OMONIYI OBAYANJU. (3) _____.

(2) Daniel Burns (50,222). (4) _____.

Date of Interview: 22 August 2016.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: NA.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 90-173.

Identification of prior art discussed: NA.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The Examiner initiated an interview to discuss the claims and double patenting issues. The Applicant agreed to file a TD.

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Attachment

/OMONIYI OBAYANJU/
Primary Examiner, Art Unit 2646


EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	((request\$3 near4 ((second or different or other or another) adj2 map)) and (location or position) and join\$3 and group and (symbol or icon) and spatial and (coordinate) and server and display\$3).clm.	USPAT	OR	ON	2016/08/22 00:42
L2	0	((request\$3 near4 ((second or different or other or another) adj2 map)) and (location or position) and join\$3 and group and (symbol or icon) and (coordinate) and server and display\$3).clm.	USPAT	OR	ON	2016/08/22 00:44
L3	0	((request\$3 with ((second or different or other or another) adj2 map)) and (location or position) and join\$3 and group and (symbol or icon) and spatial and (coordinate) and server and display\$3).clm.	USPAT	OR	ON	2016/08/22 00:45
L4	0	((request\$3 with ((second or different or other or another) adj2 map)) and (location or position) and join\$3 and group and (symbol or icon) and spatial and server and display\$3).clm.	USPAT	OR	ON	2016/08/22 00:45
L5	0	((request\$3 with ((second or different or other or another) adj2 map)) and (location or position) and join\$3 and group and (symbol or icon) and coordinate and server and display\$3).clm.	USPAT	OR	ON	2016/08/22 00:46


8/ 22/ 2016 2:04:07 AM

C:\ Users\ oobayanju\ Documents\ EAST\ Workspaces\ 14529978.wsp

Issue Classification 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

CPC					
Symbol				Type	Version
H04W	4		22	F	2013-01-01
H04W	76		007	I	2013-01-01
H04M	1		72519	I	2013-01-01
H04W	76		021	A	2013-01-01
H04W	4		10	A	2013-01-01
H04W	68		00	I	2013-01-01
H04W	4		023	I	2013-01-01
H04W	4		026	A	2013-01-01
H04W	4		027	I	2013-01-01
H04M	1		27455	A	2013-01-01
H04M	1		72525	A	2013-01-01
H04M	1		72547	A	2013-01-01
H04M	1		72572	I	2013-01-01
H04M	1		72583	I	2013-01-01
H04W	4		02	I	2013-01-01
H04W	4		08	I	2013-01-01
H04W	64		00	I	2013-01-01
H04W	84		18	I	2013-01-01
H04M	2250		10	A	2013-01-01
H04M	2250		22	A	2013-01-01
H04M	2250		62	A	2013-01-01
H04W	12		08	A	2013-01-01
H04W	76		005	A	2013-01-01
H04W	12		02	I	2013-01-01
G06F	3		0482	I	2013-01-01
G06F	3		04842	I	2013-01-01
H04L	63		083	I	2013-01-01
H04L	67		18	I	2013-01-01
H04M	1		72536	I	2013-01-01
H04W	4		021	I	2013-01-01
H04L	63		065	I	2013-01-01


NONE		Total Claims Allowed:	
		84	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/OMONIYI OBAYANJU/ Primary Examiner.Art Unit 2646	08/22/2016	1	1
(Primary Examiner)	(Date)		

Issue Classification 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

H04L	63	104	I	2013-01-01
H04W	12	04	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version


NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	84	
/OMONIYI OBAYANJU/ Primary Examiner.Art Unit 2646	08/22/2016	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

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		26		51		76	12	101	37	126	62	151		
	2		27		52		77	13	102	38	127	63	152		
	3		28		53		78	14	103	39	128	64	153		
	4		29		54		79	15	104	40	129	65	154		
	5		30		55		80	16	105	41	130	66	155		
	6		31		56		81	17	106	42	131	67	156		
	7		32		57		82	18	107	43	132	68	157		
	8		33		58		83	19	108	44	133	69	158		
	9		34		59		84	20	109	45	134	70	159		
	10		35		60		85	21	110	46	135	71	160		
	11		36		61		86	22	111	47	136	72	161		
	12		37		62		87	23	112	48	137	73	162		
	13		38		63		88	24	113	49	138	74	163		
	14		39		64		89	25	114	50	139	75	164		
	15		40		65	1	90	26	115	51	140	76	165		
	16		41		66	2	91	27	116	52	141	77	166		
	17		42		67	3	92	28	117	53	142	78	167		
	18		43		68	4	93	29	118	54	143	79	168		
	19		44		69	5	94	30	119	55	144	80	169		
	20		45		70	6	95	31	120	56	145	81	170		
	21		46		71	7	96	32	121	57	146	82	171		
	22		47		72	8	97	33	122	58	147	83	172		
	23		48		73	9	98	34	123	59	148	84	173		
	24		49		74	10	99	35	124	60	149				
	25		50		75	11	100	36	125	61	150				

NONE		Total Claims Allowed:	
		84	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/OMONIYI OBAYANJU/ Primary Examiner.Art Unit 2646	08/22/2016	1	1
(Primary Examiner)	(Date)		

Search Notes 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

CPC- SEARCHED		
Symbol	Date	Examiner
H04W4/02	3/31/2015	OO

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	404.2, 456.1	3/31/2015	OO

SEARCH NOTES		
Search Notes	Date	Examiner
See Attached East Search History	3/31/2015	OO
See Attached East Search History (Updated)	8/13/2015	OO
See Attached East Search History (Updated)	1/19/2016	OO
See Attached East Search History (Updated)	8/1/2016	OO

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
Same As Above	Same As Above	8/22/2016	OO
Interference Search	East Patent and PG-PUB Claim Search	8/22/2016	OO

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
 or **Fax** **(571)-273-2885**

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

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

51414 7590 08/31/2016
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
 100 Northern Avenue
 BOSTON, MA 02210

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.
14/529,978	10/31/2014	Malcolm K. Beyer Jr.	MOC-001	1092

TITLE OF INVENTION: METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	11/30/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
OBAYANJU, OMONIYI	2646	455-404200

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.563). <input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. <input type="checkbox"/> "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 <u>Goodwin Procter LLP</u> 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: Advanced Ground Information Systems, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY) Jupiter, Florida

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: <input checked="" type="checkbox"/> Issue Fee <input type="checkbox"/> Publication Fee (No small entity discount permitted) <input type="checkbox"/> Advance Order - # of Copies _____	4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) <input type="checkbox"/> A check is enclosed. <input checked="" type="checkbox"/> Payment by credit card. <input checked="" type="checkbox"/> The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number <u>07-1700</u> (enclose an extra copy of this form).
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5. **Change in Entity Status** (from status indicated above)

Applicant certifying micro entity status. See 37 CFR 1.29

Applicant asserting small entity status. See 37 CFR 1.27

Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature /Daniel J. Burns/ Date 08/31/2016
 Typed or printed name Daniel J. Burns Registration No. 50,222

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:
Malcolm K. Beyer, Jr.

Application No.: 14/529,978

Confirmation No.: 1092

Filed: October 31, 2014

Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

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

**COMMENTS ON STATEMENT OF REASONS
FOR ALLOWANCE UNDER 37 C.F.R. § 1.104(e)**

Regarding the above-identified application, Applicant has received the Examiner's Statement of Reasons for Allowance with the Notices of Allowance and Allowability mailed on August 31, 2016. Entry of the Statement into the record should not be construed as any agreement with or acquiescence in the reasoning stated by the Examiner. Each of the claims stands on its own merits and is patentable because of the combination it recites and not because of the presence or absence of any one particular element.

The Examiner's Statement was not prepared by Applicant and only contains the Examiner's possible positions in one or more reasons for allowability. Thus, any interpretation with respect to the Examiner's Statement of Reasons for Allowance should not be imputed to the Applicant.

Dated: August 31, 2016

Respectfully submitted,

Electronic signature: /Daniel J. Burns/

Daniel J. Burns

Registration No.: 50,222

GOODWIN PROCTER LLP

135 Commonwealth Drive

Menlo Park, CA 94025

(650) 752-3100

Attorney for Applicant

Electronic Patent Application Fee Transmittal

Application Number:	14529978			
Filing Date:	31-Oct-2014			
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS			
First Named Inventor/Applicant Name:	Malcolm K. Beyer			
Filer:	Daniel J. Burns/Michael Moores			
Attorney Docket Number:	MOC-001			
Filed as Small 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	2501	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt	
EFS ID:	26804755
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns
Filer Authorized By:	
Attorney Docket Number:	MOC-001
Receipt Date:	31-AUG-2016
Filing Date:	31-OCT-2014
Time Stamp:	17:42:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$480
RAM confirmation Number	090116INTEFSW17431400
Deposit Account	1120
Authorized User	Michael Moores
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p>37 CFR 1.16 (National application filing, search, and examination fees)</p> <p>37 CFR 1.17 (Patent application and reexamination processing fees)</p>	

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)	ISSUEFEEPAYMENT.pdf	120495	no	1
			1133289b7dbb093ae9114db2689f30ea8550cb60		

Warnings:

Information:

2	Miscellaneous Incoming Letter	RESPONSE_REASONSALLOWANCE.pdf	66768	no	1
			e94b2e0445d59e6897b7c30e8c551b10b0cadd1e		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30674	no	2
			fbbf7c18bd90301dae5d1f24dfa62ec3a07ce54		

Warnings:

Information:

Total Files Size (in bytes): 217937

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.

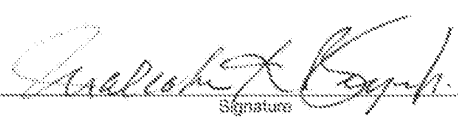
National Stage of an International Application under 35 U.S.C. 371

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.

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.

TERMINAL DISCLAIMER TO OBTAIN A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION	Docket Number (Optional) MCC-001
In re Application of: Malcolm K. Beyer, Jr., et al. Application No.: 14/629,978 Filed: October 31, 2014 For: METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS The applicant, Advanced Ground Information Systems, Inc., owner of 100 percent interest 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 any patent granted on pending reference Application Number 14/633,804 filed February 27, 2015 as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application 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 applicant does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that, any such patent granted on the pending reference application 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 shortened by any terminal disclaimer filed prior to its grant. Check either box 1 or 2 below, if appropriate. 1. <input checked="" type="checkbox"/> The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee. I hereby acknowledge that any willful false statements made are punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. 2. <input type="checkbox"/> The undersigned is an attorney or agent of record. Reg. No. _____ <div style="text-align: center; margin-top: 20px;">  _____ Signature </div> <div style="text-align: right; margin-top: 20px;"> 8/23/2016 _____ Date </div> <div style="text-align: center; margin-top: 20px;"> Malcolm K. Beyer, Jr. _____ Typed or printed name </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;"> CEO, Advanced Ground Information Systems, Inc. _____ Title </div> <div style="text-align: right;"> (561) 744-3213 _____ Telephone Number </div> </div> 3. <input checked="" type="checkbox"/> Terminal disclaimer fee under 37 CFR 1.29(d) is included.	
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2838.	

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1456, Alexandria, VA 22313-1456.

If you need assistance in completing the form, call 1-800-PTO-8189 and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	14529978			
Filing Date:	31-Oct-2014			
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS			
First Named Inventor/Applicant Name:	Malcolm K. Beyer			
Filer:	Daniel J. Burns/Michael Moores			
Attorney Docket Number:	MOC-001			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Statutory or Terminal Disclaimer	2814	1	160	160
Total in USD (\$)				160

Electronic Acknowledgement Receipt	
EFS ID:	26726133
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns
Filer Authorized By:	
Attorney Docket Number:	MOC-001
Receipt Date:	24-AUG-2016
Filing Date:	31-OCT-2014
Time Stamp:	12:06:55
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	082416INTEFSW12122700
Deposit Account	1120
Authorized User	Michael Moores
<p>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)</p>	

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	Miscellaneous Incoming Letter	TDCOVERLETTER.pdf	63761	no	1
			f2d094a307a749fd5af4da63346f97f48e15c4c2		

Warnings:

Information:

2	Terminal Disclaimer Filed	TERMINALDISCLAIMER.pdf	721070	no	1
			b50d3d7ae434983456cc37a9cf1047078504354c		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30531	no	2
			3dc73f86d4eaa7f975f302b8c2cb0f99dea0b		

Warnings:

Information:

Total Files Size (in bytes):	815362
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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

In re Patent Application of:
Malcolm K. Beyer, Jr., et al.

Application No.: 14/529,978

Confirmation No.: 1092

Filed: October 31, 2014

Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

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

LETTER ACCOMPANYING FILING OF TERMINAL DISCLAIMER

This letter is responsive to the Examiner-initiated telephone conversation between Examiner Obayanju and Applicant's representatives, Daniel J. Burns and Samuel S. Stone, on August 22, 2016, regarding the above-identified application. During the conversation, the Examiner requested that the Applicant file a Terminal Disclaimer with respect to U.S. Patent Application No. 14/633,804, and stated that the present application was otherwise in condition for allowance. Accordingly, a Terminal Disclaimer is filed herewith.

The Director is hereby authorized to charge the total of any fees asserted to be filed or which should have been filed herewith to our Deposit Account No. 07-1700, under Order No. MOC-001.

Dated: August 23, 2016

Respectfully submitted,

Electronic signature: /Daniel J. Burns/

Daniel J. Burns

Registration No.: 50,222

GOODWIN PROCTER LLP

135 Commonwealth Drive

Menlo Park, CA 94025

(650) 752-3100

Attorney for Applicant

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/25 U.S. Patent and Trademark Office Department of Commerce	
Electronic Petition Request	TERMINAL DISCLAIMER TO OBLVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION		
Application Number	14529978		
Filing Date	31-Oct-2014		
First Named Inventor	Malcolm Beyer		
Attorney Docket Number	MOC-001		
Title of Invention	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS		
<input checked="" type="checkbox"/> Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action			
<input checked="" type="checkbox"/> This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.			
Owner	Percent Interest		
Advanced Ground Information Systems, Inc.	100%		
The owner(s) of 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 any patent granted on pending reference Application Number(s)			
14633804 filed on 02/27/2015			
as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. 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 any patent granted on the reference application 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 any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: 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 shortened by any terminal disclaimer filed prior to its grant.			
<input type="checkbox"/> Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.			

<input checked="" type="radio"/> 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.	
<p>THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES</p> <p>I certify, in accordance with 37 CFR 1.4(d)(4) that I am:</p>	
<input checked="" type="radio"/> An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application Registration Number <u> 50222 </u>	
<input type="radio"/> A sole inventor	
<input type="radio"/> 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	
<input type="radio"/> A joint inventor; all of whom are signing this request	
Signature	/Daniel J. Burns/
Name	Daniel J. Burns

*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.

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 14529978

Filing Date: 31-Oct-2014

Applicant/Patent under Reexamination: Beyer et al.

Electronic Terminal Disclaimer filed on August 24, 2016

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:	26734629
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns/Samuel Stone
Filer Authorized By:	Daniel J. Burns
Attorney Docket Number:	MOC-001
Receipt Date:	24-AUG-2016
Filing Date:	31-OCT-2014
Time Stamp:	16:22:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	32691 65d9d836f171ba4d9cb494d47560b391f58d195e	no	2

Warnings:

Information:	
Total Files Size (in bytes):	32691
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>	

Electronic Acknowledgement Receipt	
EFS ID:	26726133
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns
Filer Authorized By:	
Attorney Docket Number:	MOC-001
Receipt Date:	24-AUG-2016
Filing Date:	31-OCT-2014
Time Stamp:	12:06:55
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	082416INTEFSW12122700
Deposit Account	071700
Authorized User	Michael Moores

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 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	TDCOVERLETTER.pdf	63761	no	1
			f2d094a307a749fd5af4da63346f97f48e15c4c2		

Warnings:

Information:

2	Terminal Disclaimer Filed	TERMINALDISCLAIMER.pdf	721070	no	1
			b50d3d7ae434983456cc37a9cf1047078504354c		

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30531	no	2
			3dc73f86d4eeaf7975f302b8c2cb0f99dea0b		

Warnings:

Information:

Total Files Size (in bytes):	815362
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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.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	14/529,978	Filing Date	2014-10-31	Docket Number (if applicable)	MOC-001	Art Unit	2646
First Named Inventor	Malcolm K. Beyer, Jr.			Examiner Name	O. Obayanju		
<p>This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, to any international application that does not comply with the requirements of 35 U.S.C. 371, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV.</p>							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
<p>Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).</p>							
<p><input type="checkbox"/> Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.</p> <p style="margin-left: 40px;"><input type="checkbox"/> Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____</p> <p style="margin-left: 40px;"><input type="checkbox"/> Other _____</p> <p><input checked="" type="checkbox"/> Enclosed</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> Amendment/Reply</p> <p style="margin-left: 40px;"><input type="checkbox"/> Information Disclosure Statement (IDS)</p> <p style="margin-left: 40px;"><input type="checkbox"/> Affidavit(s)/ Declaration(s)</p> <p style="margin-left: 40px;"><input type="checkbox"/> Other _____</p>							
MISCELLANEOUS							
<p><input type="checkbox"/> Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)</p> <p><input type="checkbox"/> Other _____</p>							
FEES							
<p><input checked="" type="checkbox"/> The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed. The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 071700 _____</p>							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
<p><input checked="" type="checkbox"/> Patent Practitioner Signature</p> <p><input type="checkbox"/> Applicant Signature</p>							

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

PTO/SB/30EFS (07-14)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Daniel J. Burns/	Date (YYYY-MM-DD)	2016-08-12
Name	Daniel J. Burns	Registration Number	50222

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

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

Privacy Act Statement

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

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

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

Electronic Patent Application Fee Transmittal

Application Number:	14529978			
Filing Date:	31-Oct-2014			
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS			
First Named Inventor/Applicant Name:	Malcolm K. Beyer			
Filer:	Daniel J. Burns			
Attorney Docket Number:	MOC-001			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	22	40	880
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:				
RCE- 2nd and Subsequent Request	2820	1	850	850
Total in USD (\$)				1730

Electronic Acknowledgement Receipt	
EFS ID:	26633807
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns
Filer Authorized By:	
Attorney Docket Number:	MOC-001
Receipt Date:	12-AUG-2016
Filing Date:	31-OCT-2014
Time Stamp:	20:36:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$1730
RAM confirmation Number	081516INTEFSW20375400
Deposit Account	1120
Authorized User	Michael Moores

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 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response After Final Action	RESPONSETRANSMITTAL.pdf	77155	no	1
			41c9a3f1432802538eca6df2039f3f146abd0e90		
Warnings:					
Information:					
2	Claims	RESPONSECLAIMS.pdf	110676	no	18
			65b9656808a00fac3da836849e9fbf7f42a8bae3		
Warnings:					
Information:					
3	Applicant Arguments/Remarks Made in an Amendment	RESPONSEREMARKS.pdf	118385	no	11
			593f222b051cd5339453c9412cf4788e96cd917		
Warnings:					
Information:					
4	Request for Continued Examination (RCE)	RCE.pdf	84938	no	3
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5	Fee Worksheet (SB06)	fee-info.pdf	32222	no	2
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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.

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Docket No.: MOC-001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:
Malcolm K. Beyer, Jr.

Application No.: 14/529,978

Confirmation No.: 1092

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Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

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

AMENDMENT FILED WITH REQUEST FOR CONTINUED EXAMINATION (RCE)

In response to the Office Action dated August 4, 2016, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 20 of this paper.

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1-89. (Canceled)

90. (New) A computer-implemented method comprising:

performing, by a first device:

joining a communication network corresponding to a group, wherein joining the communication network comprises transmitting a message including an identifier corresponding to the group;

participating in the group, wherein participating in the group includes sending first location information to a first server and receiving second location information from the first server, the first location information comprising a location of the first device, the second location information comprising one or more locations of one or more respective second devices included in the group;

presenting, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;

sending, to a second server, a request for second georeferenced map data different from the first georeferenced map data;

receiving, from the second server, the second georeferenced map data;

presenting, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates; and

identifying user interaction with the interactive display selecting one or more of the second set of user-selectable symbols corresponding to one or more of the second devices and positioned on the second georeferenced map and user interaction with the display specifying an action and, based thereon, sending third data to the selected one or more second devices via the first server.

91. (New) The method of claim 90, wherein the message is transmitted to the first server.

92. (New) The method of claim 90, wherein the group comprises a plurality of group members permitted to communicate with each other via the communication network.

93. (New) The method of claim 90, wherein sending the third data to the selected one or more second devices via the first server comprises using an Internet Protocol to send the third data to the first server.

94. (New) The method of claim 93, wherein the first device does not have access to respective Internet Protocol addresses of the one or more second devices included in the group.

95. (New) The method of claim 90, wherein the third data include a short message service message, a text message, an image, or a video.

96. (New) The method of claim 95, wherein the video comprises a video clip.

97. (New) The method of claim 90, wherein the third data include a voice recording.

98. (New) The method of claim 90, wherein sending the third data to the selected one or more second devices comprises transmitting a text message to at least one of the selected one or more second devices using an Internet Protocol (IP).

99. (New) The method of claim 90, further comprising performing by the first device:
identifying user interaction with the interactive display selecting at least one of the second set of user-selectable symbols corresponding to at least one of the second devices and user interaction with the display specifying an action and, based thereon, initiating a phone call or phone conference with the at least one second device.
100. (New) The method of claim 90, further comprising performing by the first device:
identifying user interaction with the interactive display selecting a particular user-selectable symbol corresponding to a particular second device and user interaction with the display specifying an action and, based thereon, initiating voice-over-IP (VOIP) communication with the particular second device.
101. (New) The method of claim 90, further comprising performing by the first device:
identifying user interaction with the interactive display selecting a particular user-selectable symbol corresponding to a particular second device and user interaction with the display specifying an action and, based thereon, initiating a data call with the particular second device.
102. (New) The method of claim 90, wherein the first device is a personal digital assistant (PDA) or a personal computer (PC).
103. (New) The method of claim 90, wherein the first device is a smart phone.
104. (New) The method of claim 90, wherein the display of the first device is a touch screen display, and wherein the user interaction with the display selecting the one or more user-selectable symbols in the second set of symbols comprises touching the one or more user-selectable symbols in the second set of symbols.

105. (New) The method of claim 90, further comprising performing by the first device:
sending updated location information comprising an updated location of the first device, the updated location information being sent based on passage of a predetermined time interval since sending previous location information comprising a previous location of the first device, displacement of the first device by a predetermined distance relative to a previous location of the first device, or both.
106. (New) The method of claim 90, further comprising performing by the first device: using a Global Positioning Satellite (GPS) receiver of the first device to obtain data indicative of the location of the first device, wherein sending the first location information to the first server comprises using an Internet Protocol (IP) to send the first location information to the first server.
107. (New) The method of claim 106, wherein sending the first location information to the first server further comprises sending the first location information via the Internet.
108. (New) The method of claim 90, wherein participating in the group further includes sending first status information to the first server and receiving second status information from the first server, wherein the first status information comprises data indicative of a battery level of the first device, a signal strength of a wireless signal of the first device, a status of a Global Positioning Satellite (GPS) receiver of the first device, or a combination thereof, and wherein the second status information comprises data indicative of one or more battery levels of the respective one or more second devices included in the group, one or more signal strengths of wireless signals of the respective one or more second devices included in the group, one or more statuses of GPS receivers of the respective one or more second devices included in the group, or a combination thereof.
109. (New) The method of claim 90, wherein the second georeferenced map data comprise a satellite image or aerial photograph.

110. (New) The method of claim 90, wherein the spatial coordinates comprise latitude and longitude coordinates.

111. (New) The method of claim 90, further comprising identifying, by the first device, user interaction with the display selecting a particular user-selectable symbol positioned on the second georeferenced map and corresponding to a particular second device, wherein identifying the user interaction selecting the particular user-selectable symbol comprises:

detecting user selection of a portion of the interactive display corresponding to a position on the second georeferenced map;

based at least in part on coordinates of the selected position on the second georeferenced map and on the second georeferenced map data relating positions on the second georeferenced map to spatial coordinates, determining spatial coordinates of a location represented by the selected position on the second georeferenced map; and

identifying the particular user-selectable symbol based, at least in part, on the spatial coordinates represented by the selected position.

112. (New) The method of claim 111, wherein identifying the particular user-selectable symbol based, at least in part, on the spatial coordinates represented by the selected position comprises:

searching a database of entities for an entity located nearest to the spatial coordinates represented by the selected position, wherein the entities represented by data in the database include the one or more second devices included in the group, wherein the database data include locations of the respective entities, and wherein the database is searchable by location; and

based on a result of searching the database, identifying the particular second device as the entity located nearest to the spatial coordinates represented by the selected position, wherein the particular user-selectable symbol corresponds to the particular second device.

113. (New) The method of claim 112, wherein the entity is a first entity, and wherein the method further comprises performing by the first device:

receiving user input via user interaction with the interactive display of the first device, the user input specifying a location and a symbol corresponding to a second entity other than the first device and the one or more second devices included in the group; and

based on the user input, adding the user-specified symbol to the interactive display at a position on the second georeferenced map corresponding to the user-specified location of the second entity.

114. (New) The method of claim 113, further comprising performing by the first device:
transmitting the user-specified symbol and location of the second entity to the one or more second devices included in the group for addition of the user-specified symbol to respective interactive displays of the one or more second devices at respective positions on respective georeferenced maps corresponding to the user-specified location of the second entity.

115. (New) The method of claim 114, wherein the user input further specifies information associated with the second entity, and wherein the method further comprises performing by the first device: transmitting the user-specified information associated with the second entity to the one or more second devices included in the group.

116. (New) The method of claim 115, wherein the information comprises a category of the second entity.

117. (New) The method of claim 116, wherein the category comprises a vehicle, a person, an event, a site, a building, or a facility.

118. (New) The method of claim 115, wherein the information comprises an image.

119. (New) The method of claim 115, wherein the information comprises at least one type of information selected from the group consisting of text and video.

120. (New) The method of claim 115, further comprising performing by the first device:
identifying user interaction with the interactive display selecting the symbol
corresponding to the second entity, and
based thereon, displaying the information associated with the second entity.
121. (New) The method of claim 120, wherein the first device uses an Internet Protocol to
transmit the user-specified symbol, location, and information associated with the second entity.
122. (New) The method of claim 115, further comprising performing by the first device:
adding data representing the spatial coordinates of the location of the second entity and
data representing the information associated with the second entity to the database.
123. (New) The method of claim 113, wherein the portion of the interactive display is a first
portion, wherein the position of the symbol corresponding to the particular second device is a
first position, and wherein receiving the user input specifying the location of the second entity
comprises:
detecting user selection of a second portion of the interactive display corresponding to a
second position on the second georeferenced map; and
based at least in part on coordinates of the second position on the second georeferenced
map and on the second georeferenced map data relating positions on the second georeferenced
map to spatial coordinates, determining spatial coordinates of a location represented by the
second position on the second georeferenced map, wherein the location represented by the
second position is the location of the second entity.
124. (New) The method of claim 112, wherein the database is stored on the first device.
125. (New) The method of claim 112, wherein the database is stored on the first server.

126. (New) The method of claim 90, further comprising performing by the first device:
receiving user-specified information transmitted by a particular second device, the user-specified information including a user-specified location and a user-specified symbol corresponding to an entity other than the first device and the one or more second devices included in the group; and

adding the user-specified symbol to the interactive display at a position on the second georeferenced map corresponding to the user-specified location.

127. (New) The method of claim 126, further comprising performing by the first device:
identifying user interaction with the interactive display selecting the user-specified symbol corresponding to the entity, and

based thereon, displaying information associated with the entity, wherein the user-specified information further includes the information associated with the entity.

128. (New) The method of claim 90, wherein the message including the identifier corresponding to the group is a first message, and wherein the method further comprises performing by the first device:

sending, to a particular second device via the first server, a second message related to remotely controlling the particular second device to perform an action, wherein the particular second device is configured to perform the action based on receiving the second message.

129. (New) The method of claim 128, wherein the second message indicates the action to be performed, and wherein the action is selected from the group consisting of playing audio, initiating a phone call, vibrating, converting text to speech, changing sound intensity, and displaying information.

130. (New) The method of claim 129, wherein playing audio comprises playing an audio message announcing an emergency.

131. (New) The method of claim 90, wherein the message including the identifier corresponding to the group is a first message, and wherein the method further comprises performing by the first device:
- receiving a second message sent by a particular second device, wherein the second message indicates an action to be performed by the first device; and
 - performing the indicated action.
132. (New) The method of claim 131, wherein the indicated action is selected from the group consisting of playing audio, initiating a phone call, vibrating, converting text to speech, changing sound intensity, and displaying information.
133. (New) The method of claim 90, further comprising performing by the first device:
- presenting another symbol on the second georeferenced map corresponding to a fixed location and associated with a telephone number; and
 - receiving user selection of the other symbol and, based thereon, initiating a telephone call to the telephone number associated with the symbol.
134. (New) The method of claim 90, further comprising performing, by the first device:
- presenting a symbol corresponding to a facility, wherein the facility is selected from the group consisting of a hospital, a police station, and a fire station, and wherein the symbol corresponding to the facility is positioned on the second georeferenced map at a position corresponding to a location of the facility.
135. (New) The method of claim 134, further comprising performing, by the first device:
- identifying user interaction with the interactive display selecting the symbol corresponding to the facility, and based thereon, displaying information associated with the facility.
136. (New) The method of claim 135, wherein the information associated with the facility comprises a uniform resource locator (URL) of a web site associated with the facility.

137. (New) The method of claim 134, further comprising performing, by the first device:
identifying user interaction with the interactive display selecting the symbol
corresponding to the facility and user interaction with the display specifying an action, and based
thereon, loading a web page associated with the facility.

138. (New) The method of claim 90, further comprising performing by the first device:
identifying user interaction with the interactive display selecting a subset of the user-
selectable symbols corresponding to a subset of the one or more second devices included in the
group; and
identifying user interaction with the interactive display specifying an action and, based
thereon, assigning the subset of second devices to a sub-net.

139. (New) The method of claim 138, further comprising performing by the first device:
identifying user interaction with the interactive display selecting the sub-net and user
interaction with the display specifying an action; and
based thereon, sending fourth data to the subset of second devices via the first server or
initiating a phone conference with the subset of second devices.

140. (New) The method of claim 90, wherein the first server is the second server.

141. (New) The method of claim 90, wherein the first set of second devices and the second set
of second devices are identical.

142. (New) The method of claim 90, wherein the message further includes an identifier
corresponding to the first device.

143. (New) A system comprising:

- a first device programmed to perform operations comprising:
 - joining a communication network corresponding to a group, wherein joining the communication network comprises transmitting a message including an identifier corresponding to the group;
 - participating in the group, wherein participating in the group includes sending first location information to a first server and receiving second location information from the first server, the first location information comprising a location of the first device, the second location information comprising one or more locations of one or more respective second devices included in the group;
 - presenting, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;
 - sending, to a second server, a request for second georeferenced map data different from the first georeferenced map data;
 - receiving, from the second server, the second georeferenced map data;
 - presenting, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates; and
 - identifying user interaction with the interactive display selecting one or more of the second set of user-selectable symbols corresponding to one or more of the second devices and positioned on the second georeferenced map and user interaction with the display specifying an action and, based thereon, sending third data to the selected one or more second devices via the first server.

144. (New) A computer-implemented method comprising:
- performing, by a server:
 - receiving, from a first device, a message including an identifier corresponding to a group;
 - permitting the first device to join a communication network corresponding to the group,
 - wherein permitting the first device to join the communication network comprises:
 - receiving first location information from the first device, the first location information comprising a location of the first device,
 - sending the first location information to one or more second devices included in the group,
 - receiving second location information from the one or more second devices, the second location information comprising one or more locations of the respective one or more second devices, and
 - sending the second location information to the first device, wherein the first device is configured to present, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;
 - receiving, from the first device, a request for second georeferenced map data different from the first georeferenced map data;
 - sending, to the first device, the second georeferenced map data, wherein the first device is configured to present, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates;

receiving, from the first device, (1) third data, and (2) fourth data indicating user selection of one or more of the second set of user-selectable symbols corresponding to one or more of the second devices; and

based on receiving the third data and the fourth data, sending the third data to the selected one or more second devices.

145. (New) The method of claim 144, wherein sending the first location information to the one or more second devices included in the group comprises pushing the first location information to the one or more second devices.

146. (New) The method of claim 144, wherein an Internet Protocol (IP) address of the server is accessible to the first device and the one or more second devices.

147. (New) The method of claim 146, further comprising performing by the server:
storing an IP address of the first device;
receiving, from a particular second device, a request to send fifth data to the first device, wherein the request to send the fifth data to the first device identifies the first device using an identifier corresponding to the first device; and
sending the fifth data to the first device in a message addressed to the stored IP address of the first device.

148. (New) The method of claim 144, wherein the group comprises a plurality of group members permitted to communicate with each other via the communication network.

149. (New) The method of claim 144, wherein receiving the third data from the first device comprises using an Internet Protocol to receive the third data to the first device.

150. (New) The method of claim 144, wherein the third data include a short message service message, a text message, an image, or a video.

151. (New) The method of claim 150, wherein the video comprises a video clip.
152. (New) The method of claim 150, wherein the third data include a voice recording.
153. (New) The method of claim 144, wherein sending the third data to the selected one or more second devices comprises transmitting a text message to at least one of the selected one or more second devices using an Internet Protocol (IP).
154. (New) The method of claim 144, further comprising performing by the server:
receiving, from the first device, fifth data indicating user selection of at least one symbol in the second set of user-selectable symbols corresponding to at least one of the second devices;
and
based on receiving the fifth data, initiating voice-over-IP (VOIP) communication between the first device and the at least one second device.
155. (New) The method of claim 90, wherein receiving the first location information from the first device comprises using an Internet Protocol (IP) to receive the first location information from the first device.
156. (New) The method of claim 155, wherein receiving the first location information from the first device further comprises receiving the first location information via the Internet.
157. (New) The method of claim 144, wherein permitting the first device to join the communication network further comprises:
receiving first status information from the first device and sending second status information to the first device,
wherein the first status information comprises data indicative of a battery level of the first device, a signal strength of a wireless signal of the first device, a status of a Global Positioning Satellite (GPS) receiver of the first device, or a combination thereof, and
wherein the second status information comprises data indicative of one or more battery levels of the respective one or more second devices included in the group, one or more signal

strengths of wireless signals of the respective one or more second devices included in the group, one or more statuses of GPS receivers of the respective one or more second devices included in the group, or a combination thereof.

158. (New) The method of claim 144, wherein the second georeferenced map data comprise a satellite image or aerial photograph.

159. (New) The method of claim 144, wherein the spatial coordinates comprise latitude and longitude coordinates.

160. (New) The method of claim 144, further comprising performing by the server:
receiving, from the first device, fifth data comprising a user-specified location and a user-specified symbol corresponding to an entity other than the first device and the one or more second devices included in the group;
based on receiving the fifth data, transmitting the user-specified symbol and location of the entity to the one or more second devices included in the group for addition of the user-specified symbol to respective interactive displays of the one or more second devices at respective positions on respective georeferenced maps corresponding to the user-specified location of the entity.

161. (New) The method of claim 160, wherein the fifth data further comprises user-specified information associated with the entity, and wherein the method further comprises performing by the server:

based on receiving the fifth data, transmitting the user-specified information associated with the entity to the one or more second devices included in the group.

162. (New) The method of claim 161, wherein the information comprises a category of the second entity.

163. (New) The method of claim 162, wherein the category comprises a vehicle, a person, an event, a site, a building, or a facility.

164. (New) The method of claim 161, wherein the information comprises an image.

165. (New) The method of claim 161, wherein the information comprises at least one type of information selected from the group consisting of text and video.

166. (New) The method of claim 161, wherein the first device uses an Internet Protocol to transmit the user-specified symbol, location, and information associated with the entity.

167. (New) The method of claim 160, further comprising performing by the server:
adding data representing spatial coordinates of the location of the entity and data representing the information associated with the entity to a database.

168. (New) The method of claim 90, wherein the message including the identifier corresponding to the group is a first message, and wherein the method further comprises performing by the server:
receiving, from the first device, a second message related to remotely controlling a particular second device to perform an action; and
after receiving the second message, sending, to the particular second device, a third message related to remotely controlling the particular second device to perform the action, wherein the particular second device is configured to perform the action based on receiving the third message.

169. (New) The method of claim 168, wherein the second message indicates the action to be performed, and wherein the action is selected from the group consisting of playing audio, initiating a phone call, vibrating, converting text to speech, changing sound intensity, and displaying information.

170. (New) The method of claim 169, wherein playing audio comprises playing an audio message announcing an emergency.

171. (New) The method of claim 144, wherein the first set of second devices and the second set of second devices are identical.

172. (New) The method of claim 144, wherein the message further includes an identifier corresponding to the first device.

173. (New) A system comprising:
one or more servers programmed to perform operations comprising:
receiving, from a first device, a message including an identifier corresponding to a group;
permitting the first device to join a communication network corresponding to the group,
wherein permitting the first device to join the communication network comprises:
receiving first location information from the first device, the first location information comprising a location of the first device,
sending the first location information to one or more second devices included in the group,
receiving second location information from the one or more second devices, the second location information comprising one or more locations of the respective one or more second devices, and
sending the second location information to the first device, wherein the first device is configured to present, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;

receiving, from the first device, a request for second georeferenced map data different from the first georeferenced map data;

sending, to the first device, the second georeferenced map data, wherein the first device is configured to present, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates;

receiving, from the first device, (1) third data, and (2) fourth data indicating user selection of one or more of the second set of user-selectable symbols corresponding to one or more of the second devices; and

based on receiving the third data and the fourth data, sending the third data to the selected one or more second devices.

REMARKS

Claims 1-4, 7, 9-16, 19, 20, 22-27, 30, 31, 33-38, 42, 45, 48, 49, 53, 56, and 59-89 were presented for examination and were rejected. In the present Amendment, claims 1-4, 7, 9-16, 19, 20, 22-27, 30, 31, 33-38, 42, 45, 48, 49, 53, 56, and 59-89 are canceled without prejudice or disclaimer, and new claims 90-148 are added.

No new matter is added. Support for the new claims can be found, for example, in U.S. Patent No. 7,630,724 (“the ‘724 patent”), which was incorporated by reference in the present application at the time of the present application’s filing. For example:

- Support for new claims 90, 140, 141, 143, and 171 can be found in the ‘724 patent at least at col. 3:47-52, col. 14:60-61, col. 15:11-18, col. 15:23-25, and col. 18:57-19:7.
- Support for new claim 91 can be found in the ‘724 patent at least at col. 10:57-11:15 and col. 15:11-18.
- Support for new claims 92 and 148 can be found in the ‘724 patent at least at col. 14:60-61 and col. 15:11-18.
- Support for new claims 93, 94, 98, 149, and 153 can be found in the ‘724 patent at least at col. 4:55-59 and col. 10:57-11.
- Support for new claims 95 and 150 can be found in the ‘724 patent at least at col. 4:55-59, col. 7:18-24, and col. 11:39-43.
- Support for new claims 96 and 151 can be found in the ‘724 patent at least in the Abstract and at col. 1:14.
- Support for new claims 97 and 152 can be found in the ‘724 patent at least at col. 10:66-11:2.
- Support for new claim 99 can be found in the ‘724 patent at least at col. 3:43-52.
- Support for new claims 100 and 101 can be found in the ‘724 patent at least at col. 2:64-67, col. 3:43-52, and col. 11:2-7.
- Support for new claims 102 and 103 can be found in the ‘724 patent at least in the Abstract and at col. 3:58-63 and col. 17:45-51.
- Support for new claim 104 can be found in the ‘724 patent at least at col. 13:62 and col. 15:31-36.

- Support for new claims 105, 107, and 156 can be found in the '724 patent at least at col. 9:31-47 and col. 15:7-8.
- Support for new claims 106 and 155 can be found in the '724 patent at least at col. 4:52-65 and col. 10:57-11.
- Support for new claims 108 and 157 can be found in the '724 patent at least at col. 2:50-57, col. 3:32-35, col. 6:60-64, col. 9:31-47, and col. 14:15-16.
- Support for new claims 109 and 158 can be found in the '724 patent at least at col. 18:57-19:7.
- Support for new claims 110 and 159 can be found in the '724 patent at least at col. 5:60-67.
- Support for new claims 111 and 112 can be found in the '724 patent at least at col. 5:51-67 and col. 7:48-8:22.
- Support for new claims 113-120, 122, 123, and 160-165 can be found in the '724 patent at least at col. 2:60-63, col. 3:36-41, col. 10:23-56, and col. 15:36-49.
- Support for new claims 121 and 166 can be found in the '724 patent at least at col. 4:55-59 and 10:57-11:15.
- Support for new claims 124 and 125 can be found in the '724 patent at least at col. 10:9-22.
- Support for new claims 126, 127, 131, and 132 can be found in the '724 patent at least at col. 2:61-62 and col. 15:38-49.
- Support for new claims 128-130 and 168-170 can be found in the '724 patent at least at col. 3:11-20, col. 9:25-30, col. 10:57-11, col. 11:44-58, and col. 12:3-7.
- Support for new claim 133 can be found in the '724 patent at least at col. 8:23-48 and col. 20:1-19.
- Support for new claim 134 can be found in the '724 patent at least at col. 7:35-38, col. 8:25-28, and col. 10:9-22.
- Support for new claim 135 can be found in the '724 patent at least at col. 7:5-13.
- Support for new claims 136 and 137 can be found in the '724 patent at least at col. 19:41-49 and 20:1-19.

- Support for new claims 138 and 139 can be found in the '724 patent at least at col. 3:53-57 and col. 8:49-9:5.
- Support for new claims 142 and 172 can be found in the '724 patent at least at col. 15:11-25.
- Support for news claim 144 and 173 can be found in the '724 patent at least at col. 3:47-52, col. 10:57-11:15, col. 14:60-61, col. 15:11-18, col. 15:23-25, and col. 18:57-19:7.
- Support for new claim 145 can be found in the '724 patent at least at col. 19:35-40.
- Support for new claim 146 can be found in the '724 patent at least at col. 13:3-6
- Support for new claim 147 can be found in the '724 patent at least at col. 10:57-11:15.
- Support for new claim 154 can be found in the '724 patent at least at col. 11:2-7.
- Support for new claim 167 can be found in the '724 patent at least at col. 10:9-22.

Claim Rejections Under 35 U.S.C. § 103

Each of the previously-pending independent claims was rejected under 35 U.S.C. § 103 as purportedly being obvious over U.S. Patent No. 7,593,740 ("Crowley") in view of U.S. Pub. No. 2005/0227705 ("Rousu") and further in view of U.S. Pub. No. 2004/0148090 ("Melen"). Each of the previously-pending dependent claims was rejected as purportedly being obvious over Crowley, Rousu, and Melen alone or in combination with U.S. Pub. No. 2004/0054428 ("Sheeha"), U.S. Patent No. 7,024,207 ("Gorday"), or U.S. Patent No. 7,421,270 ("Serafat"). These rejections are moot, since all of the previously-pending claims have been canceled.

Overview of Some Embodiments

At the time the invention was made, conventional mobile device interfaces for locating and communicating with entities (e.g., users, businesses, homes, etc.) were generally cumbersome to use. See '724 patent, col. 1, line 53 – col. 2, line 4. For example, to view contact information for an entity at a particular location, a conventional mobile device may have required a user to access a user interface that displays a map of georeferenced entities and select the entity of interest. See '724 patent, col. 1, lines 53-60. To use the contact information (e.g., a

telephone number) to initiate a phone call to the entity, the conventional mobile device may have required the user to access another user interface and manually enter the entity's phone number. See '724 patent, col. 1, lines 60-63. To use the contact information to send data to the entity, the conventional mobile device may have required the user to access yet another user interface and manually enter the entity's contact information. See '724 patent, col. 1, line 64 – col. 2, line 4. Furthermore, to enter and share the location of an entity not shown on the map of georeferenced entities, the mobile device might require a user to manually enter coordinates of the new entity using yet another user interface. See '724 patent, col. 2, lines 5-9. Needless to say, this process of switching between different user interfaces to communicate with other users and to view, enter, and share georeferenced information is quite inconvenient. Likewise, the processes of manually entering contact information to initiate communication and manually entering geographical coordinates to share the location of an entity are cumbersome.

The present application describes, among other things, some embodiments of a mobile device that presents a user interface through which a user can view, enter, and share georeferenced information (e.g., georeferenced information associated with other users or entities), and can communicate with other users. See, e.g., '724 patent: FIG. 1; col. 1, lines 6-17; col. 2, line 48 – col. 3, line 10; and col. 3, lines 24-28 and 36-52. For example, the user interface may permit a user to view the locations of other users (see '724 patent, col. 2, lines 48-57), which may be represented by symbols displayed on a map at positions corresponding to the users' locations (see '724 patent, col. 6, lines 44-49). Each user's location may be updated based on the passage of time and/or based on the user's movement (see '724 patent: col. 14, line 66 – col. 15, line 6; and col. 9, lines 34-38). In some embodiments, the user interface permits a user to initiate phone calls with other users or send data (e.g., text messages, images, or video) to other users by selecting the symbol(s) corresponding to the other user(s) (see '724 patent, col. 3, lines 42-52). The user interface may also permit a user to view the locations of other entities (e.g., restaurants, gas stations, hospitals, fire departments, etc.) and to access information about those entities (see '724 patent: col. 8, lines 23-48; and col. 20, lines 1-19). In some embodiments, the user interface permits a user to enter an additional georeferenced entity (e.g., vehicle, event, site, etc.) and share the location of the added entity with other users by touching the displayed map at a position corresponding to the location of the entity (see '724 patent: col.

10, lines 23-57). Thus, the present application describes, among other things, a device that coordinates the retrieval of information associated with real-world entities and the communication of information between such entities through an easy-to-use but powerful user interface in which the entities are represented by interactive symbols displayed on a georeferenced map at positions corresponding to the entities' locations.

In some embodiments, the mobile device uses the georeferenced map to facilitate the selection of symbols corresponding to other entities and/or to facilitate the addition of new georeferenced entities to the user interface. For example, when a user touches a portion of a georeferenced map at a particular position on the display, the device may use the georeferenced map to determine spatial coordinates (e.g., latitude and longitude) of the location represented by the selected portion of the map ('724 patent, col. 7, lines 48-51). The device may then search a database of entities to identify the entity in the database that is located closest to the location selected by the user ('724 patent: col. 7, lines 51-52; and col. 8, lines 32-38). To facilitate such searches, the database of entities may be searchable by entity location ('724 patent, col. 7, line 65 – col. 8, line 1). Alternatively, when entering a new entity into the database, a user may specify the entity's location simply by touching the corresponding position on the georeferenced map, rather than manually providing an address or a set of spatial coordinates ('724 patent, col. 10, lines 23-56). In some embodiments, the mobile device obtains the georeferenced map from a server ('724 patent, col. 18, line 57 – col. 19, line 7).

The foregoing discussion of some embodiments is provided merely to assist the Examiner in appreciating various aspects of the subject matter described in the present application. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Examiner is requested to not rely upon the foregoing summary in interpreting any of the claims or in determining whether they patentably distinguish over the prior art of record, but rather is requested to rely only upon the language of the claims themselves and the arguments specifically related thereto provided below.

New Claims

I. Independent Claim 90 and the Claims Depending Therefrom

New independent claim 90 is directed to a method comprising performing, by a first device:

joining a communication network corresponding to a group, wherein joining the communication network comprises transmitting a message including an identifier corresponding to the group;

participating in the group, wherein participating in the group includes sending first location information to a first server and receiving second location information from the first server, the first location information comprising a location of the first device, the second location information comprising one or more locations of one or more respective second devices included in the group;

presenting, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;

sending, to a second server, a request for second georeferenced map data different from the first georeferenced map data;

receiving, from the second server, the second georeferenced map data;

presenting, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, **wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates;** and

identifying user interaction with the interactive display selecting one or more of the second set of user-selectable symbols corresponding to one or more of the second devices and positioned on the second georeferenced map and user interaction with the display specifying an action and, based thereon, sending third data to the selected one or more second devices via the first server. (Emphasis added.)

None of the cited portions of the cited references teaches or suggests at least “sending, to a second server, a request for second georeferenced map data different from the first georeferenced map data” and “receiving, from the second server, the second georeferenced map data ... , wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and

wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates,” as recited in new independent claim 90.

For at least the foregoing reason, the cited portions of the cited references (individually or in combination) do not teach or suggest each and every element of claim 90. Accordingly, Applicant respectfully submits that claim 90 is allowable. Claims 91-142 depend from claim 90 and are allowable for at least the same reason.

II. Independent Claim 143

New independent claim 143 is directed to a system comprising a first device programmed to perform operations comprising:

joining a communication network corresponding to a group, wherein joining the communication network comprises transmitting a message including an identifier corresponding to the group;

participating in the group, wherein participating in the group includes sending first location information to a first server and receiving second location information from the first server, the first location information comprising a location of the first device, the second location information comprising one or more locations of one or more respective second devices included in the group;

presenting, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;

sending, to a second server, a request for second georeferenced map data different from the first georeferenced map data;

receiving, from the second server, the second georeferenced map data;

presenting, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, **wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates;** and

identifying user interaction with the interactive display selecting one or more of the second set of user-selectable symbols corresponding to one or more of the second devices and positioned on the second georeferenced map and user interaction with the

display specifying an action and, based thereon, sending third data to the selected one or more second devices via the first server. (Emphasis added.)

For reasons that should be apparent from the discussion above in Subsection I, the cited portions of the cited references (individually or combination) do not teach or suggest at least the subject matter of the above-emphasized portions of new claim 143. Accordingly, Applicant respectfully submits that claim 143 is allowable.

III. Independent Claim 144 and the Claims Depending Therefrom

New independent claim 144 is directed to a computer-implemented method comprising performing, by a server:

receiving, from a first device, a message including an identifier corresponding to a group;

permitting the first device to join a communication network corresponding to the group, wherein permitting the first device to join the communication network comprises:

receiving first location information from the first device, the first location information comprising a location of the first device,

sending the first location information to one or more second devices included in the group,

receiving second location information from the one or more second devices, the second location information comprising one or more locations of the respective one or more second devices, and

sending the second location information to the first device, wherein the first device is configured to present, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;

receiving, from the first device, a request for second georeferenced map data different from the first georeferenced map data;

sending, to the first device, the second georeferenced map data, wherein the first device is configured to present, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, **wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and**

wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates;

receiving, from the first device, (1) third data, and (2) fourth data indicating user selection of one or more of the second set of user-selectable symbols corresponding to one or more of the second devices; and

based on receiving the third data and the fourth data, sending the third data to the selected one or more second devices. (Emphasis added.)

For reasons that should be apparent from the discussion above in Subsection I, the cited portions of the cited references (individually or combination) do not teach or suggest at least the subject matter of the above-emphasized portions of new claim 144. Accordingly, Applicant respectfully submits that claim 144 is allowable. Claims 145-172 depend from claim 144 and are allowable for at least the same reasons.

IV. Independent Claim 173

As amended, independent claim 173 is directed to a system comprising one or more servers programmed to perform operations comprising:

receiving, from a first device, a message including an identifier corresponding to a group;

permitting the first device to join a communication network corresponding to the group, wherein permitting the first device to join the communication network comprises:

receiving first location information from the first device, the first location information comprising a location of the first device,

sending the first location information to one or more second devices included in the group,

receiving second location information from the one or more second devices, the second location information comprising one or more locations of the respective one or more second devices, and

sending the second location information to the first device, wherein the first device is configured to present, via an interactive display of the first device, a first interactive, georeferenced map and a first set of one or more user-selectable symbols corresponding to a first set of one or more of the second devices, wherein the first set of symbols are positioned on the first georeferenced map at respective positions corresponding to the locations of the first set of second devices, and wherein first georeferenced map data relate positions on the first georeferenced map to spatial coordinates;

receiving, from the first device, a request for second georeferenced map data different from the first georeferenced map data;

sending, to the first device, the second georeferenced map data, wherein the first device is configured to present, via the interactive display of the first device, a second georeferenced map and a second set of one or more user-selectable symbols corresponding to a second set of one or more of the second devices, **wherein the second set of symbols are positioned on the second georeferenced map at respective positions corresponding to the locations of the second set of second devices, and wherein the second georeferenced map data relate positions on the second georeferenced map to spatial coordinates;**

receiving, from the first device, (1) third data, and (2) fourth data indicating user selection of one or more of the second set of user-selectable symbols corresponding to one or more of the second devices; and

based on receiving the third data and the fourth data, sending the third data to the selected one or more second devices. (Emphasis added.)

For reasons that should be apparent from the discussion above in Subsection I, the cited portions of the cited references (individually or combination) do not teach or suggest at least the subject matter of the above-emphasized portions of new claim 173. Accordingly, Applicant respectfully submits that claim 173 is allowable.

CONCLUSION

By responding in the foregoing remarks only to particular positions taken by the Examiner, Applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, Applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist. Finally, Applicant's decision to amend or cancel any claim should not be understood as implying that Applicant agrees with any positions taken by the Examiner with respect to that claim or other claims.

The pending application is believed to be in condition for allowance. If, in the Examiner's opinion, further communication would expedite the favorable prosecution of the present application, the undersigned would welcome the opportunity to discuss any outstanding issues and to work with the Examiner toward placing the application in condition for allowance.

Payment of fees for the addition of dependent claims and for a Request for Continued Examination (RCE) is included herewith. No other fees or extensions are believed to be necessary for entry and consideration of this paper. The Commissioner, however, is hereby authorized to charge any deficiency in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 07-1700, with reference to Order No. MOC-001.

Respectfully submitted,

Dated: August 12, 2016

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/529,978	Filing Date 10/31/2014	<input type="checkbox"/> To be Mailed
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ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (j), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 = *	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *	*	X \$ =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT	08/12/2016	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 83	Minus	** 63	= 20	x \$40 =	800	
	Independent (37 CFR 1.16(h))	* 4	Minus	***5	= 0	x \$210 =	0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
						TOTAL ADD'L FEE	800	

(Column 1) (Column 2) (Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

LIE
/KAREN VESTAL/

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
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Row 1: 14/529,978, 10/31/2014, Malcolm K. Beyer Jr., MOC-001, 1092
Row 2: 51414, 7590, 08/04/2016, GOODWIN PROCTER LLP, PATENT ADMINISTRATOR, 100 Northern Avenue, BOSTON, MA 02210
Row 3: EXAMINER, OBAYANJU, OMONIYI
Row 4: ART UNIT, PAPER NUMBER, 2646
Row 5: NOTIFICATION DATE, DELIVERY MODE, 08/04/2016, 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):

PATENTBOS@GOODWINPROCTER.COM
PSOUSA-ATWOOD@GOODWINPROCTER.COM
GLENN.WILLIAMS@GOODWINPROCTER.COM

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 04/25/2016 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In response to applicant's argument that the references Crowley et al. (US Patent No. 7593740) in view of Rousu et al. (US Publication No. 20050227705) and Melen (US Publication No. 20040148090) fails to show certain features of applicant's invention (i.e. *wherein the first device is configured to participate in the group based on receiving a message related to joining the group, and wherein the first device is configured to*

participate in the group by transmitting the location information comprising the updated location of the first device).

In this case, Examiner very kindly directs the Applicant to Crowley e.g. **fig. 3, fig. 6, col. 15, lines 27-38, and col. 7, lines 14-31, lines 60-67**, which discussed the concept of connecting group of users (e.g. community of friends) and exchanging information such as location information among the users and/or friends.

Thus, in regards to the at least claimed limitations in question, the claim does not specifically and/or uniquely define the limitations so as to be distinguished from the applied prior art. Given the claimed limitations its' broadest reasonable interpretation, the limitation in question has been fairly characterized as discussed below: *wherein the first device is configured to participate in the group based on receiving a message related to joining the group (See, fig. 3, fig. 4, connecting and exchanging information among group of users or friends, col. 15, lines 27-38, sending e-mail invitation to join the community as a friend of user), and wherein the first device is configured to participate in the group by transmitting the location information comprising the updated location of the first device (See, fig. 3, col. 7, lines 14-31, lines 60-67, exchanging current location information with friends).*

On the other hand, in an analogous field of endeavor, Rousu and Melen teaches the other claimed limitations as discussed in the previous rejection which will be further repeated in the rejection below.

Therefore, it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley and Rousu with the teachings Melen to achieve the goal of efficiently and conveniently communicating or interacting with other members of the group in a communication system. Therefore, the previous rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7, 9-16, 19, 20, 22-27, 30, 31, 33-38, 42, 45, 48, 49, 53, 56, 62-82, 84, and 85, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Crowley et al. (US Patent No. 7593740) in view of Rousu et al. (US Publication No. 20050227705) and further in view of Melen (US Publication No. 20040148090).

As to **claim 1**, Crowley teaches a computer-implemented method comprising: transmitting a respective map to each one of a plurality of devices wherein each of the devices is configured to display the respective map, and wherein the plurality of devices includes a first device and a plurality of second devices (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users); receiving from the first device location information comprising an updated location of the first device and transmitting the updated location of the first

device to the plurality of second devices (fig. 3, col. 7, lines 14-31, and lines 60-67, communicating current location information e.g. Luna lounge), wherein the first device and the plurality of second devices are included in a group of devices (fig. 3, fig. 4, connecting and exchanging information among group of users or community of friends, col. 15, lines 27-38, sending e-mail invitation to join the community as a friend of user), wherein the first device is configured to participate in the group based on receiving a message related to joining the group (fig. 3, fig. 4, connecting and exchanging information among group of users or friends, col. 15, lines 27-38, sending e-mail invitation to join the community as a friend of user), and wherein the first device is configured to participate in the group by transmitting the location information comprising the updated location of the first device (fig. 3, col. 7, lines 14-31, lines 60-67, exchanging current location information with friends). However, Crowley fails to explicitly teach wherein the device is configured to transmit the first device information comprising the updated location of the first device based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device; and receiving from the first device selection information indicating user selection of one or more displayed symbols corresponding to one or more of the second devices.

In an analogous field of endeavor, Rousu teaches wherein the device is configured to transmit the first device information comprising the updated location of the first device based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device (pp0025, pp0061, pp0074, providing updated location to other user, if terminal move more than a predefined

distance). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley with the teachings Rousu to achieve the goal of efficiently and reliably communicating location information to achieve an efficient resources use in a communication system (Rousu, pp0006). However, they both failed to explicitly teach receiving from the first device selection information indicating user selection of one or more displayed symbols corresponding to one or more of the second devices.

In an analogous field of endeavor, Melen teaches receiving from the first device selection information indicating user selection of one or more displayed symbols corresponding to one or more of the second devices (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley and Rousu with the teachings Melen to achieve the goal of efficiently and conveniently communicating or interacting with other members of the group in a communication system (Melen, pp0003).

As **to claim 2**, Crowley teaches further comprising receiving respective contact information the first and the one or more second devices information comprising (fig. 3, col. 12, lines 34-49); and sending data between the first device and the one or more second devices using the received contact information (fig. 3, and col. 13, lines 25-45, send message to friends).

As to **claims 3, 16, 27, 38, and 49**, Crowley teaches wherein the data includes a short message service message, a text message, an image, or a video (col. 9, lines 12-16).

As to **claims 4, 19, and 30**, Crowley teaches wherein particular contact information is a phone number or an Internet Protocol address (fig. 3, col. 12, lines 34-49).

As to **claims 7, 20, and 31**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches further comprising: performed by the first device: receiving user selection of a first of the one or more symbols on the respective map transmitted to the first device; obtaining contact information associated with the first symbol; and performing an action using the contact information wherein the action is initiating a phone call or transferring data (fig. 4, fig. 5, #509, #510, #511, touch selection of icon on the map, and pp0063, pp0068).

As to **claims 9, 22, 33, 45, and 56**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Rousu further teaches wherein the first device is a personal data assistant (PDA) or personal computer (Rousu, pp0017)

As to **claims 10, 23, and 34**, Crowley teaches further comprising: receiving a request for a particular map from the first device wherein the request specifies a map location (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users); and sending the particular map to the first device (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users).

As to **claims 11, 24, and 35**, Crowley teaches wherein the first device does not have access to a phone number or an Internet Protocol address of any of the one or more second devices (col. 16, lines 16-20, address maybe kept private).

As to **claims 12, 25, and 36**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches wherein the first map includes an aerial photograph, a satellite image, or a chart (Melen fig. 4).

As to **claim 13**, Crowley teaches further comprising: receiving from one or more of the plurality of devices information corresponding to the location of fixed entities, said fixed entities comprising buildings, facilities, restaurants, or emergency locations; and transmitting to one or more of the plurality of devices the information corresponding to the location of the fixed entities (fig. 3, and col. 7, Luna Lounge).

As to **claim 14**, Crowley teaches further comprising: receiving from one or more of the plurality of devices information corresponding to locations of events and/or entities; and transmitting to one or more of the plurality of devices the information corresponding to locations of the events and/or entities (fig. 3, and col. 7, Luna Lounge).

As to **claims 15 and 26**, Crowley in view of Rousu and Melen teaches similar limitations as discussed in the method of claims 1 and 2 above.

As to **claims 37 and 48**, Crowley in view of Rousu and Melen teaches similar limitations as discussed in the method of claims 1 and 2 above.

As to **claims 42 and 53**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches further

comprising: identifying user interaction with the display specifying a new symbol and a location of the new symbol (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063); presenting the new symbol on the map at the specified location (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063); and sending the new symbol and the location to the plurality of second devices wherein each of the devices included in the plurality of second devices is configured to present the new symbol on an interactive map at the specified location (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063).

As to **claims 62 and 63**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein sending the data to the one or more second devices comprises transmitting a text message to at least one of the one or more second devices using an internet Protocol (IP) (Crowley, fig. 6, col. 11, lines 49-67, internet).

As to **claims 64, 66, 68, 70, and 72**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches further comprising: based on the selection information, establishing voice communication between the first device and the one or more second devices (fig. 4, fig. 5, #509, #510, #511, touch selection of icon on the map, and pp0063).

As to **claims 65, 67, 69, 71, and 73**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches wherein the voice communication comprises a phone call (fig. 4, fig. 5, #509, #510, #511, touch selection of icon on the map, pp0039 and pp0063).

As to **claims 77 and 81**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein the data includes voice recording (Crowley, col. 9, lines 1-15).

As to **claims 74 and 78**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Rousu further teaches wherein at least one device included in the group is configured to transmit information comprising an updated location of the at least one device based on passage of at least a predetermined time interval since transmitting information comprising a location of the at least one device (Rousu, pp0061, sending updated location within a defined given time limit).

As to **claim 75**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein at least one device included in the group is configured to transmit information comprising an updated location of the at least one device (1) to a server (fig. 3, col. 7, lines 14-31, and lines 60-67, communicating current location information e.g. Luna lounge), (2) using Internet Protocol (IP) (Crowley, fig. 6, fig. 3, col. 11, lines 49-67, internet), and Rousu further teaches (3) based on passage of at least a predetermined time interval since transmitting information comprising a location of the at least one device (Rousu, pp0061, sending updated location within a defined given time limit).

As to **claims 76, 79, and 80**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein sending the data via a server between the first device and the one or more

second devices comprises: receiving the data from the first device using Internet Protocol (IP) and transmitting the data to the one or more second devices using IP (Crowley, fig. 6, fig. 3, col. 11, lines 49-67, internet).

As to **claim 82**, Crowley teaches wherein transmitting the first location information comprises transmitting the first location information to a server, and wherein obtaining the second location information comprises obtaining the second location from the server (fig. 3, col. 7, lines 14-31, lines 60-67, exchanging current location information with friends).

As to **claims 84 and 85**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches wherein the message includes an identifier of the group (pp0074, download group information).

Claims 59, 60 and 61, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Crowley et al. (US Patent No. 7593740) in view of Rousu et al. (US Publication No. 20050227705) and further in view of Melen (US Publication No. 20040148090) and Sheha et al. (US Publication No. 20040054428).

As to **claims 59, 60 and 61**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. However, failed to explicitly teach wherein transmitting the updated location of the first device to the plurality of

second devices comprises pushing the updated location of the first device to the plurality of second devices.

In an analogous field of endeavor, Sheha teaches wherein transmitting the updated location of the first device to the plurality of second devices comprises pushing the updated location of the first device to the plurality of second devices (pp0007, push updated locations). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley, Rousu, and Melen with the teachings Sheha to achieve the goal of efficiently and reliably transferring location-related information using a real-time communication system (Sheha, pp0002).

Claim 83 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Crowley et al. (US Patent No. 7593740) in view of Rousu et al. (US Publication No. 20050227705) and further in view of Melen (US Publication No. 20040148090) and Gorday et al. (US Patent No. 7024207).

As **to claim 83**, Crowley in view of Rousu and Melen teaches the limitations of the independent claim as discussed above. However they failed to teach wherein participating in the group further includes: transmitting first status information comprising at least one of item of information selected from the group consisting of a battery level of the first device and a signal strength of a wireless signal of the first device; and receiving second status information comprising at least one item of information selected from the group consisting of a plurality of battery levels of the plurality of second devices

included in the group and a plurality of signal strengths of wireless signals of the plurality of second devices included in the group.

In an analogous field of endeavor, Gorday teaches wherein participating in the group further includes: transmitting first status information comprising at least one of item of information selected from the group consisting of a battery level of the first device and a signal strength of a wireless signal of the first device (fig. 4, col. 4, lines 46-50, and clm. 6, signal strength); and receiving second status information comprising at least one item of information selected from the group consisting of a plurality of battery levels of the plurality of second devices included in the group and a plurality of signal strengths of wireless signals of the plurality of second devices included in the group (fig. 4, col. 4, lines 46-50, and clm. 6, signal strength). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley, Rousu, and Melen with the teachings Gorday to achieve the goal of efficiently and reliably selecting for communication a subset of these devices when their relative geographic location meets specific criteria, such as directional and range criteria, and transmits one or more messages to the selected devices (Gorday, col. 2, lines 45-49).

Claims 86-89, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Crowley et al. (US Patent No. 7593740) in view of Rousu et al. (US Publication No. 20050227705) and further in view of Melen (US Publication No. 20040148090) and Serafat et al. (US Patent No. 7421270).

As to **claims 86 and 88**, Crowley, Rousu, and Melen teaches the limitations of the independent claims as discussed above. However they failed to explicitly teach further comprising: receiving, from the first device, a message related to remotely controlling a second device included in the group of devices to perform an action; and remotely controlling the second device to perform the action by sending the message to the second device.

In an analogous field of endeavor, Serafat teaches further comprising: receiving, from the first device, a message related to remotely controlling a second device included in the group of devices to perform an action (fig. 1, abs, col. 5, lines 26-42, and col. 3, lines 43-58, transmitting control data from one device to another device for remotely changing operating characteristics or settings of the another device in a group or team); and remotely controlling the second device to perform the action by sending the message to the second device (fig. 1, abs, col. 5, lines 26-42, and col. 3, lines 43-58, transmitting control data from one device to another device for remotely changing operating characteristics or settings of the another device in a group or team). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley, Rousu, and Melen with the teachings Serafat to achieve the goal of efficiently and reliably communicating settings information among wireless communication devices in a communication system (Serafat, col. 2, lines 42-46).

As to **claims 87 and 89**, Crowley, Rousu, Melen, and Serafat, teaches the limitations of the claims as discussed above. Serafat further teaches wherein the message indicates the action to be performed, and wherein the action is selected from the group consisting of playing audio, initiating a phone call, vibrating, converting text to speech, changing sound intensity, and displaying information (fig. 1, abs, col. 5, lines 26-42, and col. 3, lines 43-58, changing volume loudness settings).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMONIYI OBAYANJU whose telephone number is (571)270-5885. The examiner can normally be reached on Mon - Fri, 7:30 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMRAN AFSHAR can be reached on 571-272-7796. 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.

/OMONIYI OBAYANJU/
Primary Examiner, Art Unit 2646

Notice of References Cited	Application/Control No. 14/529,978	Applicant(s)/Patent Under Reexamination BEYER ET AL.	
	Examiner OMONIYI OBAYANJU	Art Unit 2646	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A US-7,421,270 B2	09-2008	Serafat; Reza	H04W8/22	455/419
*	B US-7,024,207 B2	04-2006	Gorday; Paul Edward	H04W4/14	455/456.1
	C US-				
	D US-				
	E US-				
	F US-				
	G US-				
	H US-				
	I US-				
	J US-				
	K US-				
	L US-				
	M US-				

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N				
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	Q				
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	S				
	T				

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)				
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	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Receipt date: 06/20/2016

14529978 - GAU: 2646

PTO/SB/08a (07-09)
 Approved for use through 07/31/2016, OMB 0651-0031
 U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449/PTO			Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Application Number	14/529,978
			Filing Date	10/31/2014
			First Named Inventor	Malcolm K. Beyer
			Art Unit	2646
			Examiner Name	O. Obayanju
			Attorney Docket Number	MOC-001
Sheet	1	of	2	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1	US-6,377,210	04-23-2002	Moore	
	A2	US-6,434,403	08-13-2002	Ausems et al.	
	A3	US-6,490,521	12-03-2002	Wiener	
	A4	US-6,518,957	02-11-2003	Lehtinen et al.	
	A5	US-6,549,768	04-15-2003	Fraccaroli	
	A6	US-6,882,856	04-19-2005	Alterman et al.	
	A7	US-7,330,112	02-12-2008	Emigh et al.	
	A8	US-7,486,648	02-03-2009	Baranowski	
	A9	US-8,014,763	09-06-2011	Hymes	
	A10	US-8,139,514	03-20-2012	Weber et al.	
	A11	US-2004/0137884	07-15-2004	Engstrom et al.	
	A12	US-2004/0143391	07-22-2004	King et al.	
	A13	US-2005/0060069	03-17-2005	Breed et al.	
	A14	US-2010/0052945	03-04-2010	Breed	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ²
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	B1	JP-2000-357296-A	12-26-2000	Matsushita Electric Ind Co Ltd		X
	B2	JP-2002-277256-A	09-25-2002	Mazda Motor Corp.		X

Examiner Signature	/Omoniyi Obayanju/	Date Considered	08/01/2016
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached. 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 2 hours 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, 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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Receipt date: 06/20/2016

14529978 - GAU: 2646

PTO/SB/08b (07-09)
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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	14/529,978		
		Filing Date	10/31/2014		
		First Named Inventor	Malcolm K. Beyer		
		Art Unit	2646		
Examiner Name	O. Obayanju				
Sheet	2		2	Attorney Docket Number	MOC-001

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T ₂
	C1	Garmin rino 110 2-way Radio & Personal Navigator; Owner's Manual and Reference Guide; Apr. 2003; 88pgs	
	C2	Int'l Preliminary Report on Patentability (IPRP); for Int'l Patent App. No. PCT/JP2004/000250 dated 7/5/2005; 4pgs	
	C3	Life360's Rule 50(a) Motion for Judgment as a Matter of Law; AGIS, Inc. v. Life360, Inc. (S.D. Fl.); 3/12/2015; 27pgs	
	C4	Plaintiff Advanced Ground Information Systems, Inc.'s Motions In Limine; AGIS, Inc. v. Life360, Inc. (S.D. Fl.); 2/19/2015; 54pgs	
	C5	PRNewswire, "Trimble GPS Technology Enables Seiko Epson Communication Device and Wireless Data Service," Nov. 8, 1999, accessed on the internet at: http://www.prnewswire.com/news-releases/trimble-gps-technology-enables-seiko-epson-communication-device-and-wireless-data-service-77056402.html ; downloaded Jun. 16, 2016; 4pgs.	

Examiner Signature	/Omoniyi Obayanju/	Date Considered	08/01/2016
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Docket No.: MOC-001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Malcolm K. Beyer, et al.

Application No.: 14/529,978

Confirmation No.: 1092

Filed: October 31, 2014

Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

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

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (SIDS)

Pursuant to 37 C.F.R. § 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached form PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, and after the mailing date of the first Office Action on the merits, but before the mailing date of any of a Final Office Action, a Notice of Allowance (37 C.F.R. § 1.97(c)) or an action that otherwise closes prosecution in the application.

In accordance with 37 C.F.R. § 1.98(a)(2)(ii), Applicant has not submitted copies of U.S. patents and U.S. patent applications.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists. In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

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Applicant hereby apprises the Examiner of the following co-pending patent applications, including the contents of the file wrappers, the claims, any Office Actions issued therein, and any Notices of Allowance issued therefor, and requests that the Examiner consider these documents:

Application Number	Filing Date	Title	Inventor
14/695,233	4/24/2015	Method to Provide Ad Hoc and Password Protected Digital and Voice Networks (MOC-003)	Malcolm K. Beyer
14/633,804	2/27/2015	Method to Provide Ad Hoc and Password Protected Digital and Voice Networks (MOC-005)	Malcolm K. Beyer, et al.
14/633,764	2/27/2015	Method to Provide Ad Hoc and Password Protected Digital and Voice Networks (MOC-006)	Malcolm K. Beyer, et al.

Applicant has cited for the Examiner’s consideration certain co-pending U.S. patent applications that are owned at least in part by the assignee of this application, that describe subject matter that may be related to the present invention. The co-pending applications are listed herewith in accordance with M.P.E.P. 609.06 which states: “Applicant may wish to list U.S. patent application numbers on other than a form PTO/SB/08a and 08b format to avoid the application numbers of pending applications being published on the patent. If a citation is not printed on the patent but has been considered by the examiner, the patented file will reflect that fact as noted in MPEP § 609.05(b).”

No copies of the co-pending applications have been provided. If the Examiner wishes to have copies of the co-pending applications, Examiner should contact the Attorney of record.

It is submitted that the Information Disclosure Statement is in compliance with 37 C.F.R. § 1.98 and the Examiner is respectfully requested to consider the listed references.

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Receipt date: 06/20/2016

Application No.: 14/529,978

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14529978 - GAU: 2646

Docket No.: MOC-001

Please charge our Credit Card in the amount of \$90.00 covering the fee set forth in 37 C.F.R. § 1.17(p). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 07-1700, under Order No. MOC-001.

Dated: June 20, 2016

Respectfully submitted,

Electronic signature: /Daniel J. Burns/

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/Omoniyi Obayanju/

08/01/2016


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Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

✓	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	03/31/2015	08/13/2015	01/19/2016	08/01/2016						
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	35	✓	✓	✓	✓						
	36	✓	✓	✓	✓						

Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

✓	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

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Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

✓	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	03/31/2015	08/13/2015	01/19/2016	08/01/2016				
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	86				✓				
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	88				✓				
	89				✓				

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	0	"14529978"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:57
S2	2334	((((social\$9 near2 network\$3) or dating) same (location\$3 or position\$3 or location\$base\$2))) and (map same updat\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:58
S3	16286	((H04W4/02).CPC.)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:58
S4	5696	455/404.2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S5	4375	455/404.2.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S6	16313	455/456.1.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S7	2	"8880042"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 00:45
S8	3	"20060047825"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:02
S9	106	"7593740"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:03
S10	182	((location or position) with ((other or different or another or second) adj2 (vehicl\$5 or car or truck or auto or automobile or plane or aircraft or ship or boat))) same ((display\$3 or view\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:16

		near5 (map))				
S11	47	S10 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 02:12
S12	4	"20030093405"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 04:01
S13	1347	((update or updated) near2 (location\$3 or position\$3)) same ((chang\$3 or displac\$5 or move or movement or moving) with distan\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:01
S14	381	S13 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:01
S15	611	((update or updated) near2 (location\$3 or position\$3)) same ((chang\$3 or displac\$5 or move or movement or moving) with distan\$3) and group	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:02
S16	162	S15 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:02
S17	145	((update or updated) near2 (location\$3 or position\$3)) same ((chang\$3 or displac\$5 or move or movement or moving) with distan\$3) and (shar\$3 near2 (location or position))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:38
S18	7	S17 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:38
S19	374	S14 not S17	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 22:02
S20	219	S14 not S15	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 22:02
S21	4	"14529978"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 22:24
S22	26	"7024207"	US-PGPUB; USPAT; EPO; JPO; DERWENT;	OR	ON	2016/07/30 21:12

			IBM_TDB			
S23	3253	((455/420.ccls.)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 21:45
S24	97	((455/420.ccls.) and (group) and ((adjust\$3 or chang\$3 or control\$4) near2 volume))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 21:47
S25	27	S24 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 21:47
S26	11	((455/420.ccls.) and (invit\$8 near5 group))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 21:58
S27	27	S25 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 21:58
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S29	876	((remote\$3 near4 (control\$4 or command\$3)) and (invit\$8 near5 group))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:03
S30	12	((remote\$3 near4 (control\$4 or command\$3)) with ((second or another or other or different) near2 (device or terminal or ue or apparatus or equipment))) and (invit\$8 near5 group))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:05
S31	4	S30 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:06
S32	18	((455/420.ccls.) and (friend) and ((adjust\$3 or chang\$3 or control\$4) near2 volume))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:07
S33	7	S32 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:07
S34	47	((455/420.ccls.) and ((adjust\$3 or chang\$3 or control\$4 or alter\$4) near5 vibrat\$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT;	OR	ON	2016/07/30 22:09

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S35	24	S34 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:10
S36	145	(parent same child) and ((adjust\$3 or chang\$3) near5 volume) and 455/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:18
S37	57	S36 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:18
S38	1977	((remote\$3 near2 (control\$4 or command\$3)) near3 ((second or another or other or different) near2 (device or terminal or ue or apparatus or equipment))) and (group)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:23
S39	219	((remotely near2 (control\$4 or command\$3)) near3 ((second or another or other or different) near2 (device or terminal or ue or apparatus or equipment))) and (group)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:23
S40	157	((remotely near2 (control\$4 or command\$3)) near3 ((second or another or other or different) adj2 (device or terminal or ue or apparatus or equipment))) and (group)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:24
S41	49	S40 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:24
S42	51	((remotely near2 (control\$4 or command\$3)) near5 ((second or another or other or different) adj2 (device or terminal or ue or apparatus or equipment))) and ((adjust\$5 or chang\$3 or switch\$3) near2 display)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:37
S43	15	S42 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:38
S44	10375	((455/418, "419", "420".ccls.) and (group) and ((adjust\$3 or chang\$3 or control\$4) near2 volume))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:44
S45	330	((455/419,418,420.ccls.) and (group) and ((adjust\$3 or chang\$3 or control\$4) near2 volume))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:45
S46	998	((455/419,418,420.ccls.) and (group) and ((adjust\$3 or chang\$3 or control\$4) near2 (volume or display)))	US-PGPUB; USPAT; EPO; JPO;	OR	ON	2016/07/30 22:46

			DERWENT; IBM_TDB			
S47	363	((455/419,418,420.ccls.) and (group) and ((adjust\$3 or chang\$3) near2 (volume or display)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:46
S48	84	S47 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:46
S49	72	S48 not S24	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 22:47
S50	308	((remote\$3 near2 (control\$4 or command\$3)) near3 ((second or another or other or different) adj2 (device or terminal or ue or apparatus or equipment))) and (group or friend) and ((adjust\$3 or chang\$3) near5 (volume or display))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 23:14
S51	88	S50 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 23:14
S52	83	S51 not S47	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/07/30 23:15
S53	607	((remote\$3 near2 (control\$4 or command\$3)) near4 ((second or another or other or different) adj2 (device or terminal or ue or apparatus or equipment))) and ((adjust\$5 or chang\$3 or switch\$3) near2 (display or volume))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:31
S54	3253	(455/420.ccls.)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:32
S55	11	S53 and S54	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:32
S56	6	S55 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:32
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		near2 (display or volume))				
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S60	132	((adjust\$5 or chang\$3 or switch\$3) near2 (display or volume or settings)) with ((second or another or other or different) adj2 (device or terminal or ue or apparatus or equipment))) same remot\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:40
S61	31	S60 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:41
S62	10066	455/418.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:44
S63	4645	455/419.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:44
S64	14683	(S54 or S62 or S63)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:45
S65	42	S64 and ((adjust\$5 or chang\$3) near3 (display or volume or settings or status)) with ((second or another or other or different) adj2 (device or terminal or ue or apparatus or equipment)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:46
S66	9	S65 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:47
S67	45	S64 and ((adjust\$5 or chang\$3 or switch\$3) near3 (display or volume or settings or status)) with ((second or another or other or different) adj2 (device or terminal or ue or apparatus or equipment)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:54
S68	3	S67 not S65	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:55
S69	0	S68 and (@ad<"20040921" or @pd<"20040921" or	US-PGPUB; USPAT;	OR	ON	2016/08/01 09:55

EAST Search History

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S71	217	S70 and volume	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/01 09:56

8/ 1/ 2016 12:29:17 PM

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Search Notes 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

CPC- SEARCHED		
Symbol	Date	Examiner
H04W4/02	3/31/2015	OO

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	404.2, 456.1	3/31/2015	OO

SEARCH NOTES		
Search Notes	Date	Examiner
See Attached East Search History	3/31/2015	OO
See Attached East Search History (Updated)	8/13/2015	OO
See Attached East Search History (Updated)	1/19/2016	OO
See Attached East Search History (Updated)	8/1/2016	OO

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

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO			Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Application Number	14/529,978
			Filing Date	10/31/2014
			First Named Inventor	Malcolm K. Beyer
			Art Unit	2646
			Examiner Name	O. Obayanju
			Attorney Docket Number	MOC-001
Sheet	1	of	2	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1	US-6,377,210	04-23-2002	Moore	
	A2	US-6,434,403	08-13-2002	Ausems et al.	
	A3	US-6,490,521	12-03-2002	Wiener	
	A4	US-6,518,957	02-11-2003	Lehtinen et al.	
	A5	US-6,549,768	04-15-2003	Fraccaroli	
	A6	US-6,882,856	04-19-2005	Alterman et al.	
	A7	US-7,330,112	02-12-2008	Emigh et al.	
	A8	US-7,486,648	02-03-2009	Baranowski	
	A9	US-8,014,763	09-06-2011	Hymes	
	A10	US-8,139,514	03-20-2012	Weber et al.	
	A11	US-2004/0137884	07-15-2004	Engstrom et al.	
	A12	US-2004/0143391	07-22-2004	King et al.	
	A13	US-2005/0060069	03-17-2005	Breed et al.	
	A14	US-2010/0052945	03-04-2010	Breed	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ²
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	B1	JP-2000-357296-A	12-26-2000	Matsushita Electric Ind Co Ltd		X
	B2	JP-2002-277256-A	09-25-2002	Mazda Motor Corp.		X

Examiner Signature		Date Considered	
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Examiner Initials*	Cite No. ¹	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T ₂
	C1	Garmin rino 110 2-way Radio & Personal Navigator; Owner's Manual and Reference Guide; Apr. 2003; 88pgs	
	C2	Int'l Preliminary Report on Patentability (IPRP); for Int'l Patent App. No. PCT/JP2004/000250 dated 7/5/2005; 4pgs	
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PATENT ABSTRACTS OF JAPAN

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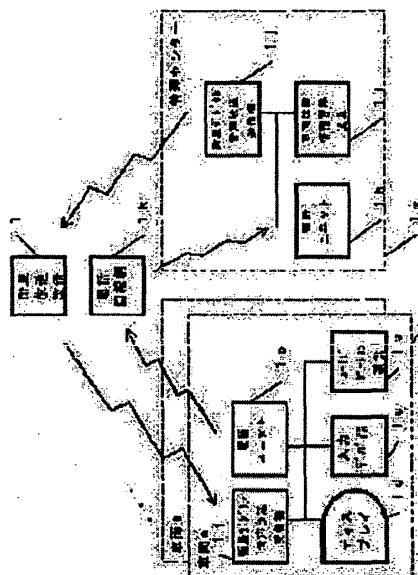
(21)Application number : 11-168694 (71)Applicant : MATSUSHITA ELECTRIC IND CO LTD
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(54) METHOD AND DEVICE FOR PROVIDING VEHICLE POSITION INFORMATION

(57)Abstract:

PROBLEM TO BE SOLVED: To provide each vehicle with position information of plural other vehicles to enable them to confirm positions of each other.

SOLUTION: Position information of each vehicle is collected by a car navigation device of the vehicle. This information is transmitted to a management center 1g by a telephone unit 1e. The management center 1g receives it by a telephone unit 1h. Position information on plural vehicles are managed by a vehicle position information management device 1i. These position information are delivered to each vehicle from the management center 1g by a satellite digital sound broadcasting transmitter 1j and received by a satellite digital sound broadcasting receiver 1f at the vehicle side. Marks are displayed in pertinent geographic positions on a digital map of a display device 1d on a vehicle so that the active state can be recognized. Each vehicle can confirm positions of plural vehicle including the vehicle itself and other vehicles. A vehicle mark on the digital map is selected to automatically telephone the pertinent vehicle, and speech and data transmission are performed.



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(54) [Title of the Invention] Vehicle position information providing system and vehicle position information providing method

(57) [Summary]

[Object] To provide each vehicle with position information on a plurality of other vehicles to enable them to confirm positions of one another.

[Solving Means] A car navigation device of each vehicle is used to collect own-vehicle position information. This information is transmitted to a management center through a telephone unit thereof. This is received by the management center through a telephone unit thereof. Position information on a plurality of vehicles is managed by a vehicle position information management system. The position information is distributed to each vehicle from the management center through a satellite digital audio broadcast transmitter, and received by the vehicle through a satellite digital audio broadcast receiver thereof. Marks are displayed in corresponding geographic positions on a digital map of a display device on a vehicle such that the active state can be grasped. Each vehicle can confirm

positions of a plurality of vehicles including the own vehicle and the other vehicles. A vehicle mark on the digital map is selected to automatically call the corresponding vehicle by telephone, allowing voice communications and data transmission.

[Scope of Claims]

[Claim 1] A vehicle position information providing system, characterized by comprising: vehicles each provided with means for collecting own-vehicle position information, means for transmitting the own-vehicle position information to a management center, and an on-vehicle display device for displaying marks in corresponding positions of the plurality of vehicles on a digital map; and the management center provided with vehicle position information distributing means for distributing the vehicle position information to each of the vehicles.

[Claim 2] The vehicle position information providing system in accordance with claim 1, characterized in that: the vehicle position information distributing means is provided with means for adding a group identification number to position information to be distributed from the management center to each of the vehicles; and each of the vehicles is provided with means for identifying the group identification number and displaying only information on vehicles belonging to a group.

[Claim 3] The vehicle position information providing system in accordance with claim 1, characterized in that the vehicle position information distributing means is provided with means for adding a cellular telephone number of a telephone mounted to the vehicle to position information to be distributed from the management center to each of the vehicles.

[Claim 4] The vehicle position information providing system in accordance with claim 1, characterized in that the system is provided with means for, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to start voice communications.

[Claim 5] The vehicle position information providing system in accordance with claim 1, characterized in that the system is also provided with means for, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to transmit data such as a text message and route guidance to a destination.

[Claim 6] The vehicle position information providing system in accordance with claim 1, characterized in that the vehicle position information distributing means includes means for distributing the position information on the plurality of vehicles to each of the vehicles from the management center via a satellite digital audio broadcasting system.

[Claim 7] A vehicle position information providing method, characterized by comprising: collecting own-vehicle position information in each of vehicles; transmitting the own-vehicle position information to the management center; distributing the position information on a plurality of vehicles to each of the vehicles from the management center; and in each of the vehicles, displaying

marks in corresponding positions of the plurality of vehicles on a digital map of an on-vehicle display device.

[Claim 8] The vehicle position information providing method in accordance with claim 7, characterized by further comprising: adding a group identification number to the position information to be distributed from the management center to each of the vehicles; and in each of the vehicles, identifying the group identification number and displaying only information on vehicles belonging to a corresponding group.

[Claim 9] The vehicle position information providing method in accordance with claim 7, characterized by further comprising adding a cellular telephone number to the position information to be distributed from the management center to each of the vehicles.

[Claim 10] The vehicle position information providing method in accordance with claim 7, characterized by further comprising, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to start voice communications.

[Claim 11] The vehicle position information providing method in accordance with claim 7, characterized by further comprising, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to transmit various data such as a text message and route guidance to a destination.

[Claim 12] The vehicle position information providing method in accordance with claim 7, characterized by further comprising distributing the position information on the plurality of vehicles to each of the vehicles from the management center through a satellite digital audio broadcast.

[Detailed Description of the Invention]

[0001]

[Technical Field to which the Invention belongs] The present invention relates to a vehicle position information providing system, and more particularly to a vehicle position information providing system for managing dynamic states of respective vehicles by collecting own-vehicle position information from respective managing vehicles into one place by means of mobile communication, by displaying their own-vehicle position information as marks by use of a map display device, and by other such operations.

[0002]

[Prior Art] An on-vehicle device such as a car navigation system has a function of calculating a position of the own vehicle by using a GPS, a vehicle speed, a gyro, and a map matching technique. Position information calculated on this vehicle is transmitted to a management center by means of mobile communication such as a cellular telephone. In the management center, a map display device is used to display each vehicle as a mark on a map and thereby manage dynamic states of vehicles. Examples of such a vehicle position information

management system includes one disclosed in JP 5-67113 A. Fig. 6 shows an example of a conventional vehicle dynamic state management system.

[0003] An automobile 10 receives navigation radio waves containing tracking data and time from a plurality of GPS satellites 2 and measures an own-vehicle position. The automobile 10 is also equipped with a travel management recorder (VDR) 13 and collects travel management data. The travel management data and own-vehicle position data are transmitted to an office 20 by a mobile radio transmitter/receiver 12. In the office 20, the vehicle position and travel data are received and the vehicle position is displayed on a display device 24. Further, based on those data, an instruction and data necessary for delivery operation by automobile are obtained by a workstation 22 and transmitted to the automobile 10 via a mobile radio base station 21. In the automobile 10, the instruction and data received by the on-vehicle mobile radio transmitter/receiver 12 are displayed on an on-vehicle display device 14. Accordingly, the delivery operation can be performed according to the instruction from the office, making it possible to improve delivery operation efficiency.

[0004]

[Problem to be solved by the Invention] However, in the conventional vehicle dynamic state management system, own-vehicle position information on each vehicle is displayed on a display device on

a side of a fixed station such as an office or a management center, but cannot be displayed on a vehicle side. Therefore, vehicles cannot confirm positions of one another. For example, there is a problem in that it is impossible to perform patrolling with efficiency, to perform delivery operation with efficiency, and while driving, confirm the positions of one another among vehicles whose users are friends with one another.

[0005] The present invention has an object to solve the above problem, and to provide a vehicle with position information on a plurality of vehicles so as to allow the vehicles to confirm positions of one another.

[0006]

[Means for solving the Problem] In order to achieve the above object, according to the present invention, a vehicle position information providing system is configured to include: vehicles each provided with means for collecting own-vehicle position information, means for transmitting the own-vehicle position information to a management center, and an on-vehicle display device for displaying marks in corresponding positions of a plurality of vehicles on a digital map; and the management center provided with vehicle position information distributing means for distributing the position information on a plurality of vehicles to each of the vehicles.

[0007] The above configuration makes it possible to provide each of the vehicles with the position information on a plurality of

other vehicles and allows the vehicles to confirm the positions of one another.

[0008] Further, the vehicle position information distributing means is provided with means for adding a group identification number to the position information to be distributed from the management center to each of the vehicles, and each of the vehicles is provided with means for identifying the group identification number and displaying only information on vehicles belonging to a corresponding group. The above configuration makes it possible to share the position information only within the group.

[0009] Further, the vehicle position information distributing means is provided with means for adding a cellular telephone number to the position information to be distributed from the management center to each of the vehicles. By being thus configured, the system is also provided with means for, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to start voice communications. The above configuration makes it possible to automatically call a vehicle displayed on the map by telephone.

[0010] Further, the system is also provided with means for, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to transmit various data such as a text message and route guidance to a destination. The above configuration makes it possible

to automatically transmit the data to a vehicle displayed on the map.

[0011] Further, the vehicle position information distributing means is provided with means for distributing the position information on the plurality of vehicles to each of the vehicles from the management center via a satellite digital audio broadcasting system. The above configuration makes it possible to broadcast the vehicle position information to vehicles within a wide range.

[0012]

[Embodiment Mode of the Invention] According to the invention as described in claim 1 of the present invention, a vehicle position information providing system includes: vehicles each provided with means for collecting own-vehicle position information, means for transmitting the own-vehicle position information to a management center, and an on-vehicle display device for displaying marks in corresponding positions of the plurality of vehicles on a digital map; and the management center provided with vehicle position information distributing means for distributing vehicle position information to each of the vehicles, and has a function of providing a vehicle side with the position information on a plurality of other vehicles.

[0013] According to the invention as described in claim 2 of the present invention, in the vehicle position information providing system in accordance with claim 1, the vehicle position information

distributing means is provided with means for adding a group identification number to position information to be distributed from the management center to each of the vehicles; and each of the vehicles is provided with means for identifying the group identification number and displaying only information on vehicles belonging to a group, and has a function of limiting the provision of the vehicle position information to a group basis.

[0014] According to the invention as described in claim 3 of the present invention, in the vehicle position information providing system in accordance with claim 1, the vehicle position information distributing means is provided with means for adding a cellular telephone number to position information to be distributed from the management center to each of the vehicles, and has a function of transmitting the telephone number simultaneously with the position of a vehicle.

[0015] According to the invention as described in claim 4 of the present invention, the vehicle position information providing system in accordance with claim 1 is provided with means for, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to start voice communications, and has a function of calling by telephone a vehicle whose position is confirmed on the map by an operation of selecting the vehicle.

[0016] According to the invention as described in claim 5 of the

present invention, the vehicle position information providing system in accordance with claim 1 is provided with means for, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to transmit various data such as a text message and route guidance to a destination, and has a function of transmitting the data by an operation of selecting a vehicle whose position is confirmed on the map.

[0017] According to the invention as described in claim 6 of the present invention, in the vehicle position information providing system in accordance with claim 1, the vehicle position information distributing means includes means for distributing the position information on the plurality of vehicles to each of the vehicles from the management center via a satellite digital audio broadcasting system, and has a function of broadcasting the vehicle position information to vehicles within a wide range.

[0018] According to the invention as described in claim 7 of the present invention, a vehicle position information providing method includes: collecting own-vehicle position information on each of vehicles; transmitting the own-vehicle position information to a management center; distributing position information on a plurality of vehicles from the management center; and displaying marks in corresponding positions of the plurality of vehicles on a digital map on an on-vehicle display device of each of the vehicles, and

has a function of providing a vehicle side with the position information on a plurality of other vehicles.

[0019] According to the invention as described in claim 8 of the present invention, the vehicle position information providing method in accordance with claim 7 includes: adding a group identification number to the position information to be distributed from the management center to each of the vehicles; and in each of the vehicles, identifying the group identification number and displaying only information on vehicles belonging to a corresponding group, and has a function of limiting the provision of the vehicle position information to a group basis.

[0020] According to the invention as described in claim 9 of the present invention, the vehicle position information providing method in accordance with claim 7 includes adding a cellular telephone number to the position information to be distributed from the management center to each of the vehicles, and has a function of transmitting the telephone number simultaneously with the position of a vehicle.

[0021] According to the invention as described in claim 10 of the present invention, the vehicle position information providing method in accordance with claim 7 includes, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to start voice communications, and has a function of calling by telephone

a vehicle whose position is confirmed on the map by an operation of selecting the vehicle.

[0022] According to the invention as described in claim 11 of the present invention, the vehicle position information providing method in accordance with claim 7 includes, in response to selection of a vehicle mark on the digital map displayed on the on-vehicle display device, calling the corresponding vehicle by telephone to transmit various data such as a text message and route guidance to a destination, and has a function of transmitting the data by an operation of selecting a vehicle whose position is confirmed on the map.

[0023] According to the invention as described in claim 12 of the present invention, the vehicle position information providing method in accordance with claim 7 includes distributing the position information on the plurality of vehicles to each of the vehicles from the management center through a satellite digital audio broadcast, and has a function of broadcasting the vehicle position information to vehicles within a wide range.

[0024] Hereinafter, detailed description will be made of an embodiment of the present invention with reference to Figs. 1 to 5.

[0025] (Embodiment) The embodiment of the present invention provides a vehicle position information providing system in which each vehicle collects own-vehicle position information and sends the own-vehicle position information to a management center by means of a cellular

telephone or an automobile telephone, position information on a plurality of vehicles is sent from the management center to each vehicle through a satellite digital audio broadcast, and each vehicle references position information on another vehicle and automatically performs voice communications and data transmission with the other vehicle.

[0026] Fig. 1 is a functional block diagram of the vehicle position information providing system according to the embodiment of the present invention. In Fig. 1, a vehicle 1a is an automobile mounted with means for collecting, sending/receiving, and displaying vehicle position information, and exists in plurality as vehicles a, b, A car navigation device 1b is a device for detecting and displaying own-vehicle position information. An input device 1c is a touch panel or a remote control and serves to operate the car navigation device, a telephone unit, and a satellite digital audio broadcast receiver. A display 1d is a display device for the car navigation device, which displays information by control from the car navigation device.

[0027] A telephone unit 1e includes a cellular telephone or an automobile telephone and a modem unit, and is used for connection to a mobile telephone line or an automobile telephone line. The telephone unit 1e operates according to an instruction to transmit own-vehicle position information issued from the car navigation device, and serves to transmit the own-vehicle position information

from a vehicle to the management center and to automatically perform voice communications and data transmission with the other vehicle. A satellite digital audio broadcast receiver 1f receives a satellite digital audio broadcast, and serves to receive vehicle position information from the management center and transmit the information to a navigation system.

[0028] A management center 1g performs management and distribution of vehicle position information. A telephone unit 1h is connected to the public telephone line and used for receiving position information from vehicles. A vehicle position information management system 1i accumulates own-vehicle position information collected from each vehicle and issues an instruction to edit and transmit information to be distributed to the vehicles. A satellite digital audio broadcast transmitter/receiver 1j is connected to a satellite digital audio broadcasting facility and transmits the vehicle position information from the vehicle position information management system to the satellite digital audio broadcasting facility. A telephone line network 1k connects each vehicle with the management center and is composed of a mobile communication network and a fixed public line network. A satellite broadcasting facility 1l is composed of a broadcasting facility for transmitting broadcast data to a geostationary satellite and a satellite broadcasting facility such as a geostationary satellite for performing a broadcast to all receivers, and connects the management

center with each vehicle for distribution of the vehicle position information.

[0029] Fig. 2 is a functional block diagram of the car navigation device of the vehicle position information providing system according to the embodiment of the present invention. In Fig. 2, own-vehicle position detecting means 11a represents means for calculating an own-vehicle position based on a matching algorithm in which GPS information received by a GPS antenna, vehicle speed information detected by a vehicle speed sensor, and rotational information detected by a gyro sensor are compared with road information stored in a digital map database. Own-vehicle position displaying means 11b represents means for displaying a digital map with the detected own-vehicle position at the center. Route guidance means 11c represents means for guiding a user to a destination designated by the user by indicating a route.

[0030] Vehicle position information providing means 11d represents means for displaying vehicle marks in corresponding geographical positions on the digital map based on the position information on a plurality of vehicles including the own vehicle and the other vehicles which is received from the management center. Automatic voice communications means 11e represents means for selecting the vehicle mark on the digital map to automatically call the corresponding vehicle by telephone and start voice communications. Automatic data transmission means 11f represents means for selecting

the vehicle mark on the digital map to automatically call the corresponding vehicle by telephone and transmit data.

[0031] Fig. 3 is a process flow chart of the vehicle position information management system according to the embodiment of the present invention. In Fig. 3, own-vehicle position detecting process means 2a represents means for detecting the position of a vehicle. Own-vehicle position information editing process means 2b represents means for editing the own-vehicle position information into transmission information to be transferred to the management center. Own-vehicle position information transmitting process means 2c represents means for transmitting the own-vehicle position information to the management center. Own-vehicle position information receiving process means 2d represents means for receiving the own-vehicle position information from each vehicle via the public telephone line. Own-vehicle position information accumulating process means 2e represents means for temporarily accumulating the own-vehicle position information collected from each vehicle. Vehicle position information editing process means 2j represents means for editing the vehicle position information on all the vehicles into distribution information. Vehicle position information transmitting process means 2k represents means for transmitting the vehicle position information through a satellite digital audio broadcast.

[0032] Vehicle position information receiving process means 2l

represents means for receiving the vehicle position information from the management center through the satellite digital audio broadcast receiver. Vehicle position information displaying process means 2m represents means for displaying the vehicle marks on the digital map of the display. Vehicle-mark input process means 2n represents means for displaying a selection window or the like for selection between automatic voice communications and automatic data transmission. Vehicle-mark input judging process means 2o represents means for determining whether the automatic voice communications or the automatic data transmission has been selected. Automatic voice communications means 2p represents means for reading out a telephone number and issuing a call instruction to the telephone unit to start voice communications. Automatic data transmission means 2q represents means for performing data transmission.

[0033] Fig. 4 is an example of a telegraphic message transmitted from the management center to each vehicle through a satellite digital audio broadcast according to the embodiment of the present invention. In Fig. 4, a header part 3a is a part into which identification information is written. A data part 3b is a part into which position information and the like are written.

[0034] Fig. 5 is an example of a screen displayed on the vehicle dynamic state management system according to the embodiment of the present invention. In Fig. 5, a digital map 4a is a map displayed on the screen of the vehicle dynamic state management system. An

arrow 4b is a mark indicating the position and travel direction of a vehicle.

[0035] Description will be made of operations of the thus-configured vehicle position information providing system according to the embodiment of the present invention. First, the operations are performed on a vehicle side from own-vehicle position detection to own-vehicle position information transmitting process with respect to the management center. In the car navigation device, a GPS receiver, a vehicle speed sensor, a gyro sensor, a map matching process, and the like are used to detect a position on the vehicle (2a). The own-vehicle position information is edited into the transmission information to be transferred to the management center (2b). The car navigation device instructs the telephone unit to transmit the own-vehicle position information to thereby transmit it to the management center by a cellular telephone or an automobile telephone (2c).

[0036] Next, the operations are performed by a center from own-vehicle position information reception to distribution of vehicle position information to each vehicle. In the telephone unit, the own-vehicle position information is received from each vehicle via the public telephone line (2d). Here, even when receiving the own-vehicle position information, the vehicle position information management system does not perform the distribution thereof to each vehicle at that instant, but temporarily accumulates the own-vehicle

position information collected from each vehicle and collectively transmits the own-vehicle position information on all the vehicles at each predetermined interval. Accordingly, loads through the satellite digital audio broadcast are reduced. In addition, assuming that the data size per vehicle is within 100 bytes, through a satellite digital audio broadcast with a bandwidth of 256 Kbytes per channel, 250,000 vehicles per channel can be transmitted for 1 second. Therefore, if an updating interval is set to 5 seconds, 1,250,000 vehicles per channel can be transmitted at a time. As apparent from the above, in the vehicle position information management system, the own-vehicle position information is accumulated (2e). Each time a predetermined time elapses, the vehicle position information on all the vehicles is edited into the distribution information based on the latest information on the vehicle position of all the vehicles which has been accumulated up to then (2j). The vehicle position information management system instructs the satellite digital audio broadcast transmitter to transmit the vehicle position information to thereby transmit it to each of the vehicles through a satellite digital audio broadcast (2k).

[0037] As exemplified in Fig. 4, in the telegraphic message transmitted from the management center to each vehicle, the header part is assigned with a group identification number (3e). This makes it possible to place such a limitation that information can be received

by only vehicles within a particular group such as vehicles belonging to the same company. The header part is further assigned with a vehicle identification number (3d). This makes it possible to place such a limitation that individual response information can be received by only the corresponding vehicle. Also, the data part is assigned with a telephone number (3g) as well as position information (3f). This is the telephone number of the cellular telephone or automobile telephone owned by the corresponding vehicle, and it is possible to read out this telephone number to call thereto when the automatic voice communications and the automatic data transmission are processed in the vehicle.

[0038] Finally, the operations are performed on the vehicle side from vehicle position information reception to vehicle position information display, automatic voice communications, and automatic data transmission. The vehicle position information from the management center is received through the satellite digital audio broadcast receiver (2l). The vehicle position information is transmitted from the satellite digital audio broadcast receiver to the car navigation device, and the vehicle marks are displayed on the digital map of the display (2m).

[0039] As exemplified in Fig. 5, on the screen displayed on the vehicle dynamic state management system, the travel direction is expressed by the arrow direction in a position located in the corresponding latitude/longitude coordinates on the digital map

4a (4b). When the vehicle mark is selected from the digital map, a selection window or the like for selection between automatic voice communications and automatic data transmission is displayed (2n). It is determined in the selection window whether the automatic voice communications or the automatic data transmission has been selected (2o). If the selection is made for the automatic voice communications, the telephone number added to the vehicle position information on the corresponding vehicle is read out, and the call instruction is issued to the telephone unit to start voice communications (2p). If the selection is made for the automatic data transmission, transmission data such as an email message, a map detection result, or a route retrieval result is designated, the telephone number added to the vehicle position information on the corresponding vehicle is read out, the call instruction is issued to the telephone unit to start communication and perform data transmission (2q).

[0040] As described above, according to the embodiment of the present invention, the vehicle position information providing system is configured such that each vehicle collects the own-vehicle position information and sends the own-vehicle position information to the management center by means of the cellular telephone or the automobile telephone, the position information on the plurality of vehicles is sent from the management center to each vehicle through the satellite digital audio broadcast, and each vehicle references the position information on another vehicle and automatically performs

the voice communications and the data transmission with the other vehicle. As a result, it is possible to distribute the position information on the other vehicles to each vehicle and allow the vehicle position information to be displayed. Further, the designation of the vehicle mark makes it possible to easily perform the automatic voice communications and the automatic data transmission, and to transfer the information between the vehicles.

[0041]

[Effects of the Invention] As apparent from the above description, according to the present invention, the vehicle position information providing system is configured to include the own-vehicle position information collecting means provided to each vehicle, the means for transmitting this to the management center, the own-vehicle position information distributing means for distributing the own-vehicle position information on each vehicle from the management center, and the on-vehicle display device for displaying the marks in the corresponding geographic positions on the digital map in order for each vehicle to confirm the position of the plurality of vehicles including the own-vehicle and the other vehicles. Consequently, an effect can be produced in that the vehicles can confirm positions of one another, and patrolling and delivery operation are performed with efficiency.

[0042] Further, the own-vehicle position information distributing means is provided with the means for adding the group identification

number to the position information to be distributed from the management center to each vehicle, and the vehicle is provided with the means for identifying the group identification number and displaying only information on the vehicles belonging to the corresponding group. Consequently, an effect can be produced in that the position information can be shared within each group.

[0043] Further, the system is provided with the means for, by selecting the vehicle mark on the digital map displayed on the on-vehicle display device, automatically calling the corresponding vehicle by telephone to start voice communications. Consequently, an effect can be produced in that the vehicles can easily interact with each other by the voice communications.

[0044] Further, the own-vehicle position information distributing means is provided with the means for adding the cellular telephone number to the position information to be distributed from the management center to each vehicle. Consequently, an effect can be produced in that the calling by telephone can easily be made.

[0045] Further, the vehicle is provided with the means for, by selecting the vehicle mark on the digital map displayed on the on-vehicle display device, automatically calling the corresponding vehicle by telephone to transmit data such as characters describing transmission contents and route guidance to a destination. Consequently, an effect can be produced in that the data can easily be transferred between the vehicles.

[Brief Description of the Drawings]

[Fig. 1] A block diagram of a vehicle position information providing system according to an embodiment of the present invention.

[Fig. 2] A process block diagram of the car navigation device composing the vehicle position information providing system according to the embodiment of the present invention.

[Fig. 3] A process flow chart of the vehicle position information providing system according to the embodiment of the present invention.

[Fig. 4] An example of a telegraphic message transmitted/received through a satellite digital audio broadcast in the vehicle position information providing system according to the embodiment of the present invention.

[Fig. 5] An example of a screen displayed on the vehicle position information providing system according to the embodiment of the present invention.

[Fig. 6] A conceptual diagram of a conventional vehicle dynamic state management system.

[Description of Symbols]

- 2 GPS satellite
- 10 automobile
- 12 mobile radio transmitter/receiver
- 13 travel management recorder
- 14 on-vehicle display device

20 office
21 mobile radio base station
22 workstation
24 display device
1a vehicle
1b car navigation device
1c input device
1d display device
1e mobile unit
1f satellite digital audio broadcast receiver
1g management center
1h telephone unit
1i vehicle position information management system
1j satellite digital audio broadcast transmitter
1k telephone line network
1l satellite broadcasting facility
1la own-vehicle position detecting means
1lb own-vehicle position displaying means
1lc route guidance means
1ld vehicle position information providing means
1le automatic voice communications means
1lf automatic data transmission means
2a own-vehicle position detecting process means
2b own-vehicle position information editing process means

2c own-vehicle position information transmitting process means
2d own-vehicle position information receiving process means
2e own-vehicle position information accumulating process means
2j vehicle position information editing process means
2k vehicle position information transmitting process means
2l vehicle position information receiving process means
2m vehicle position information displaying process means
2n vehicle-mark input process means
2o vehicle-mark input judging means
2p automatic voice communications means
2q automatic data transmission means
3a header part
3b data part
3d vehicle identification number
3e group identification number
3f position information
3g telephone number
4a digital map
4b arrow

FIG. 1

- 1l SATELLITE BROADCASTING FACILITY
- 1k TELEPHONE LINE NETWORK
- 1a VEHICLE b
- VEHICLE a
- 1f SATELLITE DIGITAL AUDIO BROADCAST RECEIVER
- 1e TELEPHONE UNIT
- 1d DISPLAY
- 1c INPUT DEVICE
- 1b CAR NAVIGATION DEVICE
- 1g MANAGEMENT CENTER
- 1j SATELLITE DIGITAL AUDIO BROADCAST TRANSMITTER
- 1i VEHICLE POSITION INFORMATION MANAGEMENT SYSTEM

FIG. 2

- 11a OWN-VEHICLE POSITION DETECTING MEANS
- 11b OWN-VEHICLE POSITION DISPLAYING MEANS
- 11c ROUTE GUIDANCE MEANS
- 11d VEHICLE POSITION INFORMATION PROVIDING MEANS
- 11e AUTOMATIC VOICE COMMUNICATIONS MEANS
- 11f AUTOMATIC DATA TRANSMISSION MEANS

FIG. 3

VEHICLE

CENTER

- 2a OWN-VEHICLE POSITION DETECTING PROCESS MEANS
- 2b OWN-VEHICLE POSITION INFORMATION EDITING PROCESS MEANS
- 2c OWN-VEHICLE POSITION INFORMATION TRANSMITTING PROCESS MEANS
- 2d OWN-VEHICLE POSITION INFORMATION RECEIVING PROCESS MEANS
- 2e OWN-VEHICLE POSITION INFORMATION ACCUMULATING PROCESS MEANS
- 2j VEHICLE POSITION INFORMATION EDITING PROCESS MEANS
- 2k VEHICLE POSITION INFORMATION TRANSMITTING PROCESS MEANS
- 2l VEHICLE POSITION INFORMATION RECEIVING PROCESS MEANS
- 2m VEHICLE POSITION INFORMATION DISPLAYING PROCESS MEANS
- 2n VEHICLE-MARK INPUT PROCESS MEANS
- 2o VEHICLE-MARK INPUT JUDGING MEANS

FIG. 4

- 3a HEADER PART
- 3b DATA PART
- 3d VEHICLE IDENTIFICATION NUMBER
- 3e GROUP IDENTIFICATION NUMBER
- 3f POSITION INFORMATION
- 3g TELEPHONE NUMBER

FIG. 6

- 10 ON-VEHICLE SIDE
- 20 OFFICE SIDE

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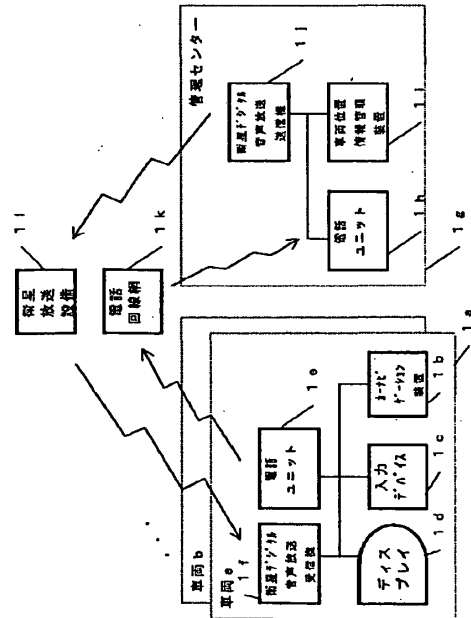
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(54) 【発明の名称】 車両位置情報提供装置とその方法

(57) 【要約】

【課題】 各車両に他の複数車両の位置情報を提供して、車両間でお互いの位置を確認しあうことができるようにする。

【解決手段】 各車両のカーナビゲーション装置で、自車位置情報を収集する。これを電話ユニットで管理センターに送信する。管理センターでは、これを電話ユニットで受信する。車両位置情報管理装置で複数車両の位置情報を管理する。管理センターから、衛星デジタル音声放送送信機で、各車両に配信する。車両側では、衛星デジタル音声放送受信機で受信する。車載ディスプレイ装置のデジタル地図上の地理的な該当位置に、活動状態が把握できるようにマーク表示する。各車両において自車両及び他車両の複数車両の位置を確認することができる。デジタル地図上の車両マークを選択することにより、該当車両に自動的に電話発信して、通話やデータ伝送を行うこともできる。



【特許請求の範囲】

【請求項1】 自車位置情報を収集する手段と、前記自車位置情報を管理センターに送信する手段と、デジタル地図上における複数の車両の該当位置にマークを表示する車載ディスプレイ装置とを各車両に設け、前記各車両に車両位置情報を配信する車両位置情報配信手段を前記管理センターに設けたことを特徴とする車両位置情報提供装置。

【請求項2】 前記車両位置情報配信手段に、前記管理センターから前記各車両へ配信する位置情報にグループ識別番号を付加する手段を設け、前記各車両に、前記グループ識別番号を識別してグループに所属している車両の情報のみを表示する手段を設けたことを特徴とする請求項1記載の車両位置情報提供装置。

【請求項3】 前記車両位置情報配信手段に、前記管理センターから前記各車両へ配信する位置情報に携帯電話番号を付加する手段を設けたことを特徴とする請求項1記載の車両位置情報提供装置。

【請求項4】 前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して通話を開始する手段を設けたことを特徴とする請求項1記載の車両位置情報提供装置。

【請求項5】 前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して、文字メッセージや経路案内等の各種データを送信する手段を設けたことを特徴とする請求項1記載の車両位置情報提供装置。

【請求項6】 前記車両位置情報配信手段は、前記管理センターから衛星デジタル音声放送装置を介して前記各車両に複数の車両の位置情報を配信する手段を含むことを特徴とする請求項1記載の車両位置情報提供装置。

【請求項7】 各車両において自車位置情報を収集し、前記自車位置情報を管理センターに送信し、前記管理センターから前記各車両に複数の車両の位置情報を配信し、前記各車両で車載ディスプレイ装置のデジタル地図上における複数の車両の該当位置にマークを表示することを特徴とする車両位置情報提供方法。

【請求項8】 前記管理センターから前記各車両へ配信する位置情報にグループ識別番号を付加し、前記各車両で前記グループ識別番号を識別して、グループに所属している車両の情報のみを表示することを特徴とする請求項7記載の車両位置情報提供方法。

【請求項9】 前記管理センターから前記各車両へ配信する位置情報に携帯電話番号を付加することを特徴とする請求項7記載の車両位置情報提供方法。

【請求項10】 前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して通話を開始することを特徴とする請求項7記載の車両位置情報提供方法。

【請求項11】 前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して、文字メッセージや経路案内等の各種データを送信することを特徴とする請求項7記載の車両位置情報提供方法。

【請求項12】 前記管理センターから衛星デジタル音声放送により前記各車両に複数の車両の位置情報を配信することを特徴とする請求項7記載の車両位置情報提供方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、車両位置情報提供装置に関し、特に、管理する各車両から自車位置情報を、移動体通信を利用して一箇所に集め、それを地図表示装置を用いて地図上にマーク表示するなどして各車両の車両動態管理を行う車両位置情報提供装置に関する。

【0002】

【従来の技術】カーナビゲーションシステムをはじめとした車載装置は、GPS、車速、ジャイロ及び地図マッチング技術を利用して、自分の車両の位置を算出する機能を有している。この車両において算出した位置情報を、携帯電話等の移動体通信を利用して管理センターに伝送する。管理センターでは、地図表示装置を用いて、各車両を地図上にマーク表示して、車両動態を管理している。このような車両動態管理装置の例としては、特開平5-67113号公報に開示されているものなどがある。図6に、従来の車両動態管理装置の例を示す。

【0003】

自動車10は、複数のGPS衛星2から、軌道データと時刻を含む航法電波を受信して、自車位置を計測する。また、自動車の運行に関する運行データを記録する運行管理記録装置(VDR)13を搭載しており、運行管理データを収集する。この運行管理データと自車位置データを、移動無線送受信装置12により事務所20に送信する。事務所20では、この車両位置および運行データを受信して、その車両位置を表示装置24に表示する。また、これらのデータに基づいて、自動車の配送業務に必要な指示およびデータをワークステーション22により求めて、移動無線基地局21を介して自動車10に送信する。自動車10では、車載移動無線送受信装置12により受信した指示およびデータを、車載表示装置14に表示する。これにより、事務所からの指示に従って配送作業を行うことができ、配送業務効率を向上させることができる。

【0004】

【発明が解決しようとする課題】しかし、従来の車両動態管理システムでは、各車両の自車位置情報は、事務所や管理センター等の固定局側の表示装置に表示されるものであり、車両側で表示することはできなかった。そのため、各車両間で、お互いの車両の位置を確認しあうこ

とができなかった。例えば、巡回パトロールを効率的に行なったり、配送業務を効率的に行なったり、ドライブ中に仲間同士の車両間で位置を確認しあったりすることができないという問題があった。

【0005】本発明は、上記問題を解決し、車両側に複数車両の位置情報を提供して、車両間でお互いの位置を確認しあうことができるようにすることを目的とする。

【0006】

【課題を解決するための手段】上記課題を解決するために、本発明では、車両位置情報提供装置を、自車位置情報を収集する手段と、自車位置情報を管理センターに送信する手段と、デジタル地図上における複数の車両の該当位置にマークを表示する車載ディスプレイ装置とを各車両に設け、各車両に車両位置情報を配信する車両位置情報配信手段を管理センターに設けた構成とした。

【0007】このように構成したことにより、各車両に他の複数車両の位置情報を提供して、車両間でお互いの位置を確認しあうことができる。

【0008】また、車両位置情報配信手段に、管理センターから各車両へ配信する位置情報にグループ識別番号を付加する手段を設け、各車両に、グループ識別番号を識別してグループに所属している車両の情報のみを表示する手段を設けた。このように構成したことにより、グループ内でのみ位置情報を共有することができる。

【0009】また、車両位置情報配信手段に、管理センターから各車両へ配信する位置情報に携帯電話番号を付加する手段を設けた。このように構成したことにより、また、車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して通話を開始する手段を設けた。このように構成したことにより、地図に表示された車両に対して自動的に電話をかけることができる。

【0010】また、車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して、文字メッセージや経路案内等の各種データを送信する手段を設けた。このように構成したことにより、地図に表示された車両に対して自動的にデータを送信することができる。

【0011】また、車両位置情報配信手段は、管理センターから衛星デジタル音声放送装置を介して各車両に複数車両の位置情報を配信する手段を含む構成とした。このように構成したことにより、広範囲の車両に対して車両位置情報を放送することができる。

【0012】

【発明の実施の形態】本発明の請求項1記載の発明は、自車位置情報を収集する手段と、前記自車位置情報を管理センターに送信する手段と、デジタル地図上における複数の車両の該当位置にマークを表示する車載ディスプレイ装置とを各車両に設け、前記各車両に車両位置情報を配信する車両位置情報配信手段を前記管理センターに

設けた車両位置情報提供装置であり、車両側に他の複数車両の位置情報を提供するという作用を有する。

【0013】本発明の請求項2記載の発明は、請求項1記載の車両位置情報提供装置において、前記車両位置情報配信手段に、前記管理センターから前記各車両へ配信する位置情報にグループ識別番号を付加する手段を設け、前記各車両に、前記グループ識別番号を識別してグループに所属している車両の情報のみを表示する手段を設けたものであり、車両位置情報の提供をグループ単位に制限するという作用を有する。

【0014】本発明の請求項3記載の発明は、請求項1記載の車両位置情報提供装置において、前記車両位置情報配信手段に、前記管理センターから前記各車両へ配信する位置情報に携帯電話番号を付加する手段を設けたものであり、車両の位置とともに電話番号を同時に送るという作用を有する。

【0015】本発明の請求項4記載の発明は、請求項1記載の車両位置情報提供装置において、前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して通話を開始する手段を設けたものであり、地図上で位置を確認した車両を選択する操作により電話をかけるという作用を有する。

【0016】本発明の請求項5記載の発明は、請求項1記載の車両位置情報提供装置において、前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して、文字メッセージや経路案内等の各種データを送信する手段を設けたものであり、地図上で位置を確認した車両を選択する操作でデータを送信するという作用を有する。

【0017】本発明の請求項6記載の発明は、請求項1記載の車両位置情報提供装置において、前記車両位置情報配信手段は、前記管理センターから衛星デジタル音声放送装置を介して前記各車両に複数車両の位置情報を配信する手段を含むものであり、広い範囲に車両の位置情報を放送するという作用を有する。

【0018】本発明の請求項7記載の発明は、各車両において自車位置情報を収集し、前記自車位置情報を管理センターに送信し、前記管理センターから前記各車両に複数車両の位置情報を配信し、前記各車両で車載ディスプレイ装置のデジタル地図上における複数の車両の該当位置にマークを表示する車両位置情報提供方法であり、車両側に他の複数車両の位置情報を提供するという作用を有する。

【0019】本発明の請求項8記載の発明は、請求項7記載の車両位置情報提供方法において、前記管理センターから前記各車両へ配信する位置情報にグループ識別番号を付加し、前記各車両で前記グループ識別番号を識別して、グループに所属している車両の情報のみを表示す

るものであり、車両位置情報の提供をグループ単位に制限するという作用を有する。

【0020】本発明の請求項9記載の発明は、請求項7記載の車両位置情報提供方法において、前記管理センターから前記各車両へ配信する位置情報に携帯電話番号を付加するものであり、車両の位置とともに電話番号を同時に送るという作用を有する。

【0021】本発明の請求項10記載の発明は、請求項7記載の車両位置情報提供方法において、前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して通話を開始するものであり、地図上で位置を確認した車両を選択する操作により電話をかけるという作用を有する。

【0022】本発明の請求項11記載の発明は、請求項7記載の車両位置情報提供方法において、前記車載ディスプレイ装置に表示されたデジタル地図上の車両マークが選択されたことに応答して、当該車両に対して電話発信して、文字メッセージや経路案内等の各種データを送信するものであり、地図上で位置を確認した車両を選択する操作でデータを送信するという作用を有する。

【0023】本発明の請求項12記載の発明は、請求項7記載の車両位置情報提供方法において、前記管理センターから衛星デジタル音声放送により前記各車両に複数車両の位置情報を配信するものであり、広い範囲に車両の位置情報を放送するという作用を有する。

【0024】以下、本発明の実施の形態について、図1～図5を参照しながら詳細に説明する。

【0025】(実施の形態)本発明の実施の形態は、各車両において自車位置情報を収集し、これを携帯電話または自動車電話を利用して管理センターに送り、管理センターから衛星デジタル音声放送を利用して各車両に複数の車両位置情報を送り、各車両において、他の車両位置情報を参照したり、他車との自動通話をしたり、自動データ伝送を行う車両位置情報提供装置である。

【0026】図1は、本発明の実施の形態の車両位置情報提供装置の機能ブロック図である。図1において、車両1aは、車両位置情報を収集、送受信、表示する手段を搭載した自動車である。車両a、b、・・・のように複数存在する。カーナビゲーション装置1bは、自車位置情報を検出したり、表示する装置である。入力デバイス1cは、タッチパネルやリモコンであり、カーナビゲーション装置、電話ユニット及び衛星デジタル音声放送受信機を操作するものである。ディスプレイ1dは、カーナビゲーション装置の表示ディスプレイであり、カーナビゲーション装置からの制御により情報を表示する装置である。

【0027】電話ユニット1eは、携帯電話機または自動車電話機及びモデムユニット等により構成され、携帯電話回線または自動車電話回線に接続するものであり、

カーナビゲーション装置からの自車位置情報送信指示により動作し、車両から管理センターへの自車位置情報送信と、他車両への自動通話及び自動データ伝送に利用するものである。衛星デジタル音声放送受信機1fは、衛星デジタル音声放送を受信するものであり、管理センターから車両位置情報を受信し、ナビゲーションシステムに伝達する。

【0028】管理センター1gは、車両位置情報管理及び配信を行うものである。電話ユニット1hは、公衆電話回線に接続されるものであり、車両からの位置情報を受信するものである。車両位置情報管理装置1iは、各車両から収集した自車位置情報の蓄積、車両への配信情報編集及び送信指示を行うものである。衛星デジタル音声放送送信機1jは、衛星デジタル音声放送設備に接続されるものであり、車両位置情報管理装置からの車両位置情報を、衛星デジタル音声放送設備に送信するものである。電話回線網1kは、各車両と管理センターを接続するものであり、移動体通信網及び固定公衆回線網である。衛星放送設備1lは、静止衛星へ放送データを送信する放送設備と、全受信機へ放送を行う静止衛星等衛星放送設備であり、管理センターと各車両を接続し、車両位置情報を配信するものである。

【0029】図2は、本発明の実施の形態の車両位置情報提供装置におけるカーナビゲーション装置の機能ブロック図である。図2において、自車位置検出手段11aは、GPSアンテナから受信したGPS情報や、車速センサから検出した車速情報や、ジャイロセンサから検出した回転情報と、デジタル地図データベースの道路情報によるマッチングアルゴリズムにより自車位置を算出する手段である。自車位置表示手段11bは、検出した自車位置を中心にデジタル地図を表示する手段である。経路案内手段11cは、使用者が指定する目的地への経路案内を行う手段である。

【0030】車両位置情報提供手段11dは、管理センターから受信した自車両及び他車両の複数の車両の位置情報を元に、デジタル地図上の地理的な該当位置に車両マークを表示する手段である。自動通話手段11eは、デジタル地図上の車両マークを選択することにより、該当車両に自動的に電話発信し通話を開始する手段である。自動データ伝送手段11fは、デジタル地図上の車両マークを選択することにより、該当車両に自動的に電話発信しデータを送信する手段である。

【0031】図3は、本発明の実施の形態の車両位置情報管理装置の処理フロー図である。図3において、自車位置検出処理手段2aは、車両の位置検出を行う手段である。自車位置情報編集処理手段2bは、自車位置情報を管理センターに伝達するための送信情報に編集する手段である。自車位置情報送信処理手段2cは、管理センターに送信する手段である。自車位置情報受信処理手段2dは、各車両からの自車位置情報を公衆電話回線経由

で受信する手段である。自車位置情報蓄積処理手段2eは、各車両から収集した自車位置情報を一旦蓄積する手段である。車両位置情報編集処理手段2jは、全車両の車両位置情報を配信情報に編集する手段である。車両位置情報送信処理手段2kは、衛星デジタル音声放送により各車両に送信する手段である。

【0032】車両位置情報受信処理手段2lは、衛星デジタル音声放送受信装置により管理センターからの車両位置情報を受信する手段である。車両位置情報表示処理手段2mは、ディスプレイのデジタル地図上に車両マークを表示する手段である。車両マーク入力処理手段2nは、自動通話かまたは自動データ伝送かの選択ウィンドウなどを表示する手段である。車両マーク入力判断手段2oは、自動通話かまたは自動データ伝送かどちらが選択されたかを判定する手段である。自動通話手段2pは、電話番号を読み出し、電話ユニットへ発信指示を行い、通話を開始する手段である。自動データ伝送手段2qは、データ伝送を行う手段である。

【0033】図4は、本発明の実施の形態の衛星デジタル音声放送を利用した管理センターから各車両への送信電文例である。図4において、ヘッダ部3atは、識別情報を記載した部分である。データ部3btは、位置情報などを記載した部分である。

【0034】図5は、本発明の実施の形態の車両動態管理装置の画面表示例である。図5において、デジタル地図4aは、車両動態管理装置の画面に表示された地図である。矢印4bは、車両の位置と進行方向を示すマークである。

【0035】上記のように構成された本発明の実施の形態の車両位置情報提供装置の動作を説明する。まず、車両における自車位置検出から、管理センターへの自車位置情報送信処理を行う。カーナビゲーション装置において、GPS受信機、車速センサ、ジャイロセンサ及びマップマッチング処理等により、車両の位置検出を行う(2a)。自車位置情報を、管理センターに伝達するための送信情報に編集する(2b)。カーナビゲーション装置から電話ユニットへ、自車位置情報を送信するよう指示し、携帯電話または自動車電話により管理センターに送信する(2c)。

【0036】次に、センターにおける自車位置情報受信から、各車両への車両位置情報の配信までを行う。電話ユニットにおいて、各車両からの自車位置情報を、公衆電話回線経由で受信する(2d)。ここで、車両位置情報管理装置は、自車位置情報を受信しても、その時点で各車両への配信は行わず、各車両から収集した自車位置情報を一旦蓄積し、一定間隔ごとに全車両一括して送信する。これにより、衛星デジタル音声放送の負荷を軽減する。また、1台あたりのデータサイズは100byte以内とすれば、1チャンネルが256Kbyteである衛星デジタル音声放送で、1チャンネル当たり25万台を1秒で送信でき

る。したがって、更新間隔を5秒とした場合には、125万台分が送信可能である。以上のことから、車両位置情報管理装置では、自車位置情報を蓄積する(2e)。一定時間ごとに、それまで蓄積してきた全車両の自車位置の最新情報を元に、全車両の車両位置情報を配信情報に編集する(2j)。車両位置情報管理装置から衛星デジタル音声放送送信機へ、車両位置情報を送信するよう指示し、衛星デジタル音声放送により各車両に送信する(2k)。

【0037】管理センターから各車両への送信電文は、図4に例として示したように、ヘッダ部にグループ識別番号(3e)を付与する。これにより、同一会社内の車両等のように、特定グループ内の車両のみが情報を受信できるように制限することが可能となる。さらに、車両識別番号(3d)を付与する。これにより、個別応答情報を、該当の車両のみが受信できるように制限することが可能となる。また、データ部には、位置情報(3f)の他、電話番号(3g)を付与する。これは、該当車両が所有する携帯電話または自動車電話の電話番号であり、車両における自動通話及び自動データ伝送処理時に、この電話番号を読み出して発信することができる。

【0038】最後に、車両における車両位置情報受信から車両位置情報表示、自動通話及び自動データ伝送を行う。衛星デジタル音声放送受信装置により、管理センターからの車両位置情報を受信する(2l)。車両位置情報は、衛星デジタル音声放送受信装置からカーナビゲーション装置に送信され、ディスプレイのデジタル地図上に車両マークを表示する(2m)。

【0039】車両動態管理装置の画面表示では、図5に例を示したように、デジタル地図4a上の該当する経度緯度座標位置に、進行方向を矢印の方向で表現する(4b)。デジタル地図上の車両マークを選択すると、自動通話かまたは自動データ伝送かの選択ウィンドウなどが表示される(2n)。選択ウィンドウにて、自動通話または自動データ伝送のどちらが選択されたかを判定する(2o)。選択が自動通話であれば、該当車両について、車両位置情報に付加された電話番号を読み出し、電話ユニットへ発信指示を行い、通話を開始する(2p)。選択が自動データ伝送であれば、電子メッセージや地図検索結果や経路探索結果などの伝送データを指定して、該当車両について、車両位置情報に付加された電話番号を読み出し、電話ユニットへ発信指示を行い、通話を開始し、データ伝送を行う(2q)。

【0040】上記のように、本発明の実施の形態では、車両位置情報提供装置を、各車両において自車位置情報を収集し、これを携帯電話または自動車電話を利用して管理センターに送り、管理センターから衛星デジタル音声放送を利用して各車両に複数の車両位置情報を送り、各車両において、他の車両位置情報を参照したり、他車との自動通話をしたり、自動データ伝送を行う構成とし

たので、各車両に他の車両の位置情報を配信して車両位置を表示できる。さらには、その車両マークを指定することにより、自動通話及び自動データ伝送を簡単に行うことができ、車両間の情報伝達をスムーズにすることができる。

【 0 0 4 1 】

【発明の効果】以上の説明から明らかなように、本発明では、車両位置情報提供装置を、各車両ごとに設けられた自車位置情報収集手段と、これを管理センターに送信する手段と、管理センターから各車両の自車位置情報を配信する自車位置情報配信手段と、各車両において自車両及び他車両の複数の車両の位置を確認するためにデジタル地図上の地理的な該当位置にマーク表示する車載ディスプレイ装置とを備えた構成としたので、各車両間でお互いの車両の位置を確認しあって、巡回パトロールや配送業務を効率的に行なうことができるという効果が得られる。

【 0 0 4 2 】また、自車位置情報配信手段に、管理センターから各車両へ配信する位置情報にグループ識別番号を付加する手段を設け、車両側に、それを識別してグループに所属している車両のみ情報を表示する手段を設けたので、各グループ内で位置情報を共有することができるという効果が得られる。

【 0 0 4 3 】また、車載ディスプレイ装置に表示しているデジタル地図上の車両マークを選択することにより該当車両に自動的に電話発信し通話を開始する手段を設けたので、通話による車両間でのやりとりが容易にできるという効果が得られる。

【 0 0 4 4 】また、自車位置情報配信手段に管理センターから各車両へ配信する位置情報に携帯電話番号を付加する手段を設けたので、電話発信が容易にできるという効果が得られる。

【 0 0 4 5 】また、車両において伝達内容を記述した文字、目的地までの経路案内等各種データを車載ディスプレイ装置に表示しているデジタル地図上の車両マークを選択することにより該当車両に自動的に電話発信しデータを送信する手段を設けたので、車両間でのデータのやりとりが容易にできるという効果が得られる。

【図面の簡単な説明】

【図 1】本発明の実施の形態の車両位置情報提供装置のブロック図、

【図 2】本発明の実施の形態の車両位置情報提供装置を構成するカーナビゲーション装置の処理ブロック図、

【図 3】本発明の実施の形態の車両位置情報提供装置の処理フロー図、

【図 4】本発明の実施の形態の車両位置情報提供装置における衛星デジタル音声放送の送受信電文例、

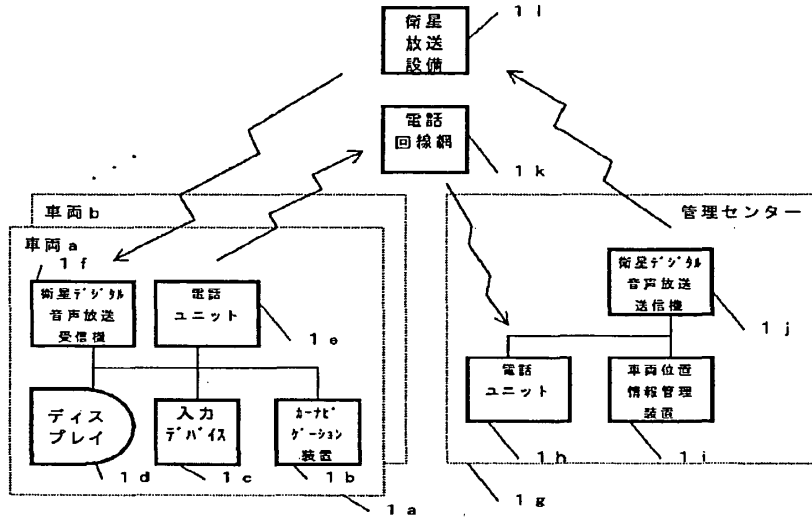
【図 5】本発明の実施の形態の車両位置情報提供装置の画面表示例、

【図 6】従来の車両動態管理装置の概念図である。

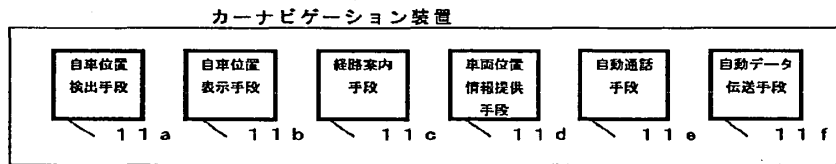
【符号の説明】

- 2 GPS衛星
- 10 自動車
- 12 移動無線送受信装置
- 13 運行管理記録装置
- 14 車載表示装置
- 20 事務所
- 21 移動無線基地局
- 22 ワークステーション
- 10 24 表示装置
 - 1 a 車両
 - 1 b カーナビゲーション装置
 - 1 c 入力装置
 - 1 d ディスプレイ装置
 - 1 e 携帯ユニット
 - 1 f 衛星デジタル音声放送受信機
 - 1 g 管理センター
 - 1 h 電話ユニット
 - 1 i 車両位置情報管理装置
 - 20 1 j 衛星デジタル音声放送送信機
 - 1 k 電話回線網
 - 1 l 衛星放送設備
 - 11 a 自車位置検出手段
 - 11 b 自車位置表示手段
 - 11 c 経路案内手段
 - 11 d 車両位置情報提供手段
 - 11 e 自動通話手段
 - 11 f 自動データ伝送手段
 - 2 a 自車位置検出処理手段
 - 30 2 b 自車位置情報編集処理手段
 - 2 c 自車位置情報送信処理手段
 - 2 d 自車位置情報受信処理手段
 - 2 e 自車位置情報蓄積処理手段
 - 2 j 車両位置情報編集処理手段
 - 2 k 車両位置情報送信処理手段
 - 2 l 車両位置情報受信処理手段
 - 2 m 車両位置情報表示処理手段
 - 2 n 車両マーク入力処理手段
 - 2 o 車両マーク入力判断手段
 - 2 p 自動通話手段
 - 2 q 自動データ伝送手段
 - 3 a ヘッド部
 - 3 b データ部
 - 3 d 車両識別番号
 - 3 e グループ識別番号
 - 3 f 位置情報
 - 3 g 電話番号
 - 4 a デジタル地図
 - 4 b 矢印

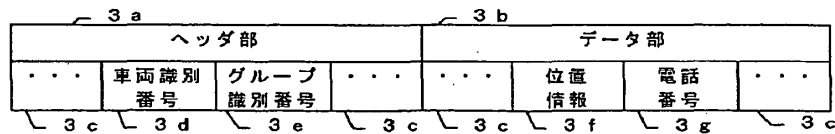
【図1】



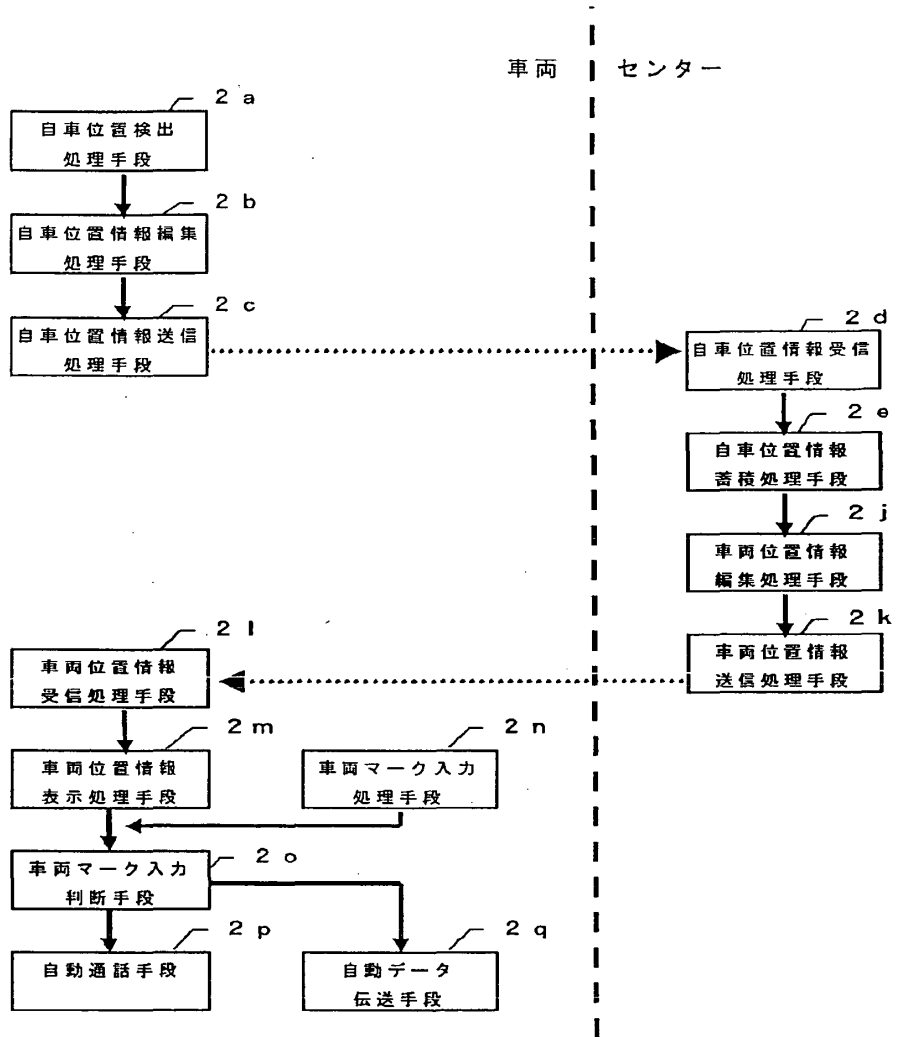
【図2】



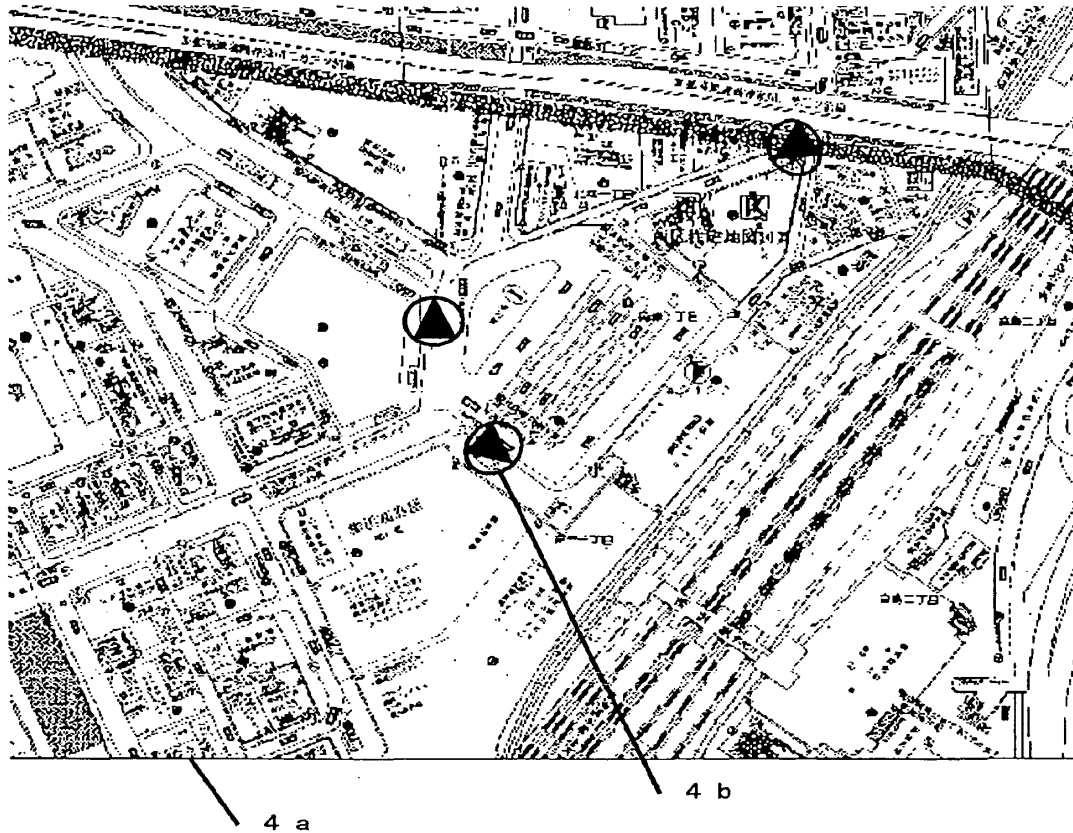
【図4】



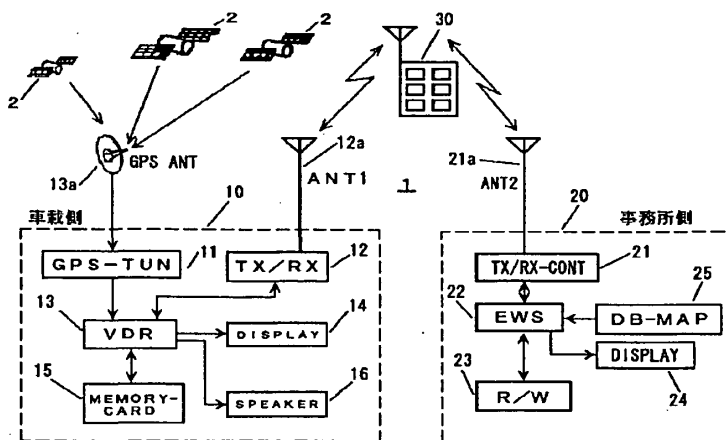
[図 3]



【図5】



【図6】



PATENT ABSTRACTS OF JAPAN

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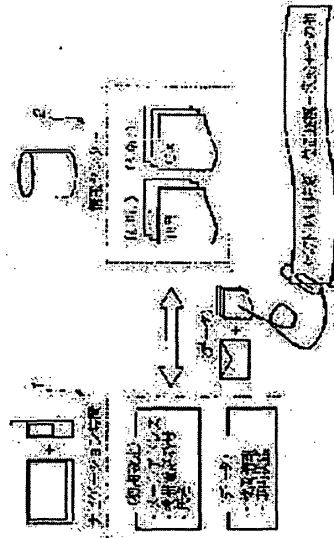
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(54) MOBILE UNIT POSITION DISPLAY METHOD AND SYSTEM, AND INFORMATION-MEDIATION APPARATUS AND ITS COMPUTER PROGRAM

(57)Abstract:

PROBLEM TO BE SOLVED: To easily perform intercommunication by performing communication directly between mobile units.

SOLUTION: A navigation 1 mounted to each of pluralities of vehicles for composing a group has a communication function; and transmits such information as time, a current position (coordinates information), vehicle state, and vehicle speed (driving distance) to an information center 2 in the form a file attached to an E-mail. The identification information of each vehicle for composing the group concerned is registered at the information center 2. When the information center 2 receives position information or the like by an E-mail from a certain vehicle, the center 2 provides the received information to a navigation apparatus 1 that is mounted to another vehicle in the same group by a file attached to an E-mail. The navigation apparatus 1 that is mounted to each vehicle displays a map screen including a specific symbol for indicating the current position of each vehicle on a display based on the received position information on another information, the received current position information on the detected own vehicle, and map information.



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(54) [Title of the Invention] Mobile unit position display method, mobile unit position display system, information mediation apparatus, and computer program for the same

(57) [Summary]

[Object] To perform intercommunication between mobile units with ease without performing direct communication.

[Solving Means] A navigation 1 (*sic*) mounted to each of a plurality of vehicles composing a group has a communication function and sends information including time, a current position (coordinates information), a vehicle state, and a vehicle speed (travel distance) to an information center 2 in the form of a file attached to an email. In the information center 2, identification information is registered for each of the vehicles composing the group. When receiving position information or the like by an email from a given vehicle, the information center 2 provides the received information to a navigation apparatus 1 that is mounted to another vehicle in the same group by a file attached to an E-mail. The navigation apparatus 1 that is mounted to each vehicle displays a map screen

containing a predetermined symbol indicating the current position of each vehicle on a display based on the received position information on another vehicle, detected current position information on the own vehicle, and map information.

[Scope of Claims]

[Claim 1] A mobile unit position display method, which uses a communication system including: an information center provided with a database; and a communication terminal that can communicate with the information center and mounted to or carried by a mobile unit, the method being characterized by comprising:

a storage step for storing identification information on the communication terminals mounted to or carried by a plurality of mobile units composing a group in the database in association;

a communication control step for, when the information center is accessed by the communication terminal and it is judged that the communication terminal is included in the communication terminals mounted to or carried by the plurality of mobile units composing the group by use of the identification information stored in the database, sending position information received from the communication terminal to the other communication terminals in the same group; and

a display step for, in each communication terminal in the group, displaying a map screen that allows identification of current positions of the plurality of mobile units composing the group based on position information on the own communication terminal, position information on the other communication terminals received from the outside, and map information corresponding to those position information.

[Claim 2] The mobile unit position display method according to claim 1, characterized in that in the case where the identification information on the plurality of communication terminals corresponding to the group is stored in the database, the communication control step provides a Web page or a chat room valid only for the communication terminals.

[Claim 3] The mobile unit position display method according to claim 1, characterized in that in the case where, upon receiving a communication start request from a given communication terminal in the group, the association can be confirmed by referencing the database, the communication control step enables communication of the position information with the other communication terminals in the group.

[Claim 4] A mobile unit position display system, comprising: an information center provided with a database; and communication terminals that can communicate with the information center and mounted to or carried by a plurality of mobile units, characterized in that:

identification information on the communication terminals mounted to or carried by a plurality of mobile units composing a group is stored in the database in association;

the information center includes communication control means for, when the information center is accessed by the communication terminal and it is judged that the communication terminal is included

in the communication terminals mounted to or carried by the plurality of mobile units composing the group by use of the identification information stored in the database, sending position information received from the communication terminal to the other communication terminals in the same group; and

the communication terminal includes display means for displaying a map screen that allows identification of current positions of the plurality of mobile units composing the group based on position information on the own communication terminal, position information on the other communication terminals received from the outside, and map information corresponding to those position information.

[Claim 5] The mobile unit position display system according to claim 4, characterized in that in the information center, in the case where the identification information on the plurality of communication terminals corresponding to the group is stored in the database, the communication control means provides a Web page or a chat room valid only for the communication terminals.

[Claim 6] The mobile unit position display system according to claim 4, characterized in that in the information center, in the case where, when receiving a communication start request from a given communication terminal in the group, the association can be confirmed by referencing the database, the communication control means enables communication of the position information with another communication

terminal in the group.

[Claim 7] The mobile unit position display system according to claim 6, characterized in that in the information center, even in the case where the association can be confirmed as a result of referencing the database, when receiving an indication of refusal of communication from the other communication terminal, the communication control means eliminate the other communication terminal from communication among the communication terminals in the group.

[Claim 8] The mobile unit position display system according to claim 5, characterized in that the Web page is chargeable.

[Claim 9] The mobile unit position display system according to claim 5, characterized in that the communication terminal includes communication means for, when the Web page is provided by the information center, directly providing the other communication terminals in the group with an address of the Web page.

[Claim 10] The mobile unit position display system according to claim 7, characterized in that in the information center, when receiving the indication of refusal of communication from the other communication terminal, the communication control means notifies the communication terminals performing communication among the communication terminals in the group of the indication.

[Claim 11] The mobile unit position display system according to any one of claims 4 to 6, characterized in that in the information

center, the communication control means ends communication among the communication terminals in the group automatically when a predetermined period of time has elapsed and/or when there is left one communication terminal that participates in the communication.

[Claim 12] An information mediation apparatus for mediating communication with communication terminals mounted to or carried by a plurality of mobile units, characterized by comprising:

a database in which identification information on the communication terminals mounted to or carried by the plurality of mobile units composing a group is stored in association; and

communication control means for, when the information center (*sic*) is accessed by the communication terminal and it is judged that the communication terminal is included in the communication terminals mounted to or carried by the plurality of mobile units composing the group by use of the identification information stored in the database, sending position information received from the communication terminal to the other communication terminals in the same group.

[Claim 13] The information mediation apparatus according to claim 12, characterized in that in the case where the identification information on the plurality of communication terminals corresponding to the group is stored in the database, the communication control means provides a Web page or a chat room valid only for the communication terminals.

[Claim 14] The information mediation apparatus according to claim 12, characterized in that in the case where, when receiving a communication start request from a given communication terminal in the group, the association can be confirmed by referencing the database, the communication control means enables communication of the position information with another communication terminal in the group.

[Claim 15] A computer program, characterized by causing a computer to operate as the information mediation apparatus according to any one of claims 12 to 14.

[Detailed Description of the Invention]

[0001]

[Technical Field to which the Invention belongs] The present invention relates to a mobile unit position display method for displaying positions of mobile units such as vehicles and persons, a mobile unit position display system, an information mediation apparatus, and a computer program for the same.

[0002]

[Prior Art] Up to now, there has been proposed a navigation apparatus for directly performing inter-vehicle communication between a plurality of vehicles (mobile units) in, for example, JP 2000-59533 A, etc.

[0003]

[Problems to be solved by the Invention] According to the

above-mentioned prior art, increased convenience is provided in the case where a plurality of vehicles compose a group and move, but it is required to equip a navigation apparatus with a dedicated communication apparatus.

[0004] The present invention therefore has an object to provide a mobile unit position display method for performing intercommunication between mobile units with ease without performing direct communication, a mobile unit position display system, an information mediation apparatus, and a computer program for the same.

[0005]

[Means for solving the Problem] In order to achieve the above-mentioned object, a mobile unit position display system according to the present invention is characterized by the following configuration.

[0006] That is, the mobile unit position display system includes: an information center provided with a database; and communication terminals that can communicate with the information center and mounted to or carried by a plurality of mobile units, and is characterized in that: identification information on the communication terminals mounted to or carried by a plurality of mobile units composing a group is stored in the database in association; the information center includes communication control means for, when the information center is accessed by the

communication terminal and it is judged that the communication terminal is included in the communication terminals mounted to or carried by the plurality of mobile units composing the group by use of the identification information stored in the database, sending position information received from the communication terminal to the other communication terminals in the same group; and the communication terminal includes display means for displaying a map screen that allows identification of current positions of the plurality of mobile units composing the group based on position information on the own communication terminal, position information on the other communication terminals received from the outside, and map information corresponding to those position information.

[0007] Preferably, in the information center, in the case where the identification information on the plurality of communication terminals corresponding to the group is stored in the database, the communication control means may provide a Web page or a chat room valid only for the communication terminals.

[0008] Further, preferably, in the information center, in the case where, when receiving a communication start request from a given communication terminal in the group, the association can be confirmed by referencing the database, the communication control means may enable communication of the position information with another communication terminal in the group.

[0009] In each of the configurations described above, the information

center (*sic*), the communication control means may end communication among the communication terminals in the group automatically when a predetermined period of time has elapsed and/or when there is left one communication terminal that participates in the communication.

[0010] Note that the same object described above is achieved by an information mediation apparatus corresponding to an information center in each of the system configurations described above; a program code for implementing an operation of the apparatus by a computer; a storage medium readable by a computer which stores the program code; and a mobile unit position display method corresponding to each of the system configurations described above.

[0011]

[Effects of the Invention] According to the present invention described above, it becomes possible to provide a mobile unit position display method for performing intercommunication between mobile units with ease without performing direct communication, a mobile unit position display system, an information mediation apparatus, and a computer program for the same.

[0012] That is, according to the inventions of claims 1, 4, and 12, for example, the association based on the identification information is used (claim 6) without providing the dedicated communication apparatus on each mobile unit, thereby making it possible to display the position of each mobile unit (communication

apparatus) with ease.

[0013] Further, according to the inventions of claims 2, 5, and 13, the dedicated Web page or chat room is provided to each group, so that the constituent members of the group can share various kinds of information with ease even on the move.

[0014] Further, according to the inventions of claims 3, 6, and 14, the position checking can be started easily for one another, for example, among specific members who often act together in ordinary cases.

[0015] Further, according to the invention of claim 7, members composing a group can be adjusted appropriately, for example, among the specific members who often act together in ordinary cases, so that the privacy of each member can be ensured, thereby increasing the convenience.

[0016] Further, according to the invention of claim 8, the information center can be operated on a commercial base.

[0017] Further, according to the invention of claim 9, a plurality of members composing a group can be notified with ease that the dedicated Web page has been opened.

[0018] Further, according to the invention of claim 10, for example, among specific members who often act together in ordinary cases, all participating members can recognize current constituent members of the group, thereby increasing the convenience.

[0019] Further, according to the invention of claim 11, in the case

where the system is available not for flat-rate billing but for usage-based billing, the system can be used at lower cost, thereby increasing the convenience.

[0020]

[Embodiment Mode of the Invention] Hereinafter, detailed description will be made of an embodiment, in which a mobile unit position display system according to the present invention is applied to vehicles (automobiles) given as a typical example of mobile units, with reference to the drawings.

[0021] Note that in each embodiment (*sic*) below, the description is made by taking a navigation apparatus that is mounted to a vehicle and has a communication function as an example of a communication terminal that is mounted to or carried by a mobile unit. However, the communication terminal is not limited to such an apparatus configuration, and may be an information processor such as a personal digital assistant (PDA) or cellular telephone that has a positioning function (examples of the mobile unit thus including a person).

[0022] Fig. 1 is a diagram showing an entire configuration of the mobile unit position display system according to this embodiment.

[0023] In the figure, reference numeral 1 denotes a navigation apparatus mounted to a vehicle (an on-vehicle navigation apparatus with a communication function) given as an example of the mobile unit, which includes a communication interface 27 for performing communication with an external apparatus. In this embodiment, the

communication interface 27 is a public radio telephone such as a cellular telephone or a PHS telephone, and can be connected to the Internet 6 via a telephone base station 4 within the city and an internet service provider 5. In this embodiment, a representative vehicle, a vehicle A, a vehicle B, and a vehicle C are each mounted with the navigation apparatus 1 and the communication interface 27, which allow access to an information center 2.

[0024] Reference numeral 2 denotes an information center that functions as an information mediation apparatus in this embodiment. The hardware used as the information center 2 is itself a general server computer that can be connected to the Internet 6, and includes a database 7.

[0025] Fig. 2 is a block diagram showing an example of an internal configuration of the on-vehicle navigation apparatus with a communication function according to this embodiment.

[0026] In the figure, reference numeral 22 denotes a display such as a liquid crystal display; 23, an input device composed of key switches and various pointing devices; 24, a ROM that stores a boot program and the like; 25, a RAM that temporarily stores various processing results; 26, a storage device, such as a hard disk drive (an HDD), which stores map information for navigation, a browser program allowing access to the Internet 6, a program for sending/receiving an email, and the like; 27, a communication interface for performing communication with external apparatuses,

such as the information center 2 and the on-vehicle navigation apparatus with a communication function having a similar apparatus configuration, in the state of being connected to the Internet 6 via the telephone base station 4 within the city and the internet service provider 5; and 28, a GPS unit for detecting a current position based on a GPS (global positioning system) signal received from the outside. Those components are connected through an internal bus 29. A CPU (central processing unit) 21 executes an operation control of the entire navigation apparatus, a browser function for the access to the Internet 6, an email sending/receiving function, and the like according to software programs stored in the storage device 26.

[0027] The software programs may be burned onto the ROM 24 in advance to be read for execution by the CPU 21. Alternatively, the software programs may be read from a portable storage medium such as a DVD-ROM for the execution, or may be obtained from outside via a communication line 30 and appropriately stored in the storage device 26 to be read for the execution.

[0028] Next, description will be made of a functional outline of the mobile unit position display system implemented by the above-mentioned system configuration.

[0029] Note that in the following description, in the case where a plurality of vehicles are traveling toward an identical destination or for an identical purpose, the term "group traveling" represents

the state where the plurality of vehicles are traveling in an organized group. In that case, the vehicles in the organized group are arranged in either the state of being so close to one another that each driver can view the other vehicles or the state of being so far apart from one another that each driver can recognize the other vehicles only by using a position display system described below.

[0030] Fig. 3 is a block diagram showing the functional outline of the mobile unit position display system according to this embodiment.

[0031] Before using this system, a representative (for example, a driver of the representative vehicle) for a plurality of vehicles intending to perform the group traveling needs to perform the following initial settings in the state of having logged in to a predetermined Web page or the like of the information center 2. That is, for each of the plurality of vehicles composing a group, the representative needs to register, as predetermined identification information (ID) for specifying the navigation apparatus 1 (including the communication interface 27) mounted to the vehicle, information on the navigation apparatus 1 (communication interface 27) including an email address, a telephone number, and a name of the driver (user). Accordingly, the identification information on the respective navigation apparatuses 1 is stored in the database 7 of the information center 2 in association as a single group. In the information center 2, a predetermined

work area (predetermined Web page, memory area, chat room, or the like) is allocated to the group for a predetermined period of time (for example, about 3 days), which may, for example, be commercially available as a chargeable service.

[0032] After the initial settings are complete, among the navigation apparatuses 1 (communication interface 27) on the plurality of vehicles composing the group, a polling function is executed for a current position, for example, at predetermined time intervals or distance intervals. By an automatic connection function provided to the communication interface 27, information including time, the current position (coordinates information) detected by the GPS unit 28, a vehicle state, and a vehicle speed (travel distance) is sent to the information center 2 in the form of a file attached to an email.

[0033] In the case where the address of the email received from a given vehicle (first vehicle) is included in the identification information that has already been registered in the database 7 in association in the initial settings described above, the information center 2 sends an email attached with a file containing the current position information on the first vehicle to the navigation apparatus 1 mounted to each of vehicles (second vehicles) of the other constituent members of the group.

[0034] Note that in the above configuration, the position information or other such information on the other vehicles may be obtained

collectively when the polling function described above is executed to send the position information or other such information on the own vehicle to the information center 2.

[0035] The navigation apparatus 1 mounted to each of the vehicles composing the group uses a general map display function to display a map screen containing a predetermined symbol indicating the current position of each vehicle on the display 22 based on the current position information on the other vehicles received by the email from the information center 2, the current position information on the own vehicle detected by the GPS unit 28, and the map information stored in the storage device 26.

[0036] Fig. 4 is a flow chart showing state transitions that take place between the navigation apparatus 1 on each vehicle and the information center 2 until the position information is displayed in each vehicle.

[0037] In the representative vehicle driven by the representative for a given group (in this embodiment, the representative vehicle and the vehicles A to C), a predetermined operation is performed on the navigation apparatus 1 and communication interface 27 mounted to the vehicle for the initial settings described above with respect to the information center 2 (step S2), and then the registration relating to the group becomes complete with this system (step S3).

[0038] At this time, the information center 2 issues one group ID to the group composed of the registered vehicles (navigation

apparatuses 1), and at the same time, secures a Web page (or chat room) dedicated to the group for a predetermined period of time (step S4). The constituent members of the group can write desired information into this Web page (or chat room) through the navigation apparatuses 1 with the result that all the members can share various kinds of information with ease.

[0039] The issued group ID is sent by the information center 2 to each vehicle in the form of an email by use of the address registered in the database 7 (step S5 and step S6). Here, the group ID of which the constituent members of a given group are notified may be identification information unique to each group, but in this embodiment, the group ID is assumed to be the address information (URL) on the dedicated Web page. Accordingly, the user of each vehicle that has received the group ID from the information center 2 in step S6 can recognize the existence of the dedicated Web page. At the same time, the position information display starts to include his/her own vehicle in the constituent members of the group, and the user recognizes that the other members are notified of the current position of his/her own vehicle.

[0040] Note that in the above configuration, the group ID and the address information on the dedicated Web page may be sent from the information center 2 only to the navigation apparatus 1 on the representative vehicle, and may then be sent from the representative vehicle to the other vehicles in the group.

[0041] In step S7, the information center 2 judges whether or not a signal indicating participation in the position information display according to this system is received from each of the vehicles composing the group (in this embodiment, the representative vehicle and the vehicles A to C). When the signal indicating the participation is received, the process advances to step S8. When a signal indicating non-participation is received, the process advances to step S14.

[0042] After receiving the signal indicating the non-participation from a given vehicle included in the group in step S7, the information center 2 deletes the vehicle from the constituent members of the group intending to use the system at this time (step S14), while using an email or the like to notify the other vehicles of the deletion of the vehicle from the constituent members intending to use the system at this time (step S15). Accordingly, all the members intending to use this system can recognize who are the members not intending to use this system (members intending to use this system), thereby increasing the convenience.

[0043] When the member is deleted from the constituent members intending to use the system at this time in step S14, the service provided to the member by the information center 2 ends (step S18). Accordingly, users of this system can be adjusted appropriately, for example, among the members who often act together in a group in ordinary cases, so that the privacy of each member can be ensured,

thereby increasing the convenience.

[0044] Meanwhile, in the case where the information center 2 receives the signal indicating the participation from a given vehicle included in the group in step S7, in step S8, the vehicle starts to execute the polling function for the current position of the own vehicle, for example, at predetermined time intervals or distance intervals, thereby automatically sending an email attached with a file containing the current position (coordinates information) detected by the GPS unit 28 to the information center 2.

[0045] Upon receiving the email, the information center 2 refers to the database 7 to thereby send an email containing the received attached file to the vehicles of the other members included in the same group. Accordingly, each vehicle that has received the signal indicating the participation from a given vehicle included in the group in step S7 uses the function of the navigation apparatus 1 mounted thereto to display the map screen containing a predetermined symbol indicating the current position of each vehicle on the display 22 based on the received current position information on the other vehicles, the current position information on the own vehicle detected by the GPS unit 28, and the map information stored in the storage device 26 (step S8).

[0046] If the email containing the position information is not sent from each of the vehicles that are the constituent members intending to use the system at this time within a predetermined period of

time (for example, about 30 minutes) (step S9), the information center 2 notifies at least the navigation apparatus 1 of the representative vehicle to that effect by use of an email or the like (step S10). At this time, if no response is obtained from the representative vehicle or the like, which is the user, it is judged that the use of the system by the group at this time has ended, and the system is forced to end (step S13).

[0047] Alternatively, if the constituent members decrease in number during the use of the system in a so-called dispersion-like manner to finally leave any one of the members (step S11), the position display for one another is no longer performed thereafter. Therefore, the information center 2 notifies the last one member to that effect by use of an email or the like (step S12), while forcing to end the service for the group at this time (step S13). Accordingly, in the case where the system is available not for flat-rate billing but for usage-based billing, the system can be used at lower cost, thereby increasing the convenience.

[0048] Also during the use of the system described above (step S8), in such cases where, for example, an indication of end of the use of the system is obtained from the member of the representative vehicle or the expiry date (in a predetermined period of time, for example, about 3 days later) for the Web page or the like secured for the group in the information center 2 has been reached, it is checked whether the use of the system is to be ended with at least

the member of the representative vehicle by an email or the like (step S16). If the checking results in information indicating the continuous use, the use of the system is continued (step S8), and if the checking results in information indicating the end of the use of the system, the other members are notified of the end of the use of the system by an email or the like (step S17), while the service for the group at this time is ended (step S18). Therefore, according to this embodiment described above, the position information on one another can be sent/received through the information center 2 even if the dedicated communication apparatus capable of direct communication between the vehicles is not provided. Consequently, by using the map display function provided to the navigation apparatus 1 mounted to each of the vehicles, it is possible to display the map screen containing a predetermined symbol indicating the current position of each vehicle on the display with ease and at low cost.

[0049] Note that in this embodiment described above, the position information (coordinates information) and the like are sent/received through the Internet 6 in the form of a file attached to an email. However, this embodiment is not limited to this method, and any transmission forms may be adopted as long as information on necessary items can be sent/received.

[0050] Further, this embodiment is described above on the assumption that the navigation apparatus 1 on each vehicle is previously provided

with the polling function for sending the current position of the own vehicle to the information center 2. However, this embodiment is not limited to this system configuration, and may be configured such that when the navigation apparatus 1 on each vehicle accesses (logs in to) the Web page prior to the group traveling, software implementing the polling function is provided to the accessing navigation apparatus 1 from the information center 2. More specifically, it is a possible configuration that in the case where, for example, the navigation apparatus 1 is provided with an environment allowing the apparatus to operate as a Java Virtual Machine, the Web page dedicated to a group is secured in the information center 2, and when the navigation apparatus 1 on each vehicle accesses (logs in to) the Web page prior to the group traveling, a Java program representing the polling function is downloaded to the accessing navigation apparatus 1 from the information center 2.

[Brief Description of the Drawings]

[Fig. 1] A diagram showing an entire configuration of a mobile unit position display system according to this embodiment (*sic*).

[Fig. 2] A block diagram showing an example of an internal configuration of an on-vehicle navigation apparatus with a communication function according to this embodiment.

[Fig. 3] A block diagram showing a functional outline of the mobile unit position display system according to this embodiment.

[Fig. 4] A flow chart showing state transitions that take place between a navigation apparatus 1 on each vehicle and an information center 2 until position information is displayed in each vehicle.

[Description of Reference Numerals]

- 1: navigation apparatus
- 2: information center
- 4: telephone base station
- 5: internet service provider
- 6: Internet
- 7: database
- 21: CPU
- 22: display
- 23: input device
- 24: ROM
- 25: RAM
- 26: storage device
- 27: communication interface
- 28: GPS unit
- 29: internal bus
- 30: communication line

FIG. 1

27 COMMUNICATION INTERFACE

(REPRESENTATIVE VEHICLE)

1 NAVIGATION APPARATUS

VEHICLE A

4 TELEPHONE BASE STATION

7 DATABASE

GROUP DATA

2 INFORMATION CENTER

FIG. 2

22 DISPLAY

23 INPUT DEVICE

29 INTERNAL PATH

MAP INFORMATION

26 STORAGE DEVICE

28 GPS UNIT

30 COMMUNICATION LINE

FIG. 3

(INITIAL SETTING)

EMAIL ADDRESS

CELLULAR TELEPHONE NUMBER

NAME

(DATA)

POSITION INFORMATION

VEHICLE STATE

YAMADA

EMAIL ADDRESS + TIME + POSITION COORDINATES + STATE + OTHERS

FIG. 4

START

S2 PERFORM GROUP TRAVELING SYSTEM REGISTRATION BY REPRESENTATIVE

S3 PERFORM RECEPTION/REGISTRATION BY INFORMATION CENTER

S4 ISSUE GROUP ID AND CREATE PAGE

S5 SEND GROUP ID TO EACH MEMBER

S6 RECEIVE GROUP ID BY EACH MEMBER

S7 READY TO START SYSTEM?

S8 USE SYSTEM

S9 IF NOT USED FOR PREDETERMINED PERIOD

S10 NOTIFY TO THAT EFFECT

S11 IF ONE MEMBER IS LEFT BY OTHER MEMBERS

S13 FORCE TO END

S14 DELETE FROM REGISTERED MEMBERS

S15 NOTIFY OTHER MEMBERS TO THAT EFFECT

S16 END SYSTEM?

S18 END

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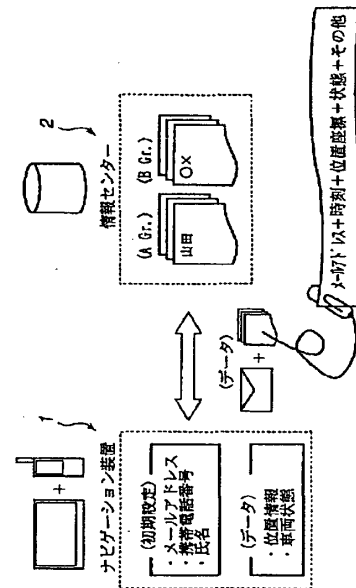
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(54) 【発明の名称】 移動体位置表示方法、移動体位置表示システム、情報仲介装置及びそのコンピュータプログラム

(57) 【要約】

【課題】 各移動体間において直接通信を行うことなく、相互通信を容易に行う。

【解決手段】 グループを構成する複数車両にそれぞれ搭載されたナビゲーション1は通信機能を備えており、時刻、現在位置 (座標情報)、車両状態、並びに車速 (走行距離) 等の情報を、情報センター2への電子メールに添付した添付ファイルの形態で送信する。情報センター2には、当該グループを構成する各車両の識別情報が登録されており、ある車両から電子メールによって位置情報等を受信すると、情報センター2は、受信した情報を同グループ内の他車両に搭載されたナビゲーション装置1に対して、電子メールの添付ファイルにより提供する。各車両に搭載されたナビゲーション装置1では、受信した他車両の位置情報、検出した自車両の現在位置情報、並びに地図情報に基づいて、各車両の所在位置を表わす所定のシンボルを含む地図画面を、ディスプレイに表示する。



【特許請求の範囲】

【請求項1】 データベースを備える情報センターと、前記情報センターと通信可能であって移動体に搭載または携帯された通信端末とを含む通信システムを用いる移動体位置表示方法であって、

前記データベースに、グループを構成する複数の移動体に搭載または携帯された通信端末の識別情報を関連付けて記憶する記憶工程と、

前記情報センターに対して通信端末からアクセスがなされたときに、前記データベースに記憶されている識別情報を利用して、その通信端末が前記グループを構成する移動体に搭載または携帯された通信端末であると判断したときに、該通信端末から受信した位置情報を、そのグループ内の他の通信端末に対して送信する通信制御工程と、

前記グループ内の各通信端末において、自通信端末の位置情報、外部より受信した他の通信端末の位置情報、並びにそれら位置情報に対応する地図情報に基づいて、前記グループを構成する複数の移動体の所在位置を識別可能な地図画面を表示する表示工程と、を有することを特徴とする移動体位置表示方法。

【請求項2】 前記通信制御工程では、前記データベースに前記グループに対応する複数の通信端末の識別情報が記憶されている場合に、それら通信端末に対してのみ有効なWebページまたはチャットルームを提供することを特徴とする請求項1記載の移動体位置表示方法。

【請求項3】 前記通信制御工程では、前記グループ内のある通信端末から通信開始要求を受信したときに、前記データベースを参照することによって関連付けが確認できた場合に、前記グループ内の他の通信端末との位置情報の通信を可能な状態にすることを特徴とする請求項1記載の移動体位置表示方法。

【請求項4】 データベースを備える情報センターと、その情報センターと通信可能であって複数の移動体に搭載または携帯された通信端末とを含む移動体位置表示システムであって、

前記データベースには、グループを構成する複数の移動体に搭載または携帯された通信端末の識別情報が関連付けられて記憶されており、

前記情報センターは、前記情報センターに対して通信端末からアクセスがなされたときに、前記データベースに記憶されている識別情報を利用して、その通信端末が前記グループを構成する移動体に搭載または携帯された通信端末であると判断したときに、該通信端末から受信した位置情報を、そのグループ内の他の通信端末に対して送信する通信制御手段を備え、

前記通信端末は、自通信端末の位置情報、外部より受信した他の通信端末の位置情報、並びにそれら位置情報に対応する地図情報に基づいて、前記グループを構成する複数の移動体の所在位置を識別可能な地図画面を表示す

る表示手段を備えることを特徴とする移動体位置表示システム。

【請求項5】 前記情報センターにおいて、前記通信制御手段は、前記データベースに前記グループに対応する複数の通信端末の識別情報が記憶されている場合に、それら通信端末に対してのみ有効なWebページまたはチャットルームを提供することを特徴とする請求項4記載の移動体位置表示システム。

【請求項6】 前記情報センターにおいて、前記通信制御手段は、前記グループ内のある通信端末から通信開始要求を受信したときに、前記データベースを参照することによって関連付けが確認できた場合に、前記グループ内の他の通信端末との位置情報の通信を可能な状態にすることを特徴とする請求項4記載の移動体位置表示システム。

【請求項7】 前記情報センターにおいて、前記通信制御手段は、前記データベースを参照した結果、関連付けが確認できた場合であっても、前記他の通信端末から通信を拒絶する旨を受信したときには、前記グループ内の通信端末間の通信から前記他の通信端末を除くことを特徴とする請求項6記載の移動体位置表示システム。

【請求項8】 前記Webページは有償であることを特徴とする請求項5記載の移動体位置表示システム。

【請求項9】 前記通信端末は、前記情報センターによって前記Webページが提供された場合に、そのWebページのアドレスを、前記グループ内の他の通信端末に直接提供する通信手段を備えることを特徴とする請求項5記載の移動体位置表示システム。

【請求項10】 前記情報センターにおいて、前記通信制御手段は、前記他の通信端末から通信を拒絶する旨を受信したときに、その旨を、前記グループ内で通信端末間の通信を行う通信端末に対して報知することを特徴とする請求項7記載の移動体位置表示システム。

【請求項11】 前記情報センターにおいて、前記通信制御手段は、前記グループ内の複数の通信端末による通信を、所定期間が経過したとき及び／または通信に参加している通信端末が1台となったときに、自動的に終了することを特徴とする請求項4乃至請求項6の何れかに記載の移動体位置表示システム。

【請求項12】 複数の移動体に搭載または携帯された通信端末との通信を仲介する情報仲介装置であって、グループを構成する複数の移動体に搭載または携帯された通信端末の識別情報が関連付けられたデータベースと、

前記情報センターに対して通信端末からアクセスがなされたときに、前記データベースに記憶されている識別情報を利用して、その通信端末が前記グループを構成する移動体に搭載または携帯された通信端末であると判断したときに、該通信端末から受信した位置情報を、その

ループ内の他の通信端末に対して送信する通信制御手段と、を備えることを特徴とする情報仲介装置。

【請求項 13】 前記通信制御手段は、前記データベースに前記グループに対応する複数の通信端末の識別情報が記憶されている場合に、それら通信端末に対してのみ有効な Web ページまたはチャットルームを提供することを特徴とする請求項 12 記載の情報仲介装置。

【請求項 14】 前記通信制御手段は、前記グループ内のある通信端末から通信開始要求を受信したときに、前記データベースを参照することによって関連付けが確認できた場合に、前記グループ内の他の通信端末との位置情報の通信を可能な状態にすることを特徴とする請求項 12 記載の情報仲介装置。

【請求項 15】 請求項 12 乃至請求項 14 の何れかに記載の情報仲介装置としてコンピュータを動作させることを特徴とするコンピュータプログラム。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、車両や人等の移動体の位置を表示する移動体位置表示方法、移動体位置表示システム、情報仲介装置及びそのコンピュータプログラムに関する。

【0002】

【従来の技術】 従来より、例えば特開 2000-59533 号等には、複数の車両（移動体）間において直接的に車車間通信を行うナビゲーション装置が提案されている。

【0003】

【発明が解決しようとする課題】 上記の従来技術によれば、複数の車両においてグループを構成して移動する場合等に利便性が高いが、ナビゲーション装置に専用の通信装置を備える必要が有る。

【0004】 本発明は、各移動体間において直接通信を行うことなく、相互通信を容易に行う移動体位置表示方法、移動体位置表示システム、情報仲介装置及びそのコンピュータプログラムの提供を目的とする。

【0005】

【課題を解決するための手段】 上記の目的を達成するため、本発明に係る移動体位置表示システムは、以下の構成を特徴とする。

【0006】 即ち、データベースを備える情報センターと、その情報センターと通信可能であって複数の移動体に搭載または携帯された通信端末とを含む移動体位置表示システムであって、前記データベースには、グループを構成する複数の移動体に搭載または携帯された通信端末の識別情報が関連付けられて記憶されており、前記情報センターは、前記情報センターに対して通信端末からアクセスがなされたときに、前記データベースに記憶されている識別情報を利用して、その通信端末が前記グループを構成する移動体に搭載または携帯された通信端末

であると判断したときに、該通信端末から受信した位置情報を、そのグループ内の他の通信端末に対して送信する通信制御手段を備え、前記通信端末は、自通信端末の位置情報、外部より受信した他の通信端末の位置情報、並びにそれら位置情報に対応する地図情報に基づいて、前記グループを構成する複数の移動体の所在位置を識別可能な地図画面を表示する表示手段を備えることを特徴とする。

【0007】 好ましくは前記情報センターにおいて、前記通信制御手段は、前記データベースに前記グループに対応する複数の通信端末の識別情報が記憶されている場合に、それら通信端末に対してのみ有効な Web ページまたはチャットルームを提供すると良い。

【0008】 また、好ましくは前記情報センターにおいて、前記通信制御手段は、前記グループ内のある通信端末から通信開始要求を受信したときに、前記データベースを参照することによって関連付けが確認できた場合に、前記グループ内の他の通信端末との位置情報の通信を可能な状態にすると良い。

【0009】 上記の各構成において、前記情報センターは、前記通信制御手段は、前記グループ内の複数の通信端末による通信を、所定期間が経過したとき及び/または通信に参加している通信端末が 1 台となったときに、自動的に終了すると良い。

【0010】 尚、上記の同目的は、上記の各システム構成における情報センターに対応する情報仲介装置、並びにその装置の動作を、コンピュータによって実現するプログラムコード、及びそのプログラムコードが格納されているコンピュータ読み取り可能な記憶媒体、そして上記の各システム構成に対応する移動体位置表示方法によっても達成される。

【0011】

【発明の効果】 上記の本発明によれば、各移動体間において直接通信を行うことなく、相互通信を容易に行う移動体位置表示方法、移動体位置表示システム、情報仲介装置及びそのコンピュータプログラムの提供が実現する。

【0012】 即ち、請求項 1、請求項 4、請求項 12 の発明によれば、各移動体間で専用の通信装置を用意することなく、例えば識別情報による関連付けを利用することで（請求項 6）、各移動体（通信装置）の位置を容易に表示することができる。

【0013】 また、請求項 2、請求項 5、請求項 13 の発明によれば、グループ毎に専用の Web ページまたはチャットルームが提供されるので、そのグループの構成メンバーは、移動中においても各種の情報を容易に共有することができる。

【0014】 また、請求項 3、請求項 6、請求項 14 の発明によれば、例えば通常一緒に行動することが多い特定のメンバー間における互いの位置確認を容易に開始す

ることができる。

【0015】また、請求項7の発明によれば、例えば通常一緒に行動することが多い特定のメンバー間において、グループを構成するメンバーを適宜調整することができるので、各メンバーのプライバシーを確保することができ、利便性が向上する。

【0016】また、請求項8の発明によれば、商業ベースで情報センターを運営することができる。

【0017】また、請求項9の発明によれば、グループを構成する複数のメンバーに、専用のWebページが開設されたことを容易に知らせることができる。

【0018】また、請求項10の発明によれば、例えば通常一緒に行動することが多い特定のメンバー間において、現在のグループの構成メンバーを参加メンバー全員が認識することができ、利便性が向上する。

【0019】また、請求項11の発明によれば、例えばシステムの利用が定額制による有料ではなく、従量制による有料である場合に、経済的な利用ができるので、利便性が向上する。

【0020】

【発明の実施の形態】以下、本発明に係る移動体位置表示システムを、代表的な移動体である車両（自動車）に適用した実施形態として、図面を参照して詳細に説明する。

【0021】尚、以下の各実施形態では、車両に搭載された通信機能を有するナビゲーション装置を、移動体に搭載または携帯された通信端末の一例として説明するが、この装置構成に限られるものではなく、通信端末は、測位機能を備える携帯情報端末（PDA）や携帯電話等の情報処理装置であっても良い（従って、移動体には人が含まれる）。

【0022】図1は、本実施形態における移動体位置表示システムの全体構成を示す図である。

【0023】同図において、1は、移動体の一例である車両に搭載されたナビゲーション装置（通信機能付き車載ナビゲーション装置）であり、外部装置との通信を行うための通信インタフェース27を含む。本実施形態において、通信インタフェース27は、携帯電話やPHS等の公衆無線電話装置であり、市中の電話基地局4及びインターネット・サービス・プロバイダ5を介して、インターネット6に接続可能である。本実施形態において、代表車両、車両A、車両B、車両Cの各車両には、ナビゲーション装置1及び通信インタフェース27がそれぞれ搭載されており、情報センター2へのアクセスが可能である。

【0024】2は、本実施形態において情報仲介装置として機能する情報センターである。情報センター2のハードウェア自体は、インターネット6に接続可能な一般的なサーバ・コンピュータであり、データベース7を備える。

【0025】図2は、本実施形態における通信機能付き車載ナビゲーション装置の内部構成を例示するブロック図である。

【0026】図中、22は、液晶表示器等のディスプレイ、23はキースイッチや各種ポインティング・デバイス等からなる入力装置である。24は、ブートプログラム等を記憶しているROMである。25は、各種処理結果を一時記憶するRAMである。26は、ナビゲーション用の地図情報や、インターネット6にアクセス可能なブラウザ・プログラム及び電子メールを送受信するプログラム等を記憶するハードディスクドライブ（HDD）等の記憶装置である。27は、市中の電話基地局4及びインターネット・サービス・プロバイダ5を介してインターネット6に接続した状態で、情報センター2や同様な装置構成を備える通信機能付き車載ナビゲーション装置等の外部装置との通信を行う通信インタフェースである。そして28は、外部より受信したGPS（グローバル・ポジショニング・システム）信号に基づいて現在位置を検出するGPSユニットである。これらの各構成

20は、内部バス29を介して接続されており、CPU（中央演算処理装置）21は記憶装置26に記憶したソフトウェアプログラムに従って、当該ナビゲーション装置の全体の動作制御、インターネット6へのブラウザ機能及び電子メールの送受信機能等を実行する。

【0027】係るソフトウェアプログラムは、CPU21において、ROM24に予め焼き込まれたものを読み出してから実行しても、DVD-ROM等の携帯可能な記憶媒体から読み出す、或いは通信回線30を介して外部より取得したものを記憶装置26に適宜格納しておき、読み出してから実行しても良い。

【0028】次に、上述したシステム構成において実現される移動体位置表示システムの機能概要について説明する。

【0029】尚、以下の説明において、グループ走行とは、同一の目的地等に向かって、或いは同一の目的に基づいて複数の車両が走行する場合に、それら複数の車両がグループを編成して走行する状態であり、この場合、編成されるグループにおいて、各車両の配置状態には、ドライバが他車両を目視可能な程に接近した状態の場合も、以下に説明する位置表示システムによってのみ他車両を認識することができる程に離間した状態の場合も含まれる。

【0030】図3は、本実施形態における移動体位置表示システムの機能概要を示すブロック図である。

【0031】グループ走行を行うであろう複数車両の代表者（例えば、代表車両のドライバ）は、本システムの利用に先立って、情報センター2の所定のWebページ等にログインした状態において、初期設定事項として、そのグループを構成する複数の車両について、それら車両に搭載されたナビゲーション装置1（通信インタフェ

ース27を含む)を特定する所定の識別情報(ID)として、ナビゲーション装置1(通信インタフェース27)のメールアドレス、電話番号、ドライバ(ユーザ)の氏名等を登録する必要がある。これにより、情報センター2のデータベース7には、各ナビゲーション装置1の識別情報が、1つのグループとして関連付けされた状態で記憶され、情報センター2には、当該グループのために、所定の処理領域(所定のWebページ、メモリ領域、チャットルーム等)が、所定時間(例えば3日程度)にわたって、例えば商業ベースの場合には有償で割り当てられる。

【0032】そして、係る初期設定が完了した状態において、当該グループを構成する複数車両のナビゲーション1(通信インタフェース27)間では、例えば所定の時間間隔または距離間隔で行われる現在位置のポーリング機能が実行されると、通信インタフェース27による自動的な接続機能により、時刻、GPSユニット28によって検出された現在位置(座標情報)、車両状態、並びに車速(走行距離)等の情報を、情報センター2への電子メールに添付した添付ファイルの形態で送信する。

【0033】情報センター2では、ある車両(第1の車両)から受信した電子メールのアドレスが、上述した初期設定において既にデータベース7に関連付けして登録されたグループ内に含まれる場合に、そのグループ内の他の構成メンバーの各車両(第2の車両)に搭載されたナビゲーション装置1に対して、第1の車両の現在位置情報を含むファイルが添付された電子メールを送信する。

【0034】尚、他車両に関する位置情報等の取得は、上記のポーリング機能によって自車両の位置情報等を情報センター2に送信したときに一括して行う構成としても良い。

【0035】当該グループを構成する各車両に搭載されたナビゲーション装置1では、情報センター2から電子メールにて受信した他の車両の現在位置情報、GPSユニット28によって検出した自車両の現在位置情報、並びに記憶装置26に記憶している地図情報に基づいて、一般的な地図表示機能により、各車両の所在位置を表す所定のシンボルを含む地図画面を、ディスプレイ22に表示する。

【0036】図4は、各車両において位置情報が表示されるまでの、各車両のナビゲーション装置1及び情報センター2間の状態遷移を示すフローチャートである。

【0037】あるグループ(本実施形態では、代表車両、車両A乃至C)の代表者が乗車する代表車両において、その車両に搭載されたナビゲーション装置1及び通信インタフェース27の所定の操作が行われて、情報センター2に対する上記の初期設定が行われると(ステップS2)、当該グループに関する本システムへの登録が完了した状態となる(ステップS3)。

【0038】このとき、情報センター2は、登録された各車両(各ナビゲーション装置1)からなる当該グループに対して、1つのグループIDを発行すると共に、そのグループ専用のWebページ(またはチャットルーム)を所定期間にわたって確保する(ステップS4)。このWebページ(またはチャットルーム)には、当該グループの構成メンバーが、ナビゲーション装置1から所望の情報を書き込むことができ、これにより各メンバーは、各種情報を容易に共有することができる。

【0039】発行されたグループIDは、データベース7に登録されたアドレスを利用して、情報センター2により、各車両に対して電子メールの形態で送信される(ステップS5、ステップS6)。ここで、あるグループの構成メンバーに対して共通に報知されるグループIDは、各グループに固有の識別情報であっても良いが、本実施形態では、係るグループIDを、専用のWebページのアドレス情報(URL)とすれば良い。これにより、ステップS6にて情報センター2からグループIDを受信した各車両のユーザは、専用のWebページの存在を認識することができると共に、自車両がグループの構成メンバーに含まれる位置情報表示が開始され、自車両の現在位置が他のメンバーに報知されることを認識する。

【0040】尚、グループIDや専用のWebページのアドレス情報は、情報センター2から代表車両のナビゲーション装置1だけに送信し、その後、代表車両からグループ内の他車両に送信するように構成しても良い。

【0041】ステップS7において、情報センター2は、当該グループを構成する各車両(本実施形態では代表車両、車両A乃至C)から、本システムによる位置情報表示に参加する旨の信号を受信したかを判断し、参加する旨の信号を受信した場合にはステップS8に進み、不参加である旨の信号を受信した場合にはステップS14に進む。

【0042】情報センター2は、ステップS7において当該グループを構成するある車両から不参加である旨の信号を受信した場合、その車両を当該グループの今回のシステム利用における構成メンバーから削除する(ステップS14)と共に、その車両が今回のシステム利用の構成メンバーから削除されたことを、他のメンバーの車両に対して、電子メール等によって報知する(ステップS15)。これにより、本システムを今回利用しないメンバー(利用するメンバー)を、利用するメンバー全員が認識することができ、利便性が向上する。

【0043】ステップS14において今回のシステム利用の構成メンバーから削除されると、そのメンバーに対する情報センター2によるサービスは終了する(ステップS18)。これにより、例えば通常一緒に行動することが多いグループ内のメンバー間において、本システムの利用者を適宜調整することができるので、各メンバー

のプライバシーを確保することができ、利便性が向上する。

【0044】一方、ステップS7において当該グループを構成するある車両から参加する旨の信号を受信した場合、ステップS8において、その車両では、自車両の現在位置のポーリング機能が、例えば所定の時間間隔または距離間隔で開始されることにより、GPSユニット28によって検出された現在位置（座標情報）を含むファイルが添付された電子メールが、自動的に情報センター2に送信される。

【0045】係る電子メールを受信した情報センター2は、データベース7を参照することによって同グループに含まれる他のメンバーの車両に対して、受信した添付ファイルを含む電子メールを送信する。これにより、ステップS7において当該グループを構成するある車両から参加する旨の信号を受信した各車両では、搭載されたナビゲーション装置1の機能により、受信した他の車両の現在位置情報、GPSユニット28によって検出した自車両の現在位置情報、並びに記憶装置26に記憶している地図情報に基づいて、各車両の所在位置を表わす所定のシンボルを含む地図画面がディスプレイ22に表示される（ステップS8）。

【0046】情報センター2では、本システムの今回の利用において構成メンバーである各車両から所定期間（例えば30分程度）にわたって位置情報を含む電子メールの送信が行われない場合（ステップS9）、その旨を少なくとも代表車両のナビゲーション装置1に対して、電子メール等を利用して連絡する（ステップS10）。このとき、利用者である代表車両等から何ら返答が得られないときには、そのグループによる今回のシステム利用は終了したものと判断して強制終了する（ステップS13）。

【0047】また、本システムの利用中に、所謂、流れ解散の如く構成メンバーが順次少なくなっていく、最後に何れかのメンバーが1人だけとなった場合（ステップS11）、それ以降は本システムによる互いの位置表示はできないので、情報センター2は、その最後の1人のメンバーに対してその旨を電子メール等を利用して連絡する（ステップS12）と共に、当該グループに対する今回のサービスを強制終了する（ステップS13）。これにより、例えばシステムの利用が定額制による有料ではなく、従量制による有料である場合に、経済的な利用ができるので、利便性が向上する。

【0048】また、上述したシステムの利用中（ステップS8）に、例えば代表車両のメンバーからシステム利用の終了指示を取得した場合、当該グループに対して情報センター2に確保したWebページ等の有効期限（例えば3日程度の所定時間）が到来した場合等には、今回のシステム利用を終了するかを、少なくとも代表車両のメンバーに対して電子メール等によって確認し（ステッ

プS16）、その確認の結果が、利用を継続する旨の情報である場合には本システムの利用を継続し（ステップS8）、利用を終了する旨の情報である場合には本システムの利用終了を、他のメンバーに対して電子メール等によって連絡する（ステップS17）と共に、当該グループに対する今回のサービスを終了する（ステップS18）。このように、上述した本実施形態によれば、各車両間において直接通信を行うことが可能な専用の通信装置を備えていなくても、情報センター2を介して互いの位置情報を送受信することができるので、各車両に搭載されたナビゲーション装置1が備える地図表示機能により、それら各車両の所在位置がシンボルによって示された地図画面を容易且つ低コストで表示することができる。

【0049】尚、上述した本実施形態では、位置情報（座標情報）等を、インターネット6を介して、電子メールの添付ファイルの形態で送受信したが、この方法に限られるものではなく、必要な項目の情報を送受信できるのであれば何れの伝送形態であっても良い。

【0050】また、上述した本実施形態では、各車両のナビゲーション装置1に自車両の現在位置を情報センター2に送信するポーリング機能を予め備える構成を前提に説明したが、このシステム構成に限られるものではなく、グループ走行に先立って各車両のナビゲーション装置1が当該Webページにアクセス（ログイン）した際、係るポーリング機能のソフトウェアを情報センター2からアクセス中のナビゲーション装置1に提供するように構成しても良い。より具体的には、例えばナビゲーション装置1がJavaの仮想マシンとして動作する環境を備える場合には、情報センター2にグループ専用のWebページが確保され、グループ走行に先立って各車両のナビゲーション装置1が当該Webページにアクセス（ログイン）した際、係るポーリング機能を表わすJavaプログラムを、情報センター2からアクセス中のナビゲーション装置1にダウンロードする構成が想定される。

【図面の簡単な説明】

【図1】本実施形態における移動体位置表示システムの全体構成を示す図である。

【図2】本実施形態における通信機能付き車載ナビゲーション装置の内部構成を例示するブロック図である。

【図3】本実施形態における移動体位置表示システムの機能概要を示すブロック図である。

【図4】各車両において位置情報が表示されるまでの、各車両のナビゲーション装置1及び情報センター2間の状態遷移を示すフローチャートである。

【符号の説明】

1：ナビゲーション装置、

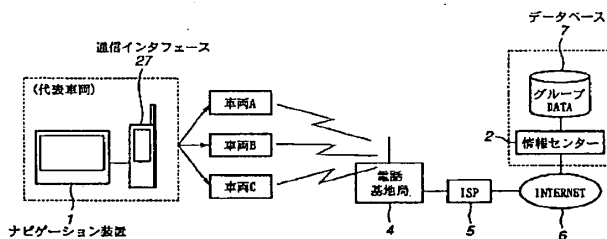
2：情報センター、

4：電話基地局、

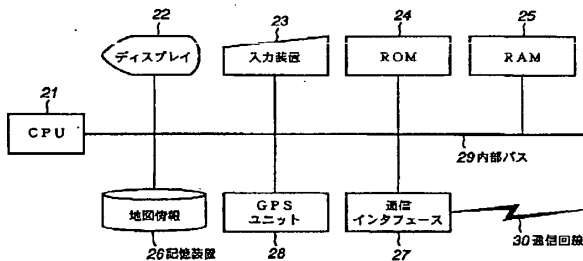
- 5 : インターネット・サービス・プロバイダ,
- 6 : インターネット,
- 7 : データベース,
- 21 : CPU,
- 22 : ディスプレイ,
- 23 : 入力装置,
- 24 : ROM,

- 25 : RAM,
- 26 : 記憶装置,
- 27 : 通信インタフェース,
- 28 : GPSユニット,
- 29 : 内部バス,
- 30 : 通信回線,

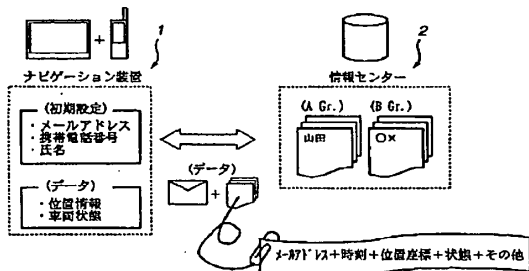
【図1】



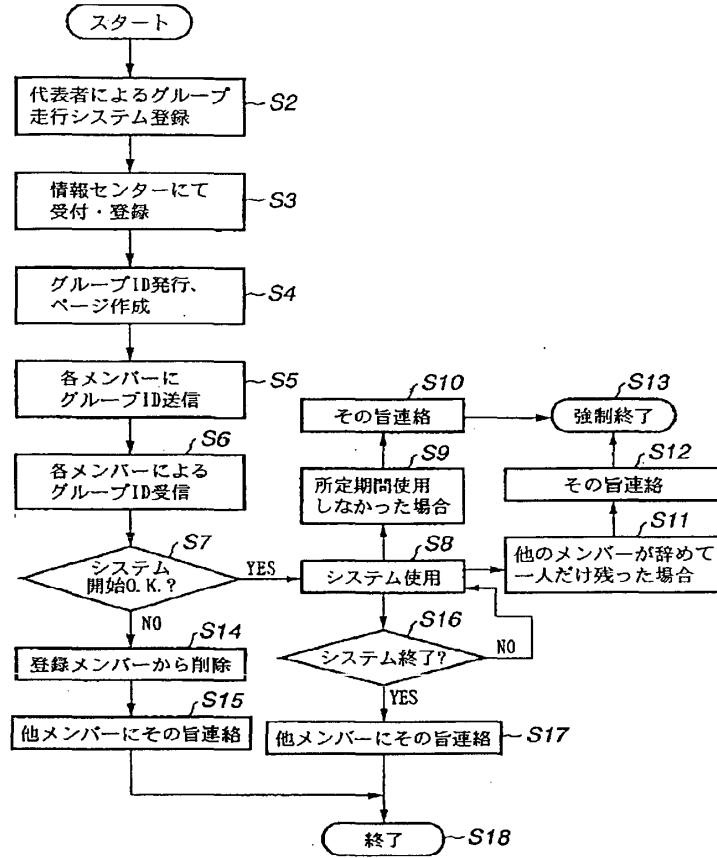
【図2】



【図3】



【図4】



フロントページの続き

(51) Int. Cl. ⁷	識別記号	F I	テマコード (参考)
G 0 9 B 29/10		G 0 9 B 29/10	A
H 0 4 B 7/26		H 0 4 B 7/26	E
H 0 4 Q 7/38			1 0 9 M

F ターム (参考) 2C032 HB02 HB05 HB22 HB25 HC08
HC11 HC13 HD03 HD13
2F029 AA02 AA07 AB07 AC02 AC14
AC19
5H180 AA01 AA21 BB02 BB04 BB05
BB13 CC12 FF04 FF05 FF13
FF27 FF33
5K067 AA21 BB04 BB26 BB36 DD17
DD20 DD52 EE02 EE10 EE16
FF03 FF23 HH11 HH22 KK13
KK15

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference 07186-1744	FOR FURTHER ACTION		See item 4 below
International application No. PCT/JP2004/000250	International filing date (<i>day/month/year</i>) 15 January 2004 (15.01.2004)	Priority date (<i>day/month/year</i>) 15 January 2003 (15.01.2003)]	
International Patent Classification (IPC) or national classification and IPC 7 G08G 1/09			
Applicant TOYOTA INFOTECHNOLOGY CENTER CO., LTD.			

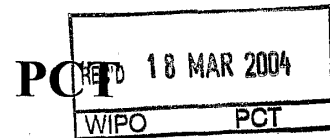
<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i>.1(a).</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/> Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/> Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/> Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/> Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/> Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/> Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/> Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/> Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44<i>bis</i>.3(c) and 93<i>bis</i>.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44<i>bis</i> .2).</p>	<input checked="" type="checkbox"/> Box No. I	Basis of the report	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input type="checkbox"/> Box No. VII	Certain defects in the international application	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/> Box No. I	Basis of the report															
<input type="checkbox"/> Box No. II	Priority															
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability															
<input type="checkbox"/> Box No. IV	Lack of unity of invention															
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement															
<input type="checkbox"/> Box No. VI	Certain documents cited															
<input type="checkbox"/> Box No. VII	Certain defects in the international application															
<input type="checkbox"/> Box No. VIII	Certain observations on the international application															

	Date of issuance of this report 15 July 2005 (15.07.2005)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Masashi Honda
Facsimile No. +41 22 740 14 35	Telephone No. +41 22 338 70 10

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



To:
YOSHIYUKI KAWAGUCHI

**Acropolis 21 Building 6th
floor, 4-10, Higashi
Nihonbashi 3-chome, Chuo-ku
Tokyo 1030004 Japan**

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **16. 3. 2004**

Applicant's or agent's file reference 07186-1744		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/JP2004/000250	International filing date (day/month/year) 15.01.2004	Priority date (day/month/year)	
International Patent Classification (IPC) or both national classification and IPC Int.Cl. ⁷ G08G1/09			
Applicant TOYOTA INFOTECHNOLOGY CENTER CO., LTD			

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer YOSHIE SASAKI Telephone No. +81-3-3581-1101 Ext. 3316	3H 9132
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Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/JP2004/000250

Box No. I **Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 a sequence listing
 table(s) related to the sequence listing

 - b. format of material
 in written format
 in computer readable form

 - c. time of filing/furnishing
 contained in the international application as filed.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority for the purposes of search.

3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

Electronic Patent Application Fee Transmittal

Application Number:	14529978			
Filing Date:	31-Oct-2014			
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS			
First Named Inventor/Applicant Name:	Malcolm K. Beyer			
Filer:	Daniel J. Burns			
Attorney Docket Number:	MOC-001			
Filed as Small 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:				
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Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
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First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns/Michael Moores
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The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 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	Transmittal Letter	SUPPLIDSTRANSMITTAL.pdf	86083 f7ccdcc47966e1dca1407e225dda25049a5a23c2	no	3
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	172375 d313be5fc80598848df660861b04978afbc8a170	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	JP2000-357296A.pdf	1789012 bbe8a835890d9aef8c6bdc17597a4ed67df4cb49	no	41
Warnings:					
Information:					
4	Foreign Reference	JP2002-277256A.pdf	1582552 6c1988fc8002d0144ec31800070181cc6435f4d8	no	38
Warnings:					
Information:					
5	Non Patent Literature	Garmin_Rino110Navigator.pdf	8296043 b20c1575a810c8f2a56ae40b20b088d42aab0600	no	88
Warnings:					
Information:					
6	Other Reference-Patent/App/Search documents	IPRP_PCT- JP2004-000250_071505.pdf	174987 0d0dd8f6aa99c3670d5a1ae1c24eebd190a420c6	no	4
Warnings:					
Information:					
7	Non Patent Literature	Life360_MotionForJudgment.pdf	177552 9992cfebf0b65724765b0cf47080031db9b7f6ed	no	27
Warnings:					
Information:					

8	Non Patent Literature	AGIS_MotionInLimine.pdf	1636887 8bdb9250149d547ad39cf5b1ef39713bd9 d0b92	no	54
Warnings:					
Information:					
9	Non Patent Literature	TrimbleGPSTechnology.pdf	819376 340efbdefe80d66e7948059fd4a6750e90f9 a60c	no	4
Warnings:					
Information:					
10	Fee Worksheet (SB06)	fee-info.pdf	30621 2aa4e9cf7e8a54ac390bb26f74e89fd97fb 4c3c	no	2
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Total Files Size (in bytes):				14765488	
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Malcolm K. Beyer, et al.

Application No.: 14/529,978

Confirmation No.: 1092

Filed: October 31, 2014

Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

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

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (SIDS)

Pursuant to 37 C.F.R. § 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached form PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, and after the mailing date of the first Office Action on the merits, but before the mailing date of any of a Final Office Action, a Notice of Allowance (37 C.F.R. § 1.97(c)) or an action that otherwise closes prosecution in the application.

In accordance with 37 C.F.R. § 1.98(a)(2)(ii), Applicant has not submitted copies of U.S. patents and U.S. patent applications.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists. In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

Applicant hereby apprises the Examiner of the following co-pending patent applications, including the contents of the file wrappers, the claims, any Office Actions issued therein, and any Notices of Allowance issued therefor, and requests that the Examiner consider these documents:

Application Number	Filing Date	Title	Inventor
14/695,233	4/24/2015	Method to Provide Ad Hoc and Password Protected Digital and Voice Networks (MOC-003)	Malcolm K. Beyer
14/633,804	2/27/2015	Method to Provide Ad Hoc and Password Protected Digital and Voice Networks (MOC-005)	Malcolm K. Beyer, et al.
14/633,764	2/27/2015	Method to Provide Ad Hoc and Password Protected Digital and Voice Networks (MOC-006)	Malcolm K. Beyer, et al.

Applicant has cited for the Examiner's consideration certain co-pending U.S. patent applications that are owned at least in part by the assignee of this application, that describe subject matter that may be related to the present invention. The co-pending applications are listed herewith in accordance with M.P.E.P. 609.06 which states: "Applicant may wish to list U.S. patent application numbers on other than a form PTO/SB/08a and 08b format to avoid the application numbers of pending applications being published on the patent. If a citation is not printed on the patent but has been considered by the examiner, the patented file will reflect that fact as noted in MPEP § 609.05(b)."

No copies of the co-pending applications have been provided. If the Examiner wishes to have copies of the co-pending applications, Examiner should contact the Attorney of record.

It is submitted that the Information Disclosure Statement is in compliance with 37 C.F.R. § 1.98 and the Examiner is respectfully requested to consider the listed references.

Please charge our Credit Card in the amount of \$90.00 covering the fee set forth in 37 C.F.R. § 1.17(p). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 07-1700, under Order No. MOC-001.

Dated: June 20, 2016

Respectfully submitted,

Electronic signature: /Daniel J. Burns/

Daniel J. Burns

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Docket No.: MOC-001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:
Malcolm K. Beyer, Jr.

Application No.: 14/529,978

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For: METHOD TO PROVIDE AD HOC AND
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AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION

In response to the Office Action dated February 2, 2016, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 15 of this paper.

ACTIVE/85646768.1

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently amended) A computer-implemented method comprising:
transmitting a respective map to each one of a plurality of devices wherein each of the devices are each configured to display the respective map, and wherein the plurality of devices includes a first device and a plurality of second devices;
~~for each of the devices, receiving from the first device location information comprising an updated location of the first device and transmitting the updated location of the first device to one or more of the plurality of second devices, wherein the first device and the plurality of second devices are included in a group of devices, wherein the first device is configured to participate in the group based on receiving a message related to joining the group, and wherein the first device is configured to transmit participate in the group by transmitting the location information comprising the updated location of the first device based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device;~~
and
receiving from ~~a first of the devices~~ the first device selection information indicating user selection of one or more displayed symbols corresponding to one or more of the second devices included in the group.
2. (Currently amended) The method of claim 1, further comprising
receiving ~~[[from]]~~ respective contact information of the first device and the one or more second devices ~~information comprising respective contact information for the device;~~ and
sending data between the first device and the one or more second devices using the received contact information.
3. (Previously presented) The method of claim 2 wherein the data includes a short message service message, a text message, an image, or a video.
4. (Original) The method of claim 2 wherein particular contact information is a phone number or an Internet Protocol address.

- 5-6. (Canceled)
7. (Currently amended) The method of claim 1, further comprising:
performed by the first device:
receiving user selection of a first of the one or more symbols on the respective
map transmitted to the first device;
obtaining contact information associated with the first symbol; and
performing an action using the contact information wherein the action is initiating
a phone call or transferring data.
8. (Canceled)
9. (Previously presented) The method of claim 1 wherein the first device is a personal
digital assistant (PDA) or personal computer.
10. (Currently amended) The method of claim 1, further comprising:
receiving a request for ~~[[the]]~~ a particular map from ~~one or more of the devices~~ the first
device wherein the request specifies a map location; and
sending the particular map to the ~~one or more devices~~ first device.
11. (Currently amended) The method of claim 1 wherein the ~~devices do~~ first device does not
have access to a phone number or an Internet Protocol address of ~~any other of the devices~~ any of
the one or more second devices.
12. (Currently amended) The method of claim 1 wherein the ~~first~~ map includes an aerial
photograph, a satellite image, or a chart.
13. (Currently amended) The method of claim 1, further comprising:
receiving from one or more of the plurality of devices information corresponding to the
location of fixed entities, said fixed entities comprising buildings, facilities, restaurants, or
emergency locations; and

transmitting to ~~all other~~ one or more of the plurality of devices the information corresponding to the location of the fixed entities.

14. (Currently amended) The method of claim 1, further comprising:
receiving from one or more of the plurality of devices information corresponding to locations of events and/or entities; and
transmitting to ~~all other~~ one or more of the plurality of devices the information corresponding to the locations of the events and/or entities.

15. (Currently amended) A computer-implemented method comprising:
sending a respective first map to each one of a plurality of devices wherein each of the device devices is configured to display the first respective map, and wherein the plurality of devices includes a first device and a plurality of second devices;
~~for each of the devices,~~ receiving from the first device location information comprising an updated location of the first device and sending the updated location of the first device to ~~one or more other~~ the plurality of second devices, wherein the first device and the plurality of second devices are included in a group of devices, wherein the first device is configured to participate in the group based on receiving a message related to joining the group, wherein the first device is configured to ~~transmit~~ participate in the group by transmitting the location information comprising the updated location of the first device based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device, and wherein each of the ~~other~~ plurality of second devices is configured to display ~~respective symbols~~ a symbol representing the updated ~~locations~~ location of the first device on the first respective map; and
receiving from [[a]] the first device selection information indicating user selection of one or more of the displayed symbols corresponding to one or more of the second devices included in the group, and, based thereon:
obtaining [[a]] respective contact information for each of the one or more second devices; and
sending data between the first device and ~~each of the~~ one or more second devices using the contact information ~~of the second device~~.

16. (Previously presented) The method of claim 15 wherein the data includes a short message service message, a text message, an image, or a video.
- 17-18. (Canceled)
19. (Original) The method of claim 15 wherein particular contact information is a phone number or an Internet Protocol address.
20. (Currently amended) The method of claim 15, further comprising:
performed by ~~one of the devices~~ the first device:
receiving user selection of a symbol on the ~~first~~ respective map transmitted to the first device;
obtaining contact information associated with the symbol; and
performing an action using the contact information wherein the action is initiating a phone call or transferring data.
21. (Canceled)
22. (Previously presented) The method of claim 15 wherein a particular device is a personal digital assistant (PDA) or personal computer (PC).
23. (Currently amended) The method of claim 15, further comprising:
receiving a request for a map from ~~a third~~ the first device wherein the request specifies a map location;
obtaining a second map that conforms to the specified map location; and
sending the second map to the ~~third~~ first device.
24. (Currently amended) The method of claim 15 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the one or more second devices.
25. (Currently amended) The method of claim 15 wherein the ~~first~~ map includes an aerial photograph, a satellite image, or a chart.

26. (Currently amended) A system comprising:
one or more computers programmed to perform operations comprising:
 sending a respective ~~first~~ map to each one of a plurality of devices wherein each of the ~~device~~ devices is configured to display the ~~first~~ respective map, and wherein the plurality of devices includes a first device and a plurality of second devices;
 ~~for each of the devices,~~ receiving from the first device location information comprising an updated location of the first device and sending the updated location of the first device to ~~one or more other~~ the plurality of devices, wherein the first device and the plurality of second devices are included in a group of devices, wherein the first device is configured to participate in the group based on receiving a message related to joining the group, wherein the first device is configured to ~~transmit~~ participate in the group by transmitting the location information comprising the updated location of the first device based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device, and wherein each of the ~~other~~ plurality of second devices is configured to display ~~respective symbols~~ a symbol representing the updated ~~locations~~ location of the first on the first respective map; and
- receiving from [[a]] the first device selection information indicating user selection of one or more of the displayed symbols corresponding to one or more of the second devices included in the group and, based thereon:
 obtaining [[a]] respective contact information for each of the one or more second devices; and
 sending data between the first device and ~~each of the one or more second devices using the contact information of the second device.~~

27. (Previously presented) The system of claim 26 wherein the data includes a short message service message, a text message, an image, or a video.

28-29. (Canceled)

30. (Original) The system of claim 26 wherein particular contact information is a phone number or an Internet Protocol address.

31. (Currently amended) The system of claim 26, wherein the operations further comprise:
performed by ~~one of the devices~~ the first device:
receiving user selection of a symbol on the ~~first~~ respective map transmitted to the first device;
obtaining contact information associated with the symbol; and
performing an action using the contact information wherein the action is initiating a phone call or transferring data.
32. (Canceled)
33. (Previously presented) The system of claim 26 wherein a particular device is a personal digital assistant (PDA) or personal computer (PC).
34. (Currently amended) The system of claim 26, wherein the operations further comprise:
receiving a request for a map from ~~a third~~ the first device wherein the request specifies a map location;
obtaining a second map that conforms to the specified map location; and
sending the second map to the ~~third~~ first device.
35. (Currently amended) The system of claim 26 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the one or more second devices.
36. (Currently amended) The system of claim 26 wherein the ~~first~~ map includes an aerial photograph, a satellite image, or a chart.
37. (Currently amended) A computer-implemented method comprising:
~~receiving user selection of a group of one or more users on an interactive display of the first device wherein each user is associated with a respective second device;~~
with a first device, receiving a message related to joining a group, wherein the group includes a plurality of second devices;
based on receiving the message related to joining in the group, participating in the group, wherein participating in the group includes:

transmitting, based on a displacement of the first device by at least a
predetermined distance relative to a previous location of the first device, ~~transmitting~~
first location information comprising an updated location of the first device; and
obtaining, by the first device, a respective second location and contact
information ~~for of each of~~ comprising a plurality of locations of the plurality of second
devices included in the group;

presenting, on an interactive display of the first device, an interactive map on the display
~~comprising one or more~~ and a plurality of user-selectable symbols ~~wherein each symbol~~
~~corresponds to one of~~ corresponding to the second devices and ~~[[is]]~~ positioned on the map at a
location ~~corresponding to the respective location~~ the locations of the second ~~device~~ devices;

[[and]]

identifying user interaction with the display specifying user selection of a set of one or
more of the symbols corresponding to one or more of the second devices; and

identifying user interaction with the display specifying an action and, based thereon,
sending data to the one or more second devices.

38. (Previously presented) The method of claim 37 wherein the data comprises a short message service message, a text message, an image, or a video.

39-41. (Canceled)

42. (Currently amended) The method of claim 37, further comprising:

identifying user interaction with the display specifying a new symbol and a location of the new symbol;

presenting the new symbol on the map at the specified location; and

sending the new symbol and the location to the plurality of second devices wherein each of the devices included in the plurality of second devices is configured to present the new symbol on an interactive map at the specified location.

43-44. (Canceled)

45. (Currently amended) The method of claim 37, wherein ~~a particular~~ the first device is a personal digital assistant (PDA) or personal computer (PC).

46-47. (Canceled)

48. (Currently amended) A system comprising:
~~one or more computers~~ a first device programmed to perform operations comprising:
~~receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;~~
receiving a message related to joining a group, wherein the group includes a plurality of second devices;
based on receiving the message related to joining the group, participating in the group, wherein participating in the group includes:
transmitting, based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device,
~~transmitting first location~~ information comprising an updated location of the first device; and
obtaining a respective second location and contact information for of each of the comprising a plurality of locations of the plurality of second devices included in the group;
presenting, on an interactive display of the first device, an interactive map on the display comprising one or more and a plurality of user-selectable symbols wherein each symbol corresponds to one of corresponding to the second devices and [[is]] positioned on the map at a location corresponding to the respective location the locations of the second device(s); [[and]]
identifying user interaction with the display specifying user selection of a set of one or more of the symbols corresponding to one or more of the second devices; and
identifying user interaction with the display specifying an action and, based thereon, sending data to the one or more second devices.

49. (Previously presented) The system of claim 48 wherein the data comprises a short message service message, a text message, an image, or a video.

ACTIVE/85736540.2

50-52. (Canceled)

53. (Currently amended) The system of claim 48, wherein the operations further comprise:
identifying user interaction with the display specifying a new symbol and a location of the new symbol;
presenting the new symbol on the map at the specified location; and
sending the new symbol and the location to the plurality of second devices wherein each of the devices included in the plurality of second devices is configured to present the new symbol on an interactive map at the specified location.

54-55. (Canceled)

56. (Currently amended) The system of claim 48 wherein ~~a particular~~ the first device is a personal digital assistant (PDA) or personal computer (PC).

57-58. (Canceled)

59. (Currently amended) The method of claim 1, wherein transmitting the updated location of the first device to one or more other ~~the plurality of second~~ devices comprises pushing the updated location of the first device to the one or more other ~~plurality of second~~ devices.

60. (Currently amended) The method of claim 15, wherein transmitting the updated location of the first device to one or more other ~~the plurality of second~~ devices comprises pushing the updated location of the first device to the one or more other ~~plurality of second~~ devices.

61. (Currently amended) The system of claim 26, wherein transmitting the updated location of the first device to one or more other ~~the plurality of second~~ devices comprises pushing the updated location of the first device to the one or more other ~~plurality of second~~ devices.

62. (Currently amended) The method of claim 37, wherein sending the data to the one or more second devices comprises transmitting a text message to at least one of the one or more second devices using an Internet Protocol (IP).

ACTIVE/85736540.2

63. (Currently amended) The system of claim 48, wherein sending the data to the one or more second devices comprises transmitting a text message to at least one of the one or more second devices using an Internet Protocol (IP).

64. (Currently amended) The method of claim 1, further comprising: ~~receiving from the first device information indicating user selection of the one or more displayed symbols corresponding to the one or more second devices, and based thereon,~~ based on the selection information, establishing voice communication between the first device and the one or more second devices.

65. (Previously presented) The method of claim 64, wherein the voice communication comprises a phone call.

66. (Currently amended) The method of claim 15, further comprising: ~~receiving from the first device information indicating user selection of the one or more displayed symbols corresponding to the one or more second devices, and based thereon,~~ based on the selection information, establishing voice communication between the first device and the one or more second devices.

67. (Previously presented) The method of claim 66, wherein the voice communication comprises a phone call.

68. (Currently amended) The system of claim 26, wherein the operations further comprise ~~receiving from the first device information indicating user selection of the one or more displayed symbols corresponding to the one or more second devices, and based thereon,~~ based on the selection information, establishing voice communication between the first device and the one or more second devices.

69. (Previously presented) The system of claim 68, wherein the voice communication comprises a phone call.

70. (Previously presented) The method of claim 37, further comprising identifying user interaction with the display specifying an action and, based thereon, establishing voice communication with at least one of the second devices.

71. (Previously presented) The method of claim 70, wherein the voice communication comprises a phone call.

72. (Previously presented) The system of claim 48, wherein the operations further comprise identifying user interaction with the display specifying an action and, based thereon, establishing voice communication with at least one of the second devices.

73. (Previously presented) The system of claim 72, wherein the voice communication comprises a phone call.

74. (Currently amended) The method of claim 15, wherein at least one ~~of the devices~~ device included in the group is further configured to transmit [[the]] information comprising an updated location of the at least one device based on passage of at least a predetermined time interval since transmitting information comprising a location of the at least one device.

75. (Currently amended) The method of claim 15, wherein at least one ~~of the devices~~ device included in the group is further configured to transmit [[the]] information comprising [[the]] an updated location of the at least one device (1) to a server, (2) using Internet Protocol (IP), and (3) based on passage of at least a predetermined time interval since transmitting information comprising a location of the at least one device.

76. (Currently amended) The method of claim 15, wherein sending the data between the first device and ~~each of the~~ the one or more second devices comprises: receiving the data from the first device using Internet Protocol (IP) and transmitting the data to ~~each of the~~ one or more second devices using IP.

77. (Previously presented) The method of claim 15, wherein the data includes a voice recording.

78. (Currently amended) The method of claim 37, further comprising: based on passage of at least a predetermined time interval since transmitting information comprising a location of the first device, transmitting information comprising ~~[[the]]~~ an updated location of the first device.

79. (Currently amended) The method of claim 37, wherein sending the data to the one or more second devices comprises sending the data to the one or more second devices using Internet Protocol (IP).

80. (Currently amended) The method of claim 37, wherein sending the data to the one or more second devices comprises sending the data to the one or more second devices via a server.

81. (Currently amended) The method of claim 37, wherein the data includes a voice recording.

82. (New) The method of claim 37, wherein transmitting the first location information comprises transmitting the first location information to a server, and wherein obtaining the second location information comprises obtaining the second location information from the server.

83. (New) The method of claim 37, wherein participating in the group further includes:
transmitting first status information comprising at least one of item of information selected from the group consisting of a battery level of the first device and a signal strength of a wireless signal of the first device; and
receiving second status information comprising at least one item of information selected from the group consisting of a plurality of battery levels of the plurality of second devices included in the group and a plurality of signal strengths of wireless signals of the plurality of second devices included in the group.

84. (New) The method of claim 37, wherein the message includes an identifier of the group.

85. (New) The method of claim 1, wherein the message includes an identifier of the group.

86. (New) The method of claim 1, further comprising:
receiving, from the first device, a message related to remotely controlling a second device included in the group of devices to perform an action; and
remotely controlling the second device to perform the action by sending the message to the second device.

87. (New) The method of claim 86, wherein the message indicates the action to be performed, and wherein the action is selected from the group consisting of playing audio, initiating a phone call, vibrating, converting text to speech, changing sound intensity, and displaying information.

88. (New) The method of claim 37, further comprising:
remotely controlling a second device included in the group of devices to perform an action by sending a message to the second device.

89. (New) The method of claim 88, wherein the message indicates the action to be performed, and wherein the action is selected from the group consisting of playing audio, initiating a phone call, vibrating, converting text to speech, changing sound intensity, and displaying information.

REMARKS

Claims 1-4, 7, 9-16, 19, 20, 22-27, 30, 31, 33-38, 40-42, 45, 48, 49, 51-53, 56, and 59-81 were presented for examination and were rejected. In the present Amendment, claims 1, 2, 7, 10-15, 20, 23-26, 31, 34-37, 42, 45, 48, 53, 56, 59-64, 66, 68, 74-76, and 78-81 are amended, claims 82-88 are added, and claims 40, 41, 51, and 52 are canceled without prejudice or disclaimer.

No new matter is added. Support for the claim amendments can be found, for example, in U.S. Patent No. 7,630,724 (e.g., in the Abstract; in col. 3:11-20, 3:32-35, 3:42-51, 3:58-63, 6:1-23, 6:44-59, 9:23-47, 10:56-11:15, 11:44-58, 12:12-62, 14:60-67, 15:7-16, 16:42-59, and 17:45-51; and in FIG. 4). It is noted that the '724 patent was incorporated by reference into the present application at the time of the present application's filing.

Interview Summary

The Applicant and the undersigned thank the Examiner for his time and courtesy during the interview that took place on April 4, 2016. The interview was held pursuant to an Interview Agenda that was emailed to Examiner Obayanju on March 31, 2016. Copies of the email and the Interview Agenda are submitted herewith. The participants included Examiner Obayanju, Applicant's undersigned representative (Daniel J. Burns), Applicant's legal representative (Samuel S. Stone), and the first named inventor (Malcolm K. Beyer, Jr.).

During the interview, the participants discussed the proposed claim amendments listed in the Interview Agenda in relation to the cited art. In particular, the participants discussed whether U.S. Pub. No. 2005/0227705 ("Rousu") taught or suggested "wherein the device is configured to initiate transmission of the information comprising the updated location of the device in response to a displacement of the device by a predetermined distance relative to a previous location of the device." No agreement was reached on this point.

In addition, the Examiner encouraged Applicant's representatives to further amend the independent claims. Without acceding to the rejections, and in the interest of advancing prosecution, Applicant's representatives agreed to further amend the independent claims. Accordingly, the independent claims are amended herein.

Applicability of Post-AIA Provisions of the Patent Laws to the Present Application

The Office Action (p. 2) states that "[t]he present application is being examined under the pre-AIA first to invent provisions" of the patent laws. Applicant respectfully notes that the

Corrected Application Data Sheet filed on October 30, 2015, indicates that the “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.” Accordingly, it is understood that the present application will be examined under the post-AIA, first-to-file provisions of the patent laws.

Claim Rejections Under 35 U.S.C. § 103

Each of the independent claims was rejected under 35 U.S.C. § 103 as purportedly being obvious over U.S. Patent No. 7,593,740 (“Crowley”) in view of U.S. Pub. No. 2005/0227705 (“Rousu”) and further in view of U.S. Pub. No. 2004/0148090 (“Melen”). Each of the dependent claims was rejected as purportedly being obvious over Crowley, Rousu, and Melen alone or in combination with U.S. Pub. No. 2004/0054428 (“Sheeha”). These rejections are respectfully traversed as applied to the claims, as amended. Even assuming (without conceding) that the cited references could have been properly combined, none of the claims would have been obvious over the cited references, because the proposed combination of the cited references does not teach or suggest all the limitations of any of the claims.

I. Independent Claim 1 and the Claims Depending Therefrom

As amended, independent claim 1 is directed to a method comprising:

transmitting a respective map to each one of a plurality of devices wherein each of the devices is configured to display the respective map, and wherein the plurality of devices includes a first device and a plurality of second devices;

receiving from the first device location information comprising an updated location of the first device and transmitting the updated location of the first device to the plurality of second devices, wherein the first device and the plurality of second devices are included in a group of devices, **wherein the first device is configured to participate in the group based on receiving a message related to joining the group, and wherein the first device is configured to participate in the group by transmitting the location information comprising the updated location of the first device** based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device; and

receiving from the first device selection information indicating user selection of one or more displayed symbols corresponding to one or more of the second devices included in the group. (Emphasis added.)

The proposed combination of the cited references does not teach or suggest at least “wherein the first device is configured to participate in the group based on receiving a message

related to joining the group, and wherein the first device is configured to participate in the group by transmitting the location information comprising the updated location of the first device,” as recited in claim 1. Rather, Crowley describes a technique for connecting acquaintances for activities such as socialization (col. 1, lines 15-17). Rousu describes a technique for the transmission of location information ([0001], [0004], [0007], and [0010]). Melen describes “vehicle navigation systems that are capable of communicating with one another” and “displaying the location of other vehicle navigation systems in the group” (Abstract). The cited references’ disclosures of connecting acquaintances for activities such as socialization, transmitting location information, and displaying locations of navigation systems do not teach or suggest “wherein the first device is configured to participate in the group based on receiving a message related to joining the group, and wherein the first device is configured to participate in the group by transmitting the location information comprising the updated location of the first device,” as recited in claim 1.

For at least the foregoing reason, claim 1 patentably distinguishes over the cited references and is in allowable condition. Claims 2-4, 7, 9-14, 59, 64, 65, and 85-87 depend from claim 1 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 1 and its dependent claims is respectfully requested.

II. Independent Claim 15 and the Claims Depending Therefrom

As amended, independent claim 15 is directed to a method comprising:

 sending a respective map to each one of a plurality of devices wherein each of the devices is configured to display the respective map, and wherein the plurality of devices includes a first device and a plurality of second devices;

 receiving from the first device location information comprising an updated location of the first device and sending the updated location of the first device to the plurality of second devices, wherein the first device and the plurality of second devices are included in a group of devices, **wherein the first device is configured to participate in the group based on receiving a message related to joining the group, wherein the first device is configured to participate in the group by transmitting the location information comprising the updated location of the first device** based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device, and wherein each of the plurality of second devices is configured to display a symbol representing the updated location of the first device on the respective map; and

receiving from the first device selection information indicating user selection of one or more of the displayed symbols corresponding to one or more of the second devices included in the group, and, based thereon:

obtaining respective contact information for each of the one or more second devices; and

sending data between the first device and the one or more second devices using the contact information. (Emphasis added.)

For reasons that should be apparent from the discussion above in Subsection I, the cited portions of the references (individually or combination) do not teach or suggest at least the subject matter of the above-emphasized portions of claim 15. Claim 15 therefore patentably distinguishes over the cited references and is in allowable condition. Claims 16, 19-20, 22-25, 60, 66-67, and 74-77 depend from claim 15 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 15 and its dependent claims is respectfully requested.

III. Independent Claim 26 and the Claims Depending Therefrom

As amended, independent claim 26 is directed to a system comprising one or more computers programmed to perform operations comprising:

sending a respective map to each one of a plurality of devices wherein each of the devices is configured to display the respective map, and wherein the plurality of devices includes a first device and a plurality of second devices;

receiving from the first device location information comprising an updated location of the first device and sending the updated location of the first device to the plurality of devices, wherein the first device and the plurality of second devices are included in a group of devices, **wherein the first device is configured to participate in the group based on receiving a message related to joining the group, wherein the first device is configured to participate in the group by transmitting the location information comprising the updated location of the first device** based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device, and wherein each of the plurality of second devices is configured to display a symbol representing the updated location of the first on the respective map; and

receiving from the first device selection information indicating user selection of one or more of the displayed symbols corresponding to one or more of the second devices included in the group and, based thereon:

obtaining respective contact information for each of the one or more second devices; and

sending data between the first device and the one or more second devices using the contact information. (Emphasis added.)

For reasons that should be apparent from the discussion above in Subsection I, the cited portions of the references (individually or combination) do not teach or suggest at least the subject matter of the above-emphasized portions of claim 26. Claim 26 therefore patentably distinguishes over the cited references and is in allowable condition. Claims 27, 30-31, 33-36, 61, and 68-69 depend from claim 26 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 26 and its dependent claims is respectfully requested.

IV. Independent Claim 37 and the Claims Depending Therefrom

As amended, independent claim 37 is directed to a method comprising:

with a first device, receiving a message related to joining a group, wherein the group includes a plurality of second devices;

based on receiving the message related to joining in the group, participating in the group, wherein participating in the group includes:

transmitting, based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device, **first location information comprising an updated location of the first device**; and

obtaining, by the first device, second location information comprising a plurality of locations of the plurality of second devices included in the group;

presenting, on an interactive display of the first device, an interactive map and a plurality of user-selectable symbols corresponding to the second devices and positioned on the map at the locations of the second devices;

identifying user interaction with the display specifying user selection of a set of one or more of the symbols corresponding to one or more of the second devices; and

identifying user interaction with the display specifying an action and, based thereon, sending data to the one or more second devices. (Emphasis added.)

For reasons that should be apparent from the discussion above in Subsection I, the proposed combination of the cited references does not teach or suggest at least “based on receiving the message related to joining in the group, participating in the group, wherein participating in the group includes: transmitting ... first location information comprising an updated location of the first device,” as recited in claim 37. For at least this reason, claim 37 patentably distinguishes over the cited references and is in allowable condition. Claims 38, 40, 42, 45, 70-71, 78- 84, 88, and 89 depend from claim 37 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 37 and its dependent claims is respectfully requested.

V. Independent Claim 48 and the Claims Depending Therefrom

As amended, independent claim 48 is directed to a system comprising a first device programmed to perform operations comprising:

receiving a message related to joining a group, wherein the group includes a plurality of second devices;

based on receiving the message related to joining the group, participating in the group, wherein participating in the group includes:

transmitting, based on a displacement of the first device by at least a predetermined distance relative to a previous location of the first device, **first location information comprising an updated location of the first device**; and

obtaining second location information comprising a plurality of locations of the plurality of second devices included in the group;

presenting, on an interactive display of the first device, an interactive map and a plurality of user-selectable symbols corresponding to the second devices and positioned on the map at the locations of the second devices;

identifying user interaction with the display specifying user selection of a set of one or more of the symbols corresponding to one or more of the second devices; and

identifying user interaction with the display specifying an action and, based thereon, sending data to the one or more second devices. (Emphasis added.)

For reasons that should be apparent from the discussion above in Subsection IV, the cited portions of the references (individually or in combination) do not teach or suggest the above-emphasized portion of claim 48. Claim 48 therefore patentably distinguishes over the cited references and is in allowable condition. Claims 49, 51, 53, 56, and 72-73 depend from claim 48 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 48 and its dependent claims is respectfully requested.

CONCLUSION

By responding in the foregoing remarks only to particular positions taken by the Examiner, Applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, Applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist. Finally, Applicant's decision to amend or cancel any claim should not be understood as implying that Applicant agrees with any positions taken by the Examiner with respect to that claim or other claims.

The pending application is believed to be in condition for allowance. If, in the Examiner's opinion, further communication would expedite the favorable prosecution of the present application, the undersigned would welcome the opportunity to discuss any outstanding issues and to work with the Examiner toward placing the application in condition for allowance.

Payment of fees for the addition of dependent claims is included herewith. No other fees or extensions are believed to be necessary for entry and consideration of this paper. The Commissioner, however, is hereby authorized to charge any deficiency in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 07-1700, with reference to Order No. MOC-001.

Respectfully submitted,

Dated: April 25, 2016

/Daniel J. Burns/

Daniel J. Burns

Registration No.: 50,222

Customer Number: 51414
Goodwin Procter LLP
Telephone: (650) 752-3100

Stone, Samuel S.

From: Stone, Samuel S.
Sent: Thursday, March 31, 2016 11:18 AM
To: 'omoniyi.obayanju@uspto.gov'
Cc: Burns, Dan; 'Cap Beyer'
Subject: Proposed Interview Agenda for U.S. App. No. 14/529,978 (Docket No.: MOC-001)
Attachments: MOC-001 - Proposed Interview Agenda.DOCX

Dear Examiner Obayanju,

Thank you for your courtesy in granting a telephone interview today (Thursday, March 31, 2016 at 2pm EDT), in Application Serial No. 14/529,978. A proposed agenda for the interview is attached. The agenda includes the phone number of our conference bridge; please dial into the conference bridge for the interview.

Regards,
Sam

Sent by Samuel S. Stone on behalf of:

Daniel J. Burns
Goodwin Procter LLP
T: (650) 752-3100
dburns@goodwinprocter.com

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:
Malcolm K. Beyer, Jr.

Application No.: 14/529,978

Confirmation No.: 102

Filed: October 31, 2014

Art Unit: 2646

For: Method to Provide Ad Hoc and Password
Protected Digital and Voice Networks

Examiner: O. Obayanju

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

PROPOSED INTERVIEW AGENDA

Applicant thanks Examiner Obayanju for agreeing to conduct a telephone interview with Applicant's undersigned representative (Daniel J. Burns), Applicant's legal representative (Samuel S. Stone), and the first named inventor (Malcolm K. Beyer, Jr.) on March 31, 2016 at 2:00pm EDT. Applicant respectfully invites the Examiner to call Applicant's representatives at 1-877-659-4128 (access code 5701624) at the scheduled time.

Without acceding to the rejections, proposed amendments to claim 1 are listed below for purposes of discussion. Applicant's representatives would appreciate discussing how claim 1, with the proposed amendments, distinguishes over Crowley, Rousu, and Melen. In particular, Applicant's representatives would appreciate discussing whether the Examiner believes that the cited art teaches or suggests "wherein the device is configured to initiate transmission of the information comprising the updated location of the device in response to a displacement of the device by a predetermined distance relative to a previous location of the device" as recited in the proposed version of claim 1 below.

ACTIVE/85511825.1

Proposed Amendments to Claim 1 (For Purposes of Discussion Only)

1. A computer-implemented method comprising:
 - transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map;
 - for each of the devices, receiving from the device information comprising an updated location of the device and transmitting the updated location of the device to one or more other devices, wherein the device is configured to ~~transmit~~ initiate transmission of the information comprising the updated location of the device ~~based on~~ in response to a displacement of the device by a predetermined distance relative to a previous location of the device; and
 - receiving from a first of the devices information indicating user selection of one or more displayed symbols corresponding to one or more second devices.

Dated: March 31, 2016

Respectfully submitted,

Electronic signature: /Daniel J. Burns/

Daniel J. Burns

Registration No.: 50,222

GOODWIN PROCTER LLP

(650) 752-3100

Electronic Patent Application Fee Transmittal

Application Number:	14529978			
Filing Date:	31-Oct-2014			
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS			
First Named Inventor/Applicant Name:	Malcolm K. Beyer			
Filer:	Daniel J. Burns/Deanna Bridges			
Attorney Docket Number:	MOC-001			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	3	40	120
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 (\$)				120

Electronic Acknowledgement Receipt	
EFS ID:	25584025
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns/Deanna Bridges
Filer Authorized By:	Daniel J. Burns
Attorney Docket Number:	MOC-001
Receipt Date:	25-APR-2016
Filing Date:	31-OCT-2014
Time Stamp:	16:02:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$120
RAM confirmation Number	2570
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		MOC-001_Amendment_Respo nse.pdf	155302 6b548d1ad9694b5fac7ae944dc1c9c92599 15c28	yes	21
Multipart Description/PDF files in .zip description					
		Document Description	Start	End	
		Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
		Claims	2	14	
		Applicant Arguments/Remarks Made in an Amendment	15	21	
Warnings:					
Information:					
2	Examination support document	MOC-001_Proposed_Interview _Agenda.pdf	1219211 76951fbb8f502dfdf1cbc98082d8d31a31ebf f54a	no	3
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30606 7602f2db9e5f8b3fc82ae79fa4b10345b659 415d	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1405119		

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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/529,978	Filing Date 10/31/2014	<input type="checkbox"/> To be Mailed
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ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (j), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 = *	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *	*	X \$ =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT	04/25/2016	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(o))	* 66	Minus	** 63	= 3	x \$40 =	120
	Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	x \$210 =	0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	120

(Column 1) (Column 2) (Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(o))	*	Minus	**	=	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/PAUL STANBACK/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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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

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for Malcolm K. Beyer Jr. and examiner information for OBAYANJU, OMONIYI.

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):

PATENTBOS@GOODWINPROCTER.COM
PSOUSA-ATWOOD@GOODWINPROCTER.COM
GLENN.WILLIAMS@GOODWINPROCTER.COM

Applicant-Initiated Interview Summary	Application No. 14/529,978	Applicant(s) BEYER ET AL.	
	Examiner OMONIYI OBAYANJU	Art Unit 2646	

All participants (applicant, applicant's representative, PTO personnel):

(1) OMONIYI OBAYANJU. (3) Daniel Burns (50,222).
(2) Sam Stone. (4) _____.

Date of Interview: 31 March 2016.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: NA.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1.

Identification of prior art discussed: Crowley, Rousu, and Melen.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The Applicant initiated an interview to discuss the rejection on file and to discuss some proposed amendments. The Examiner further clarified the rejection and discussed the proposed amendments. The Applicant agreed to further revise the proposed amendments before filing the official response. However, No agreement was reached in regards to the non-final rejection on record.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Attachment

/OMONIYI OBAYANJU/ Primary Examiner, Art Unit 2646	
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Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.



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Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 14/529,978, 10/31/2014, Malcolm K. Beyer Jr., MOC-001, 1092
Row 2: 51414, 7590, 02/02/2016, GOODWIN PROCTER LLP, PATENT ADMINISTRATOR, 53 STATE STREET, EXCHANGE PLACE, BOSTON, MA 02109-2881, EXAMINER, OBAYANJU, OMONIYI, ART UNIT, PAPER NUMBER, 2646, NOTIFICATION DATE, DELIVERY MODE, 02/02/2016, 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):

PATENTBOS@GOODWINPROCTER.COM
PSOUSA-ATWOOD@GOODWINPROCTER.COM
GLENN.WILLIAMS@GOODWINPROCTER.COM

Continuation of Disposition of Claims: Claims pending in the application are 1-4,7,9-16,19,20,22-27,30,31,40-42,45,48,49,51-53,56, and 59-81

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

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/19/2015 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1-4, 7, 9-16, 19, 20, 22-27, 30, 31, 33-38, 40-42, 45, 48, 49, 51-53, 56, and 59-81, have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

4. Furthermore, in regards to the rejection rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, the Applicant filed a remark or response on 12/18/2015 showing support for the at least claimed limitation in the specification of priority application (Patent No. 7,630,724). Based on the Applicant's remarks and/or arguments, for examination purpose, the Examiner has given the at least claimed limitations its' broadest reasonable interpretation in light of the specification.

5. Claim Rejections - 35 USC § 103

6. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

7. (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8.
9.

10. Claims 1-4, 7, 9-16, 19, 20, 22-27, 30, 31, 33-38, 40-42, 45, 48, 49, 51-53, 56, and 62-81, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Crowley et al. (US Patent No. 7593740) in view of Rousu et al. (US Publication No. 20050227705) and further in view of Melen (US Publication No. 20040148090).

11.

12. As to **claim 1**, Crowley teaches a computer-implemented method comprising: transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users); for each of the devices, receiving from the device information comprising an updated location of the device and transmitting the updated location of the device to one or more other devices (fig. 3, col. 7, lines 14-31, and lines 60-67, communicating current location information e.g. Luna lounge). However, Crowley fails to explicitly teach wherein the device is configured to transmit the device information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device; and receiving from a first of the devices information indicating user selection of one or more displayed symbols corresponding to one or more second devices.

13. **In an analogous field of endeavor**, Rousu teaches wherein the device is configured to transmit the device information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device (pp0025, pp0061, pp0074, providing updated location to other user, if terminal move more than a predefined distance). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley with the teachings Rousu to achieve the goal of efficiently and reliably communicating location information to achieve an efficient resources use in a communication system (Rousu, pp0006). However, they both failed to explicitly teach receiving from a first of the devices information indicating user selection of one or more displayed symbols corresponding to one or more second devices.

14. **In an analogous field of endeavor**, Melen teaches receiving from a first of the devices information indicating user selection of one or more displayed symbols corresponding to one or more second devices (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley and Rousu with the teachings Melen to achieve the goal of efficiently and conveniently communicating or interacting with other members of the group in a communication system (Melen, pp0003).

15. **As to claim 2**, Crowley teaches further comprising receiving from the first and the one or more second devices information comprising respective contact information for the device (fig. 3, col. 12, lines 34-49); and sending data between the first device

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and the one or more second devices using the received contact information (fig. 3, and col. 13, lines 25-45, send message to friends).

16. As to **claims 3, 16, 27, 38, and 49**, Crowley teaches wherein the data includes a short message service message, a text message, an image, or a video (col. 9, lines 12-16).

17. As to **claims 4, 19, and 30**, Crowley teaches wherein particular contact information is a phone number or an Internet Protocol address (fig. 3, col. 12, lines 34-49).

18. As to **claims 7, 20, and 31**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches further comprising: performed by the first device: receiving user selection of a first of the one or more symbols on the map; obtaining contact information associated with the first symbol; and performing an action using the contact information wherein the action is initiating a phone call or transferring data (fig. 4, fig. 5, #509, #510, #511, touch selection of icon on the map, and pp0063, pp0068).

19. As to **claims 9, 22, 33, 45, and 56**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Rousu further teaches wherein the first device is a personal data assistant (PDA) or personal computer (Rousu, pp0017)

20. As to **claims 10, 23, and 34**, Crowley teaches further comprising: receiving a request for the map from one or more of the devices wherein the request specifies a

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map location (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users); and sending the map to the one or more devices (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users).

21. As to **claims 11, 24, and 35**, Crowley teaches wherein the devices do not have access to a phone number or an Internet Protocol address of any other of the devices (col. 16, lines 16-20, address maybe kept private).

22. As to **claims 12, 25, and 36**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches wherein the first map includes an aerial photograph, a satellite image, or a chart (Melen fig. 4).

23. As to **claim 13**, Crowley teaches further comprising: receiving from one or more devices information corresponding to the location of fixed entities, said fixed entities comprising buildings, facilities, restaurants, or emergency locations; and transmitting to all other of the devices the information corresponding to the location of the fixed entities (fig. 3, and col. 7, Luna Lounge).

24. As to **claim 14**, Crowley teaches further comprising: receiving from one or more devices information corresponding to locations of events and/or entities; and transmitting to all other of the devices the information corresponding to locations of the events and/or entities (fig. 3, and col. 7, Luna Lounge).

25. As to **claims 15 and 26**, Crowley in view of Rousu and Melen teaches similar limitations as discussed in the method of claims 1 and 2 above.

26. As to **claims 37 and 48**, Crowley in view of Rousu and Melen teaches similar limitations as discussed in the method of claims 1 and 2 above.

27. As to **claims 40 and 51**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein each user is associated with a same group (Crowley, fig. 3, friends).

28. As to **claims 41 and 52**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches wherein receiving user selection of the group of one or more users in the interactive display comprises identifying user interaction with the interactive map via the display (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063), the user interaction comprising selecting the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063).

29. As to **claims 42 and 53**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches further comprising: identifying user interaction with the display specifying a new symbol and a location of the new symbol (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063); presenting the new symbol on the map at the specified location (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063); and sending the new symbol and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063).

30. As to **claims 62 and 63**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches

wherein sending the data to the second devices comprises transmitting a text message to at least one of the second devices using an internet Protocol (IP) (Crowley, fig. 6, col. 11, lines 49-67, internet).

31. As to **claims 64, 66, 68, 70, and 72**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches further comprising: receiving from the first device information indicating user selection of the one or more displayed symbols corresponding to the one or more second devices (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063), and based thereon, establishing voice communication between the first device and the one or more second devices (fig. 4, fig. 5, #509, #510, #511, touch selection of icon on the map, and pp0063).

32. As to **claims 65, 67, 69, 71, and 73**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Melen further teaches wherein the voice communication comprises a phone call (fig. 4, fig. 5, #509, #510, #511, touch selection of icon on the map, pp0039 and pp0063).

33. As to **claims 77 and 81**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein the data includes voice recording (Crowley, col. 9, lines 1-15).

34. As to **claims 74 and 78**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Rousu further teaches wherein at least one of the devices is further configured to transmit the information based on passage of a predetermined time interval since transmitting information

comprising a location of the at least one device (Rousu, pp0061, sending updated location within a defined given time limit).

35. As **to claim 75**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein at least one of the devices is further configured to transmit the information comprising the updated location of the device (1) to a server (fig. 3, col. 7, lines 14-31, and lines 60-67, communicating current location information e.g. Luna lounge), (2) using Internet Protocol (IP) (Crowley, fig. 6, fig. 3, col. 11, lines 49-67, internet), and Rousu further teaches (3) based on passage of a predetermined time interval since transmitting information comprising a location of the device (Rousu, pp0061, sending updated location within a defined given time limit).

36. As **to claims 76, 79, and 80**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. Crowley further teaches wherein sending the data via a server between the first device and each of the second devices comprises: receiving the data from the first device using Internet Protocol (IP) and transmitting the data to each of the second devices using IP (Crowley, fig. 6, fig. 3, col. 11, lines 49-67, internet).

37.

38. Claims 59, 60 and 61, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Crowley et al. (US Patent No. 7593740) in view of Rousu et al. (US Publication No. 20050227705) and further in view of Melen (US Publication No. 20040148090) and Sheha et al. (US Publication No. 20040054428).

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39.

40. As to **claims 59, 60 and 61**, Crowley in view of Rousu and Melen teaches the limitations of the independent claims as discussed above. However, failed to explicitly teach wherein transmitting the updated location to one or more other devices comprises pushing the updated location to the one or more other devices.

41. **In an analogous field of endeavor**, Sheha teaches wherein transmitting the updated location to one or more other devices comprises pushing the updated location to the one or more other devices (pp0007, push updated locations). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley, Rousu, and Melen with the teachings Sheha to achieve the goal of efficiently and reliably transferring location-related information using a real-time communication system (Sheha, pp0002).

42.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMONIYI OBAYANJU whose telephone number is (571)270-5885. The examiner can normally be reached on Mon - Fri, 7:30 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMRAN AFSHAR can be reached on 571-272-7796. 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.

/OMONIYI OBAYANJU/
Primary Examiner, Art Unit 2646

Notice of References Cited	Application/Control No. 14/529,978	Applicant(s)/Patent Under Reexamination BEYER ET AL.	
	Examiner OMONIYI OBAYANJU	Art Unit 2646	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2004/0054428 A1	03-2004	Sheha, Michael A.	G01C21/20 700/56
*	B	US-2005/0227705 A1	10-2005	Rousu, Seppo	H04W76/005 455/456.1
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)			
	U				
	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.


EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	0	"14529978"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:57
S2	2334	((((social\$9 near2 network\$3) or dating) same (location\$3 or position\$3 or location\$base\$2))) and (map same updat\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:58
S3	16286	((H04W4/02).CPC.)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:58
S4	5696	455/404.2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S5	4375	455/404.2.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S6	16313	455/456.1.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S7	2	"8880042"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 00:45
S8	3	"20060047825"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:02
S9	106	"7593740"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:03
S10	182	((((location or position) with ((other or different or another or second) adj2 (vehicl\$5 or car or truck or auto or automobile or plane or aircraft or ship or boat))) same ((display\$3 or view\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:16

		near5 (map))				
S11	47	S10 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 02:12
S12	4	"20030093405"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 04:01
S13	1347	((update or updated) near2 (location\$3 or position\$3)) same ((chang\$3 or displac\$5 or move or movement or moving) with distan\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:01
S14	381	S13 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:01
S15	611	((update or updated) near2 (location\$3 or position\$3)) same ((chang\$3 or displac\$5 or move or movement or moving) with distan\$3) and group	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:02
S16	162	S15 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:02
S17	145	((update or updated) near2 (location\$3 or position\$3)) same ((chang\$3 or displac\$5 or move or movement or moving) with distan\$3) and (shar\$3 near2 (location or position))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:38
S18	7	S17 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 21:38
S19	374	S14 not S17	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 22:02
S20	219	S14 not S15	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 22:02
S21	4	"14529978"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/01/11 22:24

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 C:\Users\oobayanju\Documents\EAST\Workspaces\14529978.wsp

Search Notes 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

CPC- SEARCHED		
Symbol	Date	Examiner
H04W4/02	3/31/2015	OO


CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	404.2, 456.1	3/31/2015	OO

SEARCH NOTES		
Search Notes	Date	Examiner
See Attached East Search History	3/31/2015	OO
See Attached East Search History (Updated)	8/13/2015	OO
See Attached East Search History (Updated)	1/19/2016	OO

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


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Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

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

Claims renumbered in the same order as presented by applicant
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CLAIM		DATE							
Final	Original	03/31/2015	08/13/2015	01/19/2016					
	1	✓	✓	✓					
	2	✓	✓	✓					
	3	✓	✓	✓					
	4	✓	✓	✓					
	5	✓	✓	-					
	6	✓	✓	-					
	7	✓	✓	✓					
	8	✓	✓	-					
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	33	✓	✓	✓					
	34	✓	✓	✓					
	35	✓	✓	✓					
	36	✓	✓	✓					

Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

✓	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	03/31/2015	08/13/2015	01/19/2016					
	37	✓	✓	✓					
	38	✓	✓	✓					
	39	✓	✓	-					
	40	✓	✓	✓					
	41	✓	✓	✓					
	42	✓	✓	✓					
	43	✓	✓	-					
	44	✓	✓	-					
	45	✓	✓	✓					
	46	✓	✓	-					
	47	✓	✓	-					
	48	✓	✓	✓					
	49	✓	✓	✓					
	50	✓	✓	-					
	51	✓	✓	✓					
	52	✓	✓	✓					
	53	✓	✓	✓					
	54	✓	✓	-					
	55	✓	✓	-					
	56	✓	✓	✓					
	57	✓	✓	-					
	58	✓	✓	-					
	59		✓	✓					
	60		✓	✓					
	61		✓	✓					
	62		✓	✓					
	63		✓	✓					
	64			✓					
	65			✓					
	66			✓					
	67			✓					
	68			✓					
	69			✓					
	70			✓					
	71			✓					
	72			✓					

Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

✓	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	03/31/2015	08/13/2015	01/19/2016					
	73			✓					
	74			✓					
	75			✓					
	76			✓					
	77			✓					
	78			✓					
	79			✓					
	80			✓					
	81			✓					



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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
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www.uspto.gov

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 14/529,978, 10/31/2014, 2646, 2870, MOC-001, 58, 5

CONFIRMATION NO. 1092
CORRECTED FILING RECEIPT



51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

Date Mailed: 02/01/2016

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)

Malcolm K. Beyer Jr., Jupiter, FL;
Christopher R. Rice, Redmond, WA;

Applicant(s)

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Assignment For Published Patent Application

Advanced Ground Information Systems, Inc., Jupiter, FL

Power of Attorney: The patent practitioners associated with Customer Number 051414

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Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/529,978**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

Preliminary Class

455

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

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page 2 of 4

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CONFIRMATION NO. 1092
CORRECTED FILING RECEIPT



000000030036917

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Christopher R. Rice, Redmond, WA;

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Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

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METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

Preliminary Class

455

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Docket No.: MOC-001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:
Malcolm K. Beyer, Jr.

Application No.: 14/529,978

Confirmation No.: 1092

Filed: October 31, 2014

Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

Office of Initial Patent Examination's Filing Receipt Corrections
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

Applicant hereby requests that a corrected Filing Receipt be issued in the above-identified patent application. As indicated in the Amendment and in the Corrected Application Data Sheet (ADS) filed on December 18, 2015, the present application is a continuation-in-part of U.S. Application No. 14/027,410 (now U.S. Patent No. 8,880,042). However, the official Updated Filing Receipt issued on December 29, 2015, a copy of which is attached hereto, has an error in the priority claim:

This application is a ~~CON~~ CIP of 14/027,410 09/16/2013 PAT 8880042

Applicant additionally requests that all pertinent U.S. Patent and Trademark Office records relating to the subject application be changed to reflect this correction.

Respectfully submitted,

Date: January 19, 2016

/Daniel J. Burns/

Daniel J. Burns
Reg. No. 50,222

Customer Number 51414
GOODWIN PROCTER LLP
Telephone: (650) 752-3137
Facsimile: (650) 853-1038

ACTIVE/84796420.1



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CONFIRMATION NO. 1092

UPDATED FILING RECEIPT



51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

Date Mailed: 12/29/2015

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

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Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

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Electronic Acknowledgement Receipt	
EFS ID:	24652450
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns/Deanna Bridges
Filer Authorized By:	Daniel J. Burns
Attorney Docket Number:	MOC-001
Receipt Date:	19-JAN-2016
Filing Date:	31-OCT-2014
Time Stamp:	15:28:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Corrected Filing Receipt	MOC-001_Request_Corrected_Filing_Receipt.pdf	78781 <small>9b654ec6c724ecf155f869cab3a23547eb852b58</small>	no	1

Warnings:

Information:

2	Examination support document	MOC-001_Corrected_Updated_Filing_Receipt.pdf	4272541 <small>b47d9302283ec0a6ed0d38b5cd8ae493f8992f1</small>	no	4
Warnings:					
Information:					
Total Files Size (in bytes):			4351322		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/529,978	10/31/2014	Malcolm K. Beyer Jr.	MOC-001

51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

CONFIRMATION NO. 1092
37 CFR 1.48 ACKNOWLEDGEMENT
LETTER



Date Mailed: 12/29/2015

NOTICE OF ACCEPTANCE OF REQUEST UNDER 37 CFR 1.48(a)

This is in response to the applicant's request under 37 CFR 1.48(a) submitted on 12/18/2015.

The request under 37 CFR 1.48(a) to correct the inventorship, to correct or update the name of an inventor, or to correct the order of names of joint inventors is accepted.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ggagedom/



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

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 14/529,978, 10/31/2014, 2646, 2870, MOC-001, 58, 5

CONFIRMATION NO. 1092
UPDATED FILING RECEIPT



51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

Date Mailed: 12/29/2015

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)

Malcolm K. Beyer Jr., Jupiter, FL;
Christopher R. Rice, Redmond, WA;

Applicant(s)

Advanced Ground Information Systems, Inc, Jupiter, FL;

Assignment For Published Patent Application

Advanced Ground Information Systems, Inc, Jupiter, FL

Power of Attorney: The patent practitioners associated with Customer Number 051414

Domestic Priority data as claimed by applicant

This application is a CON of 14/027,410 09/16/2013 PAT 8880042
which is a CON of 13/751,453 01/28/2013 PAT 8538393
which is a CIP of 12/761,533 04/16/2010 PAT 8364129
which is a CIP of 11/615,472 12/22/2006 PAT 8126441
which is a CIP of 11/308,648 04/17/2006 PAT 7630724
which is a CIP of 10/711,490 09/21/2004 PAT 7031728

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

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:

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/529,978**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

Preliminary Class

455

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 Assets Control, 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).

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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

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Request for Continued Examination (RCE) Transmittal Address to: Mail Stop RCE Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	Application Number	14/529,978-Conf. #1092
	Filing Date	October 31, 2014
	First Named Inventor	Malcolm K. Beyer, Jr.
	Art Unit	2646
	Examiner Name	O. Obayanju
	Attorney Docket Number	MOC-001

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

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, to any international application that does not comply with the requirements of 35 U.S.C 371, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO on page 2.)

1. Submission required under 37 CFR 1.114. Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).
- a. Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
- i. Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ii. Other _____
- b. Enclosed
- i. Amendment/Reply
- ii. Affidavit(s)/ Declaration(s)
- iii. Information Disclosure Statement (IDS)
- iv. Other _____
2. Miscellaneous
- a. Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
- b. Other _____
3. Fees. The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
- a. The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 07-1700.
- i. RCE fee required under 37 CFR 1.17(e)
- ii. Extension of time fee (37 CFR 1.136 and 1.17)
- iii. Other _____
- b. Check in the amount of \$ _____ enclosed
- c. Payment by credit card

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**

Signature	/Daniel J. Burns/	Date	December 18, 2015
Name (Print/Type)	Daniel J. Burns	Registration No.	50,222

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature		Date	
Name (Print/Type)		Date	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : 8,364,129 Issue Date: January 29, 2013
Application No. : 12/761,533 Filing Date: April 16, 2010
Title : **METHOD TO PROVIDE AD HOC AND PASSWORD
PROTECTED DIGITAL AND VOICE NETWORKS**

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

**PETITION TO ACCEPT
AN UNINTENTIONALLY DELAYED PRIORITY CLAIM UNDER 35 U.S.C. § 120**

In connection with the patent identified above, the Commissioner is respectfully petitioned to accept an unintentionally delayed priority claim under 35 U.S.C. § 120, pursuant to pre-AIA 37 C.F.R. § 1.78(a)(3).

The above-identified patent, U.S. Patent No. 8,364,129 (“the ‘129 patent”), issued on January 29, 2013, from U.S. Patent Application Serial No. 12/761,533 (“the ‘533 application”), which was filed on April 16, 2010. As originally filed, the ‘533 application claimed benefit under 35 U.S.C. § 120 as a continuation-in-part of U.S. Patent Application Serial No. 11/615,472, filed December 22, 2006. On May 13, 2014, a Request for Certificate of Correction of the ‘129 patent was filed, requesting that the first paragraph of the ‘129 patent be corrected to list the complete continuity data of the ‘129 patent, and on July 29, 2014, the requested Certificate of Correction was granted. The Certificate of Correction and the Request for Certificate of Correction include the following reference, as required by 35 U.S.C. § 120 and pre-AIA 37 C.F.R. § 1.78(a)(2):

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of U.S. Patent Application Serial No. 11/615,472 filed on December 22, 2006, now U.S. Patent No. 8,126,441 issued February 28, 2012, which is a continuation-in-part of U.S. Patent Application Serial No. 11/308,648 filed April 17, 2006, now U.S. Patent No. 7,630,724 issued December 8, 2009, which is a continuation-in-part of U.S. Patent Application No. 10/711,490 filed September 21, 2004, now U.S. Patent No. 7,031,728 issued April 18, 2006.

The priority claim deadline under pre-AIA 37 C.F.R. § 1.78(a)(2) was August 16, 2010 (four months from the filing date of the '533 application). The entire delay between the priority claim deadline under pre-AIA 37 C.F.R. § 1.78(a)(2) (i.e., August 16, 2010) and the date of filing the priority claim (i.e., May 13, 2014), was unintentional.

As required under pre-AIA 37 C.F.R. § 1.78(a)(3), submitted herewith are:

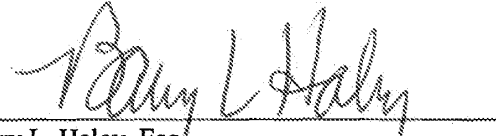
1. Authorization to charge the amount of \$850 to Deposit Account 13-1130, to cover the fee set forth in pre-AIA 37 C.F.R. § 1.17(t); and
2. The foregoing statement that the entire delay between the date the priority claim was due under 37 C.F.R. § 1.78(a)(2) and the date the claim was filed was unintentional.

As indicated above, the reference required by 35 U.S.C. § 120 and pre-AIA 37 C.F.R. § 1.78(a)(2) was previously submitted on May 13, 2014, in a Request for Certificate of Correction, which was subsequently granted.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account 13-1130.

If the Office believes that a telephone conversation with the undersigned would expedite the granting of this petition, the Office is cordially invited to call the undersigned at (954) 763-3303.

Respectfully submitted,



Barry L. Haley, Esq.
Reg. No. 25,339

Date: September 21, 2015

Customer Number 22235
MALIN HALEY DiMAGGIO & BOWEN, P.A.
1936 South Andrews Avenue
Fort Lauderdale, Florida 33316
Telephone: (954) 763-3303
Facsimile: (954) 522-6507
E-Mail: info@mhdpatents.com

Docket No.: MOC-001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:
Malcolm K. Beyer, Jr.

Application No.: 14/529,978

Confirmation No.: 1092

Filed: October 31, 2014

Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

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

REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.48(a)

In accordance with the provisions of 37 C.F.R. § 1.48(a), Applicant hereby requests correction of the inventorship of the above-identified patent application, to remove Sandel Blackwell. In support of this request, please find enclosed a Corrected Application Data Sheet.

Please charge our Credit Card in the amount of \$370.00 to cover the processing fees under 37 C.F.R. §§ 1.17(i) and 1.17(d). No additional fees are believed necessary for filing these documents. However, if any additional fees are due, the Director is hereby authorized to charge such fees to our Deposit Account No. 07-1700, under Order No. MOC-001.

Respectfully submitted,

Date: December 18, 2015

/Daniel J. Burns/

Daniel J. Burns
Reg. No. 50,222

Customer Number 51414
GOODWIN PROCTER LLP
Telephone: (650) 752-3137
Facsimile: (650) 853-1038

ACTIVE/84565675.1

Corrected Application Data Sheet

Inventor Information

Inventor Number:: 1
Given Name:: Malcolm
Middle name:: K.
Family Name:: Beyer
Suffix:: Jr.
City of Residence:: Jupiter
State or Province of Residence:: FL
Country of Residence:: US
Street of mailing address:: 92 Lighthouse Drive
City of mailing address:: Jupiter
State or Province of mailing address:: FL
Country of mailing address:: US
Postal or Zip Code of mailing address:: 33469

~~Inventor Number:: 2
Given Name:: Sandel
Family Name:: Blackwell
City of Residence:: Shawnee Mission
State or Province of Residence:: KS
Country of Residence:: US
Street of mailing address:: 5300 Summit Court
City of mailing address:: Shawnee Mission~~

~~State or Province of mailing address::~~ KS
~~Country of mailing address::~~ US
~~Postal or Zip Code of mailing address::~~ 66216

Inventor Number:: 32
Given Name:: Christopher
Middle name:: R.
Family Name:: Rice
City of Residence:: Redmond
State or Province of Residence:: WA
Country of Residence:: US
Street of mailing address:: P.O. Box 3583
City of mailing address:: Redmond
State or Province of mailing address:: WA
Country of mailing address:: US
Postal or Zip Code of mailing address:: 98073

Correspondence Information

Correspondence Customer Number:: 51414
Email Address:: patentbos@goodwinprocter.com

Application Information

Application Type:: Nonprovisional
Subject Matter:: Utility
CD-ROM or CD-R?:: None

Sequence submission?::	None
Computer Readable Form (CRF)?::	No
Title::	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
Attorney Docket Number::	MOC-001
Request for Early Publication?::	No
Request for Non-Publication?::	No
Small Entity?::	Yes
Drawing Sheets::	7
Petition included?::	No
Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2::	No
Authorization to Permit Access to the Instant Application by the Participating Offices::	No
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::	Yes

Representative Information

Representative Customer Number::	51414
----------------------------------	-------

Domestic Benefit/National Stage Information

Prior Application Status::	Patented
Application Number::	14/529,978
Continuity Type::	Continuation- <u>in-part</u> of
Prior Application Number::	14/027,410
Filing Date::	09/16/2013
Patent Number::	8,880,042
Issue Date::	11/04/2014
Prior Application Status::	Patented
Application Number::	14/027,410
Continuity Type::	Continuation of
Prior Application Number::	13/751,453
Filing Date::	01/28/2013
Patent Number::	8,538,393
Issue Date::	09/17/2013
Prior Application Status::	Patented
Application Number::	13/751,453
Continuity Type::	Continuation in part of
Prior Application Number::	12/761,533
Filing Date::	04/16/2010
Patent Number::	8,364,129
Issue Date::	01/29/2013

Prior Application Status::	Patented
Application Number::	12/761,533
Continuity Type::	Continuation in part of
Prior Application Number::	11/615,472
Filing Date::	12/22/2006
Patent Number::	8,126,441
Issue Date::	02/28/2012
Prior Application Status::	Patented
Application Number::	11/615,472
Continuity Type::	Continuation in part of
Prior Application Number::	11/308,648
Filing Date::	04/17/2006
Patent Number::	7,630,724
Issue Date::	12/08/2009
Prior Application Status::	Patented
Application Number::	11/308,648
Continuity Type::	Continuation in part of
Prior Application Number::	10/711,490
Filing Date::	09/21/2004
Patent Number::	7,031,728
Issue Date::	04/18/2006

Foreign Priority Information

Applicant Information

Applicant Number:: 1
Applicant Type:: Assignee
Organization Name:: Advanced Ground Information Systems,
Inc.
Street of mailing address:: 92 Lighthouse Drive
City of mailing address:: Jupiter
State or Province of mailing address:: FL
Country of mailing address:: US
Postal or Zip Code of mailing address:: 33469

Non-Applicant Assignee Information

Assignee Number:: 1
Organization Name:: Advanced Ground Information Systems,
Inc.
Street of mailing address:: 92 Lighthouse Drive
City of mailing address:: Jupiter
State or Province of mailing address:: FL
Country of mailing address:: US
Postal or Zip Code of mailing address:: 33469

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.			
Signature	/Daniel J. Burns/	Date	December 18, 2015
Name (Print/Type)	Daniel J. Burns	Registration No. (Attorney/Agent)	50,222

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)		Docket Number (Optional) MOC-001	
Application Number 14/529,978-Conf. #1092		Filed October 31, 2014	
For METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS			
Art Unit 2646		Examiner O. Obayanju	
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application. The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):			
	Fee	Small Entity Fee	Micro Entity Fee
<input checked="" type="checkbox"/> One month (37 CFR 1.17(a)(1))	\$200	\$100	\$50
<input type="checkbox"/> Two months (37 CFR 1.17(a)(2))	\$600	\$300	\$150
<input type="checkbox"/> Three months (37 CFR 1.17(a)(3))	\$1,400	\$700	\$350
<input type="checkbox"/> Four months (37 CFR 1.17(a)(4))	\$2,200	\$1,100	\$550
<input type="checkbox"/> Five months (37 CFR 1.17(a)(5))	\$3,000	\$1,500	\$750
<input checked="" type="checkbox"/> Applicant asserts small entity status. See 37 CFR 1.27. <input type="checkbox"/> Applicant certifies micro entity status. See 37 CFR 1.29. <small>Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.</small> <input type="checkbox"/> A check in the amount of the fee is enclosed. <input checked="" type="checkbox"/> Payment by credit card. <input type="checkbox"/> The Director has already been authorized to charge fees in this application to a Deposit Account. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>07-1700</u> . <input checked="" type="checkbox"/> Payment made via EFS-Web.			
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.			
I am the			
<input type="checkbox"/> applicant.			
<input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>50,222</u> .			
<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number _____.			
_____ /Daniel J. Burns/ Signature		_____ December 18, 2015 Date	
_____ Daniel J. Burns Typed or printed name		_____ (650) 752-3100 Telephone Number	
NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.			

* Total of 1 forms are submitted.

Docket No.: MOC-001
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:
Malcolm K. Beyer, Jr.

Application No.: 14/529,978

Confirmation No.: 1092

Filed: October 31, 2014

Art Unit: 2646

For: METHOD TO PROVIDE AD HOC AND
PASSWORD PROTECTED DIGITAL AND
VOICE NETWORKS

Examiner: O. Obayanju

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

AMENDMENT IN RESPONSE TO FINAL OFFICE ACTION

In response to the Final Office Action dated August 19, 2015, please amend the above-identified U.S. patent application as follows:

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

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 15 of this paper.

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AMENDMENTS TO THE SPECIFICATION

Please amend the first paragraph of the specification under the heading CROSS REFERENCE TO RELATED APPLICATIONS as indicated below. No new matter is added.

[0001] This application is a continuation-in-part of co-pending U.S. Patent Application Serial No. 14/027,410 filed on September 16, 2013, which is a continuation of U.S. Patent Application Serial No. 13/751,453 filed January 28, 2013, now U.S. Patent No. 8,538,393 issued September 17, 2013, which is a continuation-in-part of U.S. Patent Application Serial No. 12/761,533 filed on April 16, 2010, now U.S. Patent No. 8,364,129 issued January 29, 2013, which is a continuation-in-part of U.S. Patent Application Serial No. 11/615,472 filed on December 22, 2006, now U.S. Patent No. 8,126,441 issued on February 28, 2012, which is a continuation-in-part of U.S. Patent Application Serial No. 11/308,648 filed April 17, 2006, now U.S. Patent No. 7,630,724 issued on December 8, 2009, which is a continuation-in-part of U.S. Patent Application Serial No. 10/711,490, filed on September 21, 2004, now U.S. Patent No. 7,031,728 issued on April 18, 2006. All of the ~~preceding~~ preceding applications are incorporated herein by reference in their entirety.

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently amended) A computer-implemented method comprising:
transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map;
for each of the devices, ~~based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,~~ receiving from the device information comprising an updated location of the device and transmitting the updated location of the device to one or more other devices, wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device; and
~~transmitting to each of the other devices information comprising a symbol corresponding to the location on the map of each of the one or more devices; and~~
receiving from ~~one or more~~ a first of the devices information indicating user selection of ~~at least one of the one or more~~ displayed symbols corresponding to one or more ~~other~~ second devices.
2. (Currently amended) The method of claim 1, further comprising
receiving from ~~one or more of the devices~~ the first device and the one or more second devices information comprising ~~[[the]]~~ respective contact information for the device; and
~~facilitating communication~~ sending data between the first device and the one or more second devices using the received contact information.
3. (Currently amended) The method of claim 2 wherein the data includes communication is ~~a phone call,~~ a short message service message, ~~a voice message,~~ a text message, ~~an electronic mail message,~~ an image, or a video.
4. (Original) The method of claim 2 wherein particular contact information is a phone number or an Internet Protocol address.

- 5-6. (Canceled)
7. (Currently amended) The method of claim 1, further comprising:
performed by ~~one of the devices~~ the first device:
receiving user selection of ~~a first of the symbol~~ one or more symbols on the map;
obtaining contact information associated with the first symbol; and
performing an action using the contact information wherein the action is initiating
a phone call[[,]] or transferring data, ~~sending an electronic mail message, or opening a
web page.~~
8. (Canceled)
9. (Currently amended) The method of claim 1 wherein the first device is a personal digital
assistant (PDA) or personal computer, ~~smart phone, a personal data assistant, a tablet computer,
a desktop computer, or a laptop computer.~~
10. (Currently amended) The method of claim 1, further comprising:
receiving a request for the map from one or more of the devices wherein the request
~~comprises one or more parameters and wherein a parameter specifies a map location or a zoom
indication;~~ and
sending the map to the one or more devices.
11. (Original) The method of claim 1 wherein the devices do not have access to a phone
number or an Internet Protocol address of any other of the devices.
12. (Currently amended) The method of claim 1 wherein the first map [[is]] includes an
aerial photograph, a satellite image, or a chart.
13. (Original) The method of claim 1, further comprising:
receiving from one or more devices information corresponding to the location of fixed
entities, said fixed entities comprising buildings, facilities, restaurants, or emergency locations;
and

transmitting to all other of the devices the information corresponding to the location of the fixed entities.

14. (Currently amended) The method of claim 1, further comprising:
receiving from one or more devices information corresponding to ~~the location~~ locations of events and/or entities; and
transmitting to all other of the devices the information corresponding to the ~~location~~ locations of the events and/or entities.

15. (Currently amended) A computer-implemented method comprising:
sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;
for each of the devices, ~~based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,~~ receiving from the device information comprising an updated location of the device and sending the updated location of the device to one or more other devices, wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device, wherein each of the other devices is configured to display respective symbols representing the updated locations on the first map;
receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:
obtaining a respective contact information for each of the second devices; and
~~facilitating a respective communication~~ sending data between the first device and each of the second devices using the contact information of the second device.

16. (Currently amended) The method of claim 15 wherein the data includes a particular communication ~~is a phone call,~~ a short message service message, ~~a voice message,~~ a text message, ~~an electronic mail message,~~ an image, or a video.

17-18. (Canceled)

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19. (Original) The method of claim 15 wherein particular contact information is a phone number or an Internet Protocol address.
20. (Currently amended) The method of claim 15, further comprising:
performed by one of the devices:
receiving user selection of a symbol on the first map;
obtaining contact information associated with the symbol; and
performing an action using the contact information wherein the action is initiating a phone call[[,]] or transferring data, sending an electronic mail message, or opening a web page.
21. (Canceled)
22. (Currently amended) The method of claim 15 wherein a particular device is a personal digital assistant (PDA) or personal computer (PC), ~~smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.~~
23. (Currently amended) The method of claim 15, further comprising:
receiving a request for a map from a third device wherein the request ~~comprises one or more parameters and wherein a parameter specifies a map location or a zoom indication;~~
obtaining a second map that conforms to the ~~attributes~~ specified map location; and
sending the second map to the third device.
24. (Original) The method of claim 15 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the second devices.
25. (Currently amended) The method of claim 15 wherein the first map ~~[[is]]~~ includes an aerial photograph, a satellite image, or a chart.

26. (Currently amended) A system comprising:
one or more computers programmed to perform operations comprising:
 sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;
 for each of the devices, ~~based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,~~
 receiving from the device information comprising an updated location of the device and sending the updated location of the device to one or more other devices, wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device, wherein each of the other devices is configured to display respective symbols representing the updated locations on the first map;
 receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:
 obtaining a respective contact information for each of the second devices;
 and
 ~~facilitating a respective communication~~ sending data between the first device and each of the second devices using the contact information of the second device.

27. (Currently amended) The system of claim 26 wherein the data includes a particular communication ~~is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.~~

28-29. (Canceled)

30. (Original) The system of claim 26 wherein particular contact information is a phone number or an Internet Protocol address.

31. (Currently amended) The system of claim 26, wherein the operations further comprise:
 performed by one of the devices:

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receiving user selection of a symbol on the first map;
obtaining contact information associated with the symbol; and
performing an action using the contact information wherein the action is initiating a phone call[[,]] or transferring data, sending an electronic mail message, or opening a web page.

32. (Canceled)

33. (Currently amended) The system of claim 26 wherein a particular device is a personal digital assistant (PDA) or personal computer (PC), smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.

34. (Currently amended) The system of claim 26, wherein the operations further comprise:
receiving a request for a map from a third device wherein the request ~~comprises one or more parameters and wherein a parameter~~ specifies a map location ~~or a zoom indication~~;
obtaining a second map that conforms to the ~~attributes~~ specified map location; and
sending the second map to the third device.

35. (Original) The system of claim 26 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the second devices.

36. (Currently amended) The system of claim 26 wherein the first map ~~[[is]]~~ includes an aerial photograph, a satellite image, or a chart.

37. (Currently amended) A computer-implemented method comprising:
receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;
based on ~~passage of a predetermined time interval since transmitting information comprising a location of the first device,~~ a displacement of the first device by a predetermined distance relative to a previous location of the first device, ~~or both,~~ transmitting information comprising an updated location of the first device;
obtaining a respective location and contact information for of each of the second devices;

presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device; and

identifying user interaction with the display specifying an action and, based thereon, ~~initiating a communication with~~ sending data to the second devices.

38. (Currently amended) The method of claim 37 wherein ~~a particular communication is the data comprises a phone call,~~ a short message service message, ~~a voice message,~~ a text message, ~~an electronic mail message,~~ an image, or a video.

39. (Canceled)

40. (Currently amended) The method of claim 37 wherein each user is associated with a same ~~category~~ group.

41. (Previously presented) The method of claim 37, wherein receiving user selection of the group of one or more users on the interactive display comprises identifying user interaction with the interactive map via the display, the user interaction comprising selecting the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map.

42. (Original) The method of claim 37, further comprising:

identifying user interaction with the display specifying a new symbol and a location of the new symbol;

presenting the new symbol on the map at the specified location; and

sending the new symbol and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location.

43-44. (Canceled)

45. (Currently amended) The method of claim 37, wherein a particular device is a personal digital assistant (PDA) or personal computer (PC), ~~smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.~~

46-47. (Canceled)

48. (Currently amended) A system comprising:
one or more computers programmed to perform operations comprising:
receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;
based on ~~passage of a predetermined time interval since transmitting information comprising a location of the first device,~~ a displacement of the first device by a predetermined distance relative to a previous location of the first device, ~~or both,~~ transmitting information comprising an updated location of the first device;
obtaining a respective location and contact information for of each of the second devices;
presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device; and
identifying user interaction with the display specifying an action and, based thereon, ~~initiating a communication with~~ sending data to the second devices.

49. (Currently amended) The system of claim 48 wherein ~~a particular communication is a~~ the data comprises ~~phone call,~~ a short message service message, ~~a voice message,~~ a text message, ~~an electronic mail message,~~ an image, or a video.

50. (Canceled)

51. (Currently amended) The system of claim 48 wherein each user is associated with a same ~~category~~ group.

52. (Previously presented) The system of claim 48, wherein receiving user selection of the group of one or more users on the interactive display comprises identifying user interaction with the interactive map via the display, the user interaction comprising selecting the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map.

53. (Original) The system of claim 48, wherein the operations further comprise:
identifying user interaction with the display specifying a new symbol and a location of the new symbol;
presenting the new symbol on the map at the specified location; and
sending the new symbol and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location.

54-55. (Canceled)

56. (Currently amended) The system of claim 48 wherein a particular device is a personal digital assistant (PDA) or personal computer (PC), ~~smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.~~

57-58. (Canceled)

59. (Currently amended) The method of claim 1, wherein transmitting the updated location to one or more other devices comprises pushing the updated location to the one or more other devices.

60. (Currently amended) The method of claim 15, wherein transmitting the updated location to one or more other devices comprises pushing the updated location to the one or more other devices.

61. (Currently amended) The system of claim 26, wherein transmitting the updated location to one or more other devices comprises pushing the updated location to the one or more other devices.

62. (Currently amended) The method of claim 37, wherein ~~initiating the communication with sending the data to~~ the second devices comprises transmitting a text message ~~to at least one IP address corresponding~~ to at least one of the second devices using an Internet Protocol (IP).

63. (Currently amended) The system of claim 48, wherein ~~initiating the communication with sending the data to~~ the second devices comprises transmitting a text message ~~to at least one IP address corresponding~~ to at least one of the second devices using an Internet Protocol (IP).

64. (New) The method of claim 1, further comprising: receiving from the first device information indicating user selection of the one or more displayed symbols corresponding to the one or more second devices, and based thereon, establishing voice communication between the first device and the one or more second devices.

65. (New) The method of claim 64, wherein the voice communication comprises a phone call.

66. (New) The method of claim 15, further comprising: receiving from the first device information indicating user selection of the one or more displayed symbols corresponding to second devices and, based thereon, establishing voice communication between the first device and the one or more second devices.

67. (New) The method of claim 66, wherein the voice communication comprises a phone call.

68. (New) The system of claim 26, wherein the operations further comprise receiving from the first device information indicating user selection of the one or more displayed symbols corresponding to second devices and, based thereon, establishing voice communication between the first device and the one or more second devices.

69. (New) The system of claim 68, wherein the voice communication comprises a phone call.
70. (New) The method of claim 37, further comprising identifying user interaction with the display specifying an action and, based thereon, establishing voice communication with at least one of the second devices.
71. (New) The method of claim 70, wherein the voice communication comprises a phone call.
72. (New) The system of claim 48, wherein the operations further comprise identifying user interaction with the display specifying an action and, based thereon, establishing voice communication with at least one of the second devices.
73. (New) The system of claim 72, wherein the voice communication comprises a phone call.
74. (New) The method of claim 15, wherein at least one of the devices is further configured to transmit the information based on passage of a predetermined time interval since transmitting information comprising a location of the at least one device.
75. (New) The method of claim 15, wherein at least one of the devices is further configured to transmit the information comprising the updated location of the device (1) to a server, (2) using Internet Protocol (IP), and (3) based on passage of a predetermined time interval since transmitting information comprising a location of the device.
76. (New) The method of claim 15, wherein sending the data between the first device and each of the second devices comprises: receiving the data from the first device using Internet Protocol (IP) and transmitting the data to each of the second devices using IP.
77. (New) The method of claim 15, wherein the data includes a voice recording.

78. (New) The method of claim 37, further comprising: based on passage of a predetermined time interval since transmitting information comprising a location of the first device, transmitting information comprising the updated location of the first device.
79. (New) The method of claim 37, wherein sending the data to the second devices comprises sending the data to the second devices using Internet Protocol (IP).
80. (New) The method of claim 37, wherein sending the data to the second devices comprises sending the data to the second devices via a server.
81. (New) The method of claim 37, wherein the data includes a voice recording.

REMARKS

Claims 1-63 were presented for examination and were rejected. In the present Amendment, claims 1-3, 7, 9, 10, 12, 14-16, 20, 22, 23, 25-27, 31, 33, 34, 36-38, 40, 45, 48, 49, 51, 56, and 59-63 are amended, claims 5, 6, 8, 17, 18, 21, 28, 29, 32, 39, 43, 44, 46, 47, 50, 54, 55, 57, and 58 are canceled without prejudice or disclaimer, and new claims 64-81 are added.

No new matter is added. Support for the claims amendments and new claims can be found, for example, in U.S. Patent No. 7,630,724 (e.g., col. 9:31-47; col. 10:57 – 11:15, col. 12:12-62; col. 15:7-8; FIG. 4). It is noted that the '724 patent was incorporated by reference into the present application at the time of the present application's filing.

Amendments to the Specification

The specification is amended herein to correct an error in the priority claim. In particular, the priority claim has been corrected to indicate that the present application is a continuation-in-part (rather than a continuation) of U.S. Application No. 14/027,410. The same correction is included in the Corrected Application Data Sheet (ADS) filed herewith. MPEP § 211.03 states that no petition or surcharge is required for correcting a timely submitted benefit claim to correct the indicated relationship between applications from "continuation" to "continuation-in-part." Accordingly, entry of the correction and issuance of an updated Filing Receipt are respectfully requested.

In addition, for the Examiner's benefit, it is noted that a Petition to Accept an Unintentionally Delayed Priority Claim Under 35 U.S.C. § 120 was filed in U.S. Patent No. 8,364,129 ("the '129 patent") on September 21, 2015. The present application claims priority to the '129 patent, and claims priority through the '129 patent to other issued patents identified in the Petition. A copy of the Petition is filed herewith, for the Examiner's reference.

Claim Rejections Under 35 U.S.C. § 112(a)

Claims 1, 15, 26, 37, and 48 were rejected under 35 U.S.C. § 112(a) as purportedly failing to comply with the written description requirement. In particular, the Office Action (p. 3) indicated that the following limitation lacked adequate written description support: "for each of the devices, **based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device**, or both, receiving from the device

information comprising an **updated location of the device** and transmitting **the updated location** of the device to one or more other devices” (emphasis in the Office Action).

Without acceding to the rejection, claim 1 has been amended. As amended, claim 1 recites “receiving from the device information comprising an updated location of the device and transmitting the updated location of the device to one or more other devices, wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device.” As the Office Action notes, a claim satisfies the written description requirement under 35 U.S.C. § 112(a) if the subject matter of the claim is described in the application in such a way as to reasonably convey to one of ordinary skill in the relevant art that the inventor(s) had possession of the claimed invention at the time the application was filed (MPEP § 2163.03). Here, the originally filed specification incorporates U.S. Patent No. 7,630,724 (“the ‘724 patent”) by reference. The ‘724 patent describes:

... **an integrated communications system using a plurality of cellular/PDA/GPS phones** for the management of a group of people through the use of a communications net and, specifically, to provide each user with a cellular/PDA/GPS/phone that has software application programs and databases **that permit all the users to continuously know each other's locations** and status, to rapidly call and communicate voice, high speed internet data, photographs and video clips among the users by touching display screen symbols and to enable the users to easily access data concerning other users and other database information. (‘724 Patent, col. 1:6-17)

A plurality of cellular phone/WiFi/PDA/GPS devices each having application software and databases to provide a communication network having: a) the ability to selectively poll each of the other PDA/GPS phone devices with each participant **to start reporting its position** and status information directly to all or selected users equipped with the same cellular phone/PDA communication/ GPS devices in the communications net so that each of the devices that the data is transmitted to is provided a display of the location, status and other information of the other users; b) **the ability of each of the cellular phone/PDA devices to report to another device at an operator selected time rate or at a rate based on distance traveled** (‘724 Patent, col. 2:48-60)

The present cell phone/PDA/GPS device to create the communication network wherein all of the participants have the same communication device described herein also includes the ability of a specific operator device to provide polling in which **other cellular phones using SMS, internet or WiFi report periodically based on criteria such as time, speed, distance traveled, or a combination of a time, speed and distance traveled.** The operator can manually poll any or all of the cell phone devices that are used by all of the participants in the

communication network having the same device as described herein for the invention. The receiving cellular phone application code responds to the polling device with the receiving cellular phone's location and status which could include battery level, GPS status, signal strength and entered track data. Optionally, **the phone operators can set their phones to report automatically, based on time or distance traveled intervals** or another criteria. ('724 Patent, col. 9:31-47)

In FIG. 4, information flow associated with the communications cellular phone system of the present invention is shown. **The satellites 40 provide global positioning system (GPS) signals to each of the cellular phones 42, 44, 46 and 48 distributed throughout the communication area. Each of the cellular phones 42, 44, 46 and 48 automatically transmit each location data over the internet** communications 52 that is provided by the cellular phone company 50. **The data is sent to the command communication website server 54 which subsequently retransmits the data to all other common communication** units or if specifically addressed data is received to the addressed specific communication unit such as cellular phones 42, 44, 46 and 48. ('724 Patent, col. 12:16-28)

Thus, the '724 patent describes a communication system in which mobile, GPS-equipped devices automatically transmit their locations to a server "based on ... distance traveled intervals," and the server retransmits the location data to the other mobile devices. Based on at least the above-quoted passages, one of ordinary skill in the art would understand that, as of the filing date of the patent application that matured in to the '724 patent, the inventor(s) had possession of the subject matter "receiving from the device information comprising an updated location of the device and transmitting the updated location of the device to one or more other devices, wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device," as recited in amended claim 1.

Without acceding to the rejections, claims 15, 26, 37, and 48 have also been amended, and the amended claims also find adequate written description support at least in the above-quoted passages. Accordingly, withdrawal of the rejections under 35 U.S.C. § 112(a) is respectfully requested.

Claim Rejections Under 35 U.S.C. § 112(b)

Claims 59-61 were rejected under 35 U.S.C. § 112(a) as purportedly being indefinite. In particular, the Office Action (p. 4) indicated that there was insufficient antecedent basis for the limitation “the location” in claims 59-61. Claims 59-61 have been amended for clarity. Accordingly, withdrawal of the rejections under 35 U.S.C. § 112(b) is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

In the Office Action, claims 1-36 and 59-61 were rejected under 35 U.S.C. § 103 as purportedly being obvious over U.S. Patent No. 7,593,740 (“Crowley”) in view of U.S. Pub. No. 2006/0047825 (“Steenstra”) and further in view of U.S. Pub. No. 2004/0252050 (“Tengler”). Claims 37-40, 42-51, 53-58, 62, and 63 were rejected under 35 U.S.C. § 103 as purportedly being obvious over Steenstra in view of U.S. Pub. No. 2003/0093405 and further in view of Tengler. Claims 41 and 52 were rejected under 35 U.S.C. § 103 as purportedly being obvious over Steenstra in view of Mayer and further in view of Tengler and U.S. Pub. No. 2004/0148090 (“Melen”). These rejections are respectfully traversed as applied to the claims, as amended.

I. **Independent Claim 1 and the Claims Depending Therefrom**

As amended, independent claim 1 is directed to a method comprising:

transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map;

for each of the devices, receiving from the device information comprising an updated location of the device and transmitting the updated location of the device to one or more other devices, **wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device;** and

receiving from a first of the devices information indicating user selection of one or more displayed symbols corresponding to one or more second devices. (Emphasis added.)

Even assuming (without conceding) that the cited references could have properly been combined, the proposed combination of the cited portions of the references does not teach or suggest at least the subject matter of the above-emphasized portion of claim 1. Crowley describes a technique for connecting acquaintances for activities such as socialization (col. 1, lines 15-17), and the cited portions of Crowley do not teach or suggest at least the above-emphasized portion of claim 1. Steenstra describes “performing location determination and

providing location information via a location based services (LBS) architecture to create a social network” ([0002]), and the cited portions of Steenstra do not teach or suggest at least the above-emphasized portion of claim 1.

The cited portions of Tengler do not cure the deficiencies of Crowley and Steenstra at least with respect to the above-emphasized portion of claim 1. Tengler appears to describe a “vehicle fleet navigation system” (Abstract). Referring to the publication’s lone Figure, Tengler states:

The vehicle fleet navigational system 10 preferably includes an ownership or main vehicle 12 having a main mobile navigation system 14 for t[r]acking the position of one or more second or auxiliary vehicles 16. Preferably, the system 10 also includes a land based navigation system 20 for tracking at least the auxiliary vehicles 16. The land based navigation system 20 may also track the position of the main vehicle 12. As will be explained in detail below, the land based navigation system 20, the main vehicle 12, and the auxiliary vehicles 16 are preferably in selective communication with each other to exchange the positional location of at least the auxiliary vehicles 16, and optionally the main vehicle 12. As will also be explained in detail below, a preferred embodiment of the system 10 uses navigational units, such as GPS units, in the vehicles used in conjunction with a wireless data connection, such as a cellular phone network, to communicate with one another for tracking the position of the vehicles. **Preferably, a plurality of signals are transmitted at spaced apart time intervals to update the positional information of the vehicles.** The time intervals can be equally spaced apart and/or can be transmitted upon the occurrence of an event, such as a request by the main vehicle 12 or the land based navigation system 20 to update the positional information. ([0007], emphasis added.)

Regarding the transmission of positional information, Tengler further states that the transmitter or transceiver 40 of the auxiliary vehicle 16 “transmits a position signal to the main vehicle and/or the land based navigation system 20 so that the position of the auxiliary vehicle 16 can be tracked” ([0015]), and observes that “the transceivers 32 and 40 may transmit their position signal **at a predetermined time interval**” ([0023], emphasis added). Tengler’s description of transmitting position signals at predetermined time intervals does not teach or suggest “wherein the device is configured to transmit the information comprising the updated location of the device **based on a displacement of the device** by a predetermined distance relative to a previous location of the device,” as recited in claim 1 (emphasis added).

For at least the foregoing reasons, the cited portions of the references do not teach at least the above-emphasized limitation of claim 1. Claim 1 therefore patentably distinguishes over the cited references and is in allowable condition. Claims 2-4, 7, 9-14, 59, and 64-65 depend from

claim 1 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 1 and its dependent claims under 35 U.S.C. § 103 is respectfully requested.

II. Independent Claim 15 and the Claims Depending Therefrom

As amended, independent claim 15 is directed to a method comprising:

 sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;

 for each of the devices, receiving from the device information comprising an updated location of the device and sending the updated location of the device to one or more other devices, **wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device**, wherein each of the other devices is configured to display respective symbols representing the updated locations on the first map;

 receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:

 obtaining a respective contact information for each of the second devices; and

 sending data between the first device and each of the second devices using the contact information of the second device. (Emphasis added.)

For reasons that should be apparent from the discussion above, the cited portions of the references do not teach or suggest at least the subject matter of the above-emphasized portion of claim 15. Claim 15 therefore patentably distinguishes over the cited references and is in allowable condition. Claims 16, 19-20, 22-25, 60, 66-67, and 74-77 depend from claim 15 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 15 and its dependent claims under 35 U.S.C. § 103 is respectfully requested.

Furthermore, claim 75 is allowable for at least one additional reason. Claim 75, which depends directly from claim 15, recites the method of claim 15, “wherein at least one of the devices is further configured to transmit the information comprising the updated location of the device (1) to a server, (2) using Internet Protocol (IP), and (3) based on passage of a predetermined time interval since transmitting information comprising a location of the device.”

For reasons that should be apparent from the discussion above, the cited portions of Crowley and Steenstra (individually or in combination) do not teach or suggest the limitations of claim 75. The cited portions of Tengler do not cure the deficiencies of Crowley and Steenstra at least with respect to the limitations of claim 75. As discussed above, Tengler appears to describe a “vehicle fleet navigation system” in which the transmitter or transceiver 40 of an auxiliary

vehicle 16 “transmits a position signal to the main vehicle and/or the land based navigation system 20 so that the position of the auxiliary vehicle 16 can be tracked” ([0015]). Although Tengler states that “a plurality of signals are transmitted at spaced apart time intervals to update the positional information of the vehicles” ([0007]), other passages of Tengler indicate that this statement does not apply to systems that transmit their positional information to a server via the Internet.

In particular, alternative implementations of Tengler’s system are described in paragraphs [0019] and [0020]. Paragraph [0019] describes implementations of Tengler’s system in which the position signals are transmitted from the auxiliary vehicles to the main vehicle (or to the land-based navigation system) via direct wireless transmission or via a cellular network:

The operation of the system 10 will now be described. In a first or simplified embodiment of the present invention, the auxiliary vehicles 16 are only equipped with a navigational receiving unit 44 and a wireless transmitter 44 for determining and relaying the positional information of the auxiliary vehicle 16. This positional information is preferably retrieved by navigational systems of both the main mobile navigation system 14 and the land based navigational system 20. The positional information is transmitted by the transceiver 40 from the auxiliary vehicle(s) 16. The navigational systems of the main mobile navigation system 14 and the land based navigational system 20 can retrieve the positional information by any suitable manner. **For example, the navigational systems of both the main mobile navigation system 14 and the land based navigational system 20 may include transceivers 32 and 52, respectively, to directly receive a wireless position signal transmitted by the transceiver 40.** That signal can then be decoded by the respective controller to display the position of the auxiliary vehicle 16 on the respective displays 30 and 54. **If the transceivers 40 are cellular phones, the position signal is transmitted by the transceivers 40 to the tower 35 and corresponding cellular site. The cellular site is connected to a cellular network which then retransmits the position signal to the transceivers 32 and 52.** The respective controllers 28 and 50 decode the position signal and display the position of the auxiliary vehicle 16 on the respective displays 30 and 54. ([0019], emphasis added.)

Paragraph [0019] does not describe any positional information or positional signals being transmitted using the Internet Protocol (IP).

Paragraph [0020] describes an implementation of Tengler’s system in which the positional signals are transmitted through the Internet:

Instead of a direct wireless transmission of the position signal between the transceivers 32, 40, and 52, the position signal may be transmitted through the Internet. For example, the transceiver 40 of the auxiliary vehicle 16 may be a cellular phone having access to the Internet. The position signal

transmitted by the transceiver 40 is either sent via the Internet directly from the cellular phone, or the position signal may be transmitted to the cellular network which is connected to a data service bureau, which then sends the data corresponding to the position signal over the Internet to a server computer. To access the data, the transceiver 32 of the main vehicle may interface with the Internet to retrieve the data. The controller 28 can then display the position of the auxiliary vehicle on the display 30 Alternatively, **the land based navigational system 20 can retrieve the position signal via the transceiver 52 in a similar manner as the transceiver 32 of the main vehicle as described above.** ([0020], emphasis added.)

Thus, in paragraph [0020], Tengler describes two variants of an implementation in which positional signals are transmitted through the Internet. In one variant, the positional signals are transmitted directly from the auxiliary vehicles to the main vehicle or the land-based system, without being received and transmitted by a server. In the other variant, the positional signals are transmitted from the auxiliary vehicles to a server computer, and the main vehicle (or the land-based system) retrieve the positional data from the server computer.

Regarding the transmission of position signals at spaced apart time intervals, Tengler states:

To reduce the transmission time of the transceivers 32, 40, and 52, the transmitted signals may be sent according to a time or event schedule. For example, the transceivers 32 and 40 may transmit their position signal at a predetermined time interval. In this manner, the number of calls and airtime that a cellular phone uses acting as the transceiver could be regulated to reduce the cost of using the cellular network. ([0023], emphasis added.)

As can be seen, Tengler describes the transmission of position signals at predetermined time intervals only in the context of making calls over a cellular network, and not in the context of transmitting the signals to a server via the Internet. In addition, the motivation provided by Tengler for transmitting position signals at predetermined time intervals (i.e., regulating the number of calls on a cellular network) does not apply to a system that transmits position signals to a server via the Internet.

Thus, the cited portions of Tengler do not teach or suggest “wherein at least one of the devices is further configured to transmit the information comprising the updated location of the device (1) to a server, (2) using Internet Protocol (IP), and (3) based on passage of a predetermined time interval since transmitting information comprising a location of the device,” as recited in claim 75. Claim 75 is allowable for at least this additional reason.

III. Independent Claim 26 and the Claims Depending Therefrom

As amended, independent claim 26 is directed to a system comprising one or more computers programmed to perform operations comprising:

 sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;

 for each of the devices, receiving from the device information comprising an updated location of the device and sending the updated location of the device to one or more other devices, **wherein the device is configured to transmit the information comprising the updated location of the device based on a displacement of the device by a predetermined distance relative to a previous location of the device**, wherein each of the other devices is configured to display respective symbols representing the updated locations on the first map;

 receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:

 obtaining a respective contact information for each of the second devices; and

 sending data between the first device and each of the second devices using the contact information of the second device. (Emphasis added.)

For reasons that should be apparent from the discussion above in Section I, the cited portions of the references do not teach or suggest at least the subject matter of the above-emphasized portion of claim 26. Claim 26 therefore patentably distinguishes over the cited references and is in allowable condition. Claims 27, 30-31, 33-36, 61, and 68-69 depend from claim 26 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 26 and its dependent claims under 35 U.S.C. § 103 is respectfully requested.

IV. Independent Claim 37 and the Claims Depending Therefrom

As amended, independent claim 37 is directed to a method comprising:

 receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;

based on a displacement of the first device by a predetermined distance relative to a previous location of the first device, transmitting information comprising an updated location of the first device;

 obtaining a respective location and contact information for of each of the second devices;

 presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device; and

identifying user interaction with the display specifying an action and, based thereon, sending data to the second devices. (Emphasis added.)

Even assuming (without conceding) that the cited references could have properly been combined, the proposed combination of the cited portions of the references does not teach or suggest at least the subject matter of the above-emphasized portion of claim 37. For reasons that should be apparent from the discussion above in Section I, the cited portions of Steenstra do not teach or suggest at least the above-emphasized portion of claim 37. Mayer appears to describe “instant messaging and computer dating on the Internet” ([0002]), and the cited portions of Mayer do not teach or suggest at least the above-emphasized portion of claim 37. For reasons that should be apparent from the discussion above in Section I, the cited portions of Tengler do not cure the deficiencies of Steenstra and Mayer at least with respect to the above-emphasized portion of claim 37. Claim 37 therefore patentably distinguishes over the cited references and is in allowable condition. Claims 38, 40-42, 45, 70-71, and 78- 81 depend from claim 37 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 37 and its dependent claims under 35 U.S.C. § 103 is respectfully requested.

V. Independent Claim 48 and the Claims Depending Therefrom

As amended, independent claim 48 is directed to a method comprising one or more computers programmed to perform operations comprising:

receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;

based on a displacement of the first device by a predetermined distance relative to a previous location of the first device, transmitting information comprising an updated location of the first device;

obtaining a respective location and contact information for of each of the second devices;

presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device; and

identifying user interaction with the display specifying an action and, based thereon, sending data to the second devices. (Emphasis added.)

For reasons that should be apparent from the discussion above in Section I, the cited portions of the references (individually or in combination) do not teach or suggest the above-emphasized portion of claim 48. Claim 48 therefore patentably distinguishes over the cited

references and is in allowable condition. Claims 49, 51-53, 56, and 72-73 depend from claim 48 and are allowable for at least the same reasons. Withdrawal of the rejections of claim 48 and its dependent claims under 35 U.S.C. § 103 is respectfully requested.

ACTIVE/84535301.3

CONCLUSION

By responding in the foregoing remarks only to particular positions taken by the Examiner, Applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, Applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist. Finally, Applicant's decision to amend or cancel any claim should not be understood as implying that Applicant agrees with any positions taken by the Examiner with respect to that claim or other claims.

The pending application is believed to be in condition for allowance. If, in the Examiner's opinion, further communication would expedite the favorable prosecution of the present application, the undersigned would welcome the opportunity to discuss any outstanding issues and to work with the Examiner toward placing the application in condition for allowance.

A petition for a one-month extension of time and the corresponding fees are submitted herewith. No other fees or extensions are believed to be necessary for entry and consideration of this paper. The Commissioner, however, is hereby authorized to charge any deficiency in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 07-1700, with reference to Order No. MOC-001.

Respectfully submitted,

Dated: December 18, 2015

/Daniel J. Burns/

Daniel J. Burns

Registration No.: 50,222

Customer Number: 51414
Goodwin Procter LLP
Telephone: (650) 752-3100

Electronic Patent Application Fee Transmittal

Application Number:	14529978			
Filing Date:	31-Oct-2014			
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS			
First Named Inventor/Applicant Name:	Malcolm K. Beyer			
Filer:	Daniel J. Burns/Deanna Bridges			
Attorney Docket Number:	MOC-001			
Filed as Small 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:				
PROCESSING FEE, EXCEPT PROV. APPLS.	2830	1	70	70
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Extension - 1 month with \$0 paid	2251	1	100	100
Miscellaneous:				
Request for Continued Examination	2801	1	600	600
Correction of Inventorship on Merits	2819	1	300	300
Total in USD (\$)				1070

Electronic Acknowledgement Receipt	
EFS ID:	24411150
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns/Deanna Bridges
Filer Authorized By:	Daniel J. Burns
Attorney Docket Number:	MOC-001
Receipt Date:	18-DEC-2015
Filing Date:	31-OCT-2014
Time Stamp:	17:06:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1070
RAM confirmation Number	4443
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	MOC-001_RCE.pdf	82788 4633fb130ea3eb55409fde185c9d338b88fd6999	no	1
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This is not a USPTO supplied RCE SB30 form.					
Information:					
2	Examination support document	MOC-001_Petition.pdf	154543 9aef4a9508ee3dac9c608aa8d5b4fd716494861	no	2
Warnings:					
Information:					
3	Request under Rule 48 correcting inventorship	MOC-001_Correct_Inventorship_Request.pdf	79637 10108c2a67991c66eb03f94d1d632f7230d24fb1	no	1
Warnings:					
Information:					
4	Application Data Sheet	MOC-001_Corrected_ADS.pdf	68401 5238d5e0d3654c1504e56e6019db4010f403b891	no	6
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This is not an USPTO supplied ADS fillable form					
5	Extension of Time	MOC-001_EOT.pdf	77663 136789b3bbdcf16bdf19d61b11d03a0cb862a77	no	1
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Information:					
6		MOC-001_Amendment_Response.pdf	174065 04d0d3416dc43650892391535d2830d278d93d9	yes	26
	Multipart Description/PDF files in .zip description				
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	Amendment Submitted/Entered with Filing of CPA/RCE		1	1	
	Specification		2	2	

	Claims		3	14
	Applicant Arguments/Remarks Made in an Amendment		15	26
Warnings:				
Information:				
7	Fee Worksheet (S806)	fee-info.pdf	35949	no
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Warnings:				
Information:				
Total Files Size (in bytes):			673046	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875			Application or Docket Number 14/529,978	Filing Date 10/31/2014	<input type="checkbox"/> To be Mailed	
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO						
APPLICATION AS FILED – PART I						
(Column 1)		(Column 2)				
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)		
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =			
<input type="checkbox"/> 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).					
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))						
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			
APPLICATION AS AMENDED – PART II						
(Column 1)		(Column 2)		(Column 3)		
AMENDMENT	12/18/2015	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 63	Minus ** 58	= 5	X \$40 =	200
	Independent (37 CFR 1.16(h))	* 5	Minus ***5	= 0	X \$210 =	0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
					TOTAL ADD'L FEE	200
(Column 1)		(Column 2)		(Column 3)		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus ***	=	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
					TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".						
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.						

LIE
/VINCENT BUTLER/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

<h1>TRANSMITTAL FORM</h1> <p><i>(to be used for all correspondence after initial filing)</i></p>	Application Number	14/529,978-Conf. #1092	
	Filing Date	October 31, 2014	
	First Named Inventor	Malcolm K. Beyer, Jr.	
	Art Unit	2646	
	Examiner Name	O. Obayanju	
Total Number of Pages in This Submission	7	Attorney Docket Number	MOC-001

ENCLOSURES <i>(Check all that apply)</i>				
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Corrected Application Data Sheet		
<table border="1" style="width: 100%;"> <tr> <td style="width: 100px;">Remarks</td> <td></td> </tr> </table>			Remarks	
Remarks				

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	GOODWIN PROCTER LLP		
Signature	/Daniel J. Burns/		
Printed name	Daniel J. Burns		
Date	October 30, 2015	Reg. No.	50,222

Corrected Application Data Sheet

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Country of mailing address:: US
Postal or Zip Code of mailing address:: 98073

Correspondence Information

Correspondence Customer Number:: 51414
Email Address:: patentbos@goodwinprocter.com

Application Information

Application Type:: Nonprovisional
Subject Matter:: Utility
CD-ROM or CD-R?:: None
Sequence submission?:: None

Computer Readable Form (CRF)?::	No
Title::	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
Attorney Docket Number::	MOC-001
Request for Early Publication?::	No
Request for Non-Publication?::	No
Small Entity?::	Yes
Drawing Sheets::	7
Petition included?::	No
Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2::	No
Authorization to Permit Access to the Instant Application by the Participating Offices::	No
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::	No - <u>Yes</u>

Representative Information

Representative Customer Number::	51414
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Domestic Benefit/National Stage Information

Prior Application Status::	Patented
Application Number::	14/529,978
Continuity Type::	Continuation of
Prior Application Number::	14/027,410
Filing Date::	09/16/2013
Patent Number::	8,880,042
Issue Date::	11/04/2014
Prior Application Status::	Patented
Application Number::	14/027,410
Continuity Type::	Continuation of
Prior Application Number::	13/751,453
Filing Date::	01/28/2013
Patent Number::	8,538,393
Issue Date::	09/17/2013
Prior Application Status::	Patented
Application Number::	13/751,453
Continuity Type::	Continuation in part of
Prior Application Number::	12/761,533
Filing Date::	04/16/2010
Patent Number::	8,364,129
Issue Date::	01/29/2013

Prior Application Status::	Patented
Application Number::	12/761,533
Continuity Type::	Continuation in part of
Prior Application Number::	11/615,472
Filing Date::	12/22/2006
Patent Number::	8,126,441
Issue Date::	02/28/2012
Prior Application Status::	Patented
Application Number::	11/615,472
Continuity Type::	Continuation in part of
Prior Application Number::	11/308,648
Filing Date::	04/17/2006
Patent Number::	7,630,724
Issue Date::	12/08/2009
Prior Application Status::	Patented
Application Number::	11/308,648
Continuity Type::	Continuation in part of
Prior Application Number::	10/711,490
Filing Date::	09/21/2004
Patent Number::	7,031,728
Issue Date::	04/18/2006

Foreign Priority Information

Applicant Information

Applicant Number:: 1
Applicant Type:: Assignee
Organization Name:: Advanced Ground Information Systems,
Inc.
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City of mailing address:: Jupiter
State or Province of mailing address:: FL
Country of mailing address:: US
Postal or Zip Code of mailing address:: 33469

Non-Applicant Assignee Information

Assignee Number:: 1
Organization Name:: Advanced Ground Information Systems,
Inc.
Street of mailing address:: 92 Lighthouse Drive
City of mailing address:: Jupiter
State or Province of mailing address:: FL
Country of mailing address:: US
Postal or Zip Code of mailing address:: 33469

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.			
Signature	/Daniel J. Burns/	Date	10/30/2015
Name (Print/Type)	Daniel J. Burns	Registration No. (Attorney/Agent)	50,222

Electronic Acknowledgement Receipt	
EFS ID:	23948775
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	51414
Filer:	Daniel J. Burns/Deanna Bridges
Filer Authorized By:	Daniel J. Burns
Attorney Docket Number:	MOC-001
Receipt Date:	30-OCT-2015
Filing Date:	31-OCT-2014
Time Stamp:	17:18:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	MOC-001_Transmittal.pdf	88216 <small>582d850ea7bfe341e384cf126641288435cf7b7b</small>	no	1

Warnings:

Information:

2	Application Data Sheet	MOC-001_Corrected_ADS.pdf	67578 <small>72e4ed44c871e3d6caf5121ad44aedeb4eb346c6</small>	no	6
Warnings:					
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Table with 4 columns: APPLICATION NUMBER (14/529,978), FILING OR 371(C) DATE (10/31/2014), FIRST NAMED APPLICANT (Malcolm K. Beyer Jr.), ATTY. DOCKET NO./TITLE (MOC-001)

CONFIRMATION NO. 1092

PUBLICATION NOTICE



51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

Title:METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

Publication No.US-2015-0264167-A1

Publication Date:09/17/2015

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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Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, DELIVERY MODE. Includes application details for Malcolm K. Beyer Jr. and examiner OBAYANJU, OMONIYI.

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):

PATENTBOS@GOODWINPROCTER.COM
PSOUSA-ATWOOD@GOODWINPROCTER.COM
GLENN.WILLIAMS@GOODWINPROCTER.COM

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

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-63, have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C.

112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 15, 26, 37, and 48, are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.

In **regards to claims 1, 15, 26, 37, and 48**, the claims recites at least in part “for each of the devices, **based on passage of a predetermined time interval since receiving information comprising a location** of the device, a **displacement of the device by a predetermined distance relative to a previous location of the device**, or both, receiving from the devices information comprising **an updated location of the device** and transmitting **the updated location** of the device to one or more other devices” (Emphasis Added). Upon further review of the Applicant’s original specification of file, the limitations stated above were not mentioned, inconsistent, and/or not clearly described so as to be readily understood by one of ordinary skill in the art. The Applicant’s original specification merely stated that *“The hook application software determines that the stylus (or finger) is pointed close to or at the location of the symbol and puts a circle, square or other indication around the symbol indicating that amplification information concerning the symbol is to be displayed. The operator can hook entered tracks or his own track symbol and add data or change data associated with the indicated symbol. The hook application code then sends a message to the database application code to store the facility or **entity’s updated data**.”* Thus, the introduction of the newly amended limitations that were not supported and/or clearly described by the specification raises the issue of new matter.

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.

Claim 59-61 recites the limitation "**the location**" in the first line. There is insufficient antecedent basis for this limitation in the claim. The independent claims recites "an updated location", therefore it is unclear and/or inconsistent as to which location the dependent claims are referring to.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-36 and 59-61, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Crowley et al. (US Patent No. 7593740) in view of Streenstra et al. (US Publication No. 20060047825) and further in view of Tengler et al. (US Publication No. 20040252050).

As to **claim 1**, Crowley teaches a computer-implemented method comprising: transmitting a map to each one of a plurality of devices wherein the devices are

each configured to display the map (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users); receiving from the device information comprising location of the device and transmitting the location of the device to one or more other devices (fig. 3, col. 7, lines 25-31, and lines 60-67, communicating location information); transmitting to each of the other devices information comprising a location on the map of each of the one or more devices (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users). However, Crowley fails to explicitly teach user symbol and receiving from one or more of the devices information indicating user selection of at least one of the displayed symbols corresponding to one or more other devices.

In an analogous field of endeavor, Streenstra teaches user symbol and receiving from a one or more of the devices information indicating user selection of at least one of the displayed symbols corresponding to one or more other devices (pp0038, fig. 4, display selection of the list of active Qsocial users, and pp0019, fig. 5, shows icon 502 or 504 of users and their locations on the activity map). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley with the teachings Streenstra to achieve the goal of efficiently and reliably creating and maintaining location based service social network in a communication system (Streenstra, pp0006). However, they both failed to explicitly teach for each of the devices, based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both, receiving and transmitting updated location of the device to one or more other devices.

In an analogous field of endeavor, Tengler teaches for each of the devices, based on passage of a predetermined time interval since receiving information comprising a location of the device (fig. 1, and pp0023, pp0007, transmitting signal to update positional information of devices at a predetermined spaced time interval), a displacement of the device by a predetermined distance relative to a previous location of the device, or both, receiving and transmitting updated location of the device to one or more other devices (fig. 1, and pp0023, pp0007, transmitting signal to update positional information of devices at a predetermined spaced time interval). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley and Streenstra with the teachings Tengler to achieve the goal of efficiently and reliably monitoring and/or tracking the location of plurality of devices in a communication system (Tengler, pp0008).

As to **claim 2**, Crowley teaches further comprising receiving from one or more of the devices information comprising the respective contact information for the device (fig. 3, col. 12, lines 34-49); and facilitating communication between the one or more devices using the received contact information (fig. 3, and col. 13, lines 25-45, send message to friends).

As to **claims 3, 16, and 27**, Crowley teaches wherein the communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video (col. 9, lines 12-16).

As to **claims 4, 19, and 30**, Crowley teaches wherein particular contact information is a phone number or an Internet Protocol address (fig. 3, col. 12, lines 34-49).

As to **claims 5, 17, and 28**, Crowley teaches wherein at the devices are part of a same group within a user-specified geographic area (fig. 3, friends near Luna lounge).

As to **claims 6, 18, and 29**, Crowley teaches wherein the group is a friends or family group (fig. 3, friends near Luna lounge).

As to **claims 7, 20, and 31**, Crowley teaches further comprising: performed by one of the devices (fig. 3): obtaining contact information associated with the user (fig. 3, col. 12, lines 34-49); and performing an action using the contact information wherein the action is initiating a phone call, transferring data, sending an electronic mail message, or opening a web page (fig. 3, and col. 13, lines 25-45, send message to friends, and col. 9, lines 12-16). However failed to explicitly teach receiving user selection of the symbol on the map.

In an analogous field of endeavor, Streenstra teaches receiving user selection of the symbol on the map (pp0038, fig. 4, display selection of the list of active Qsocial users, and pp0019, fig. 5, shows icon 502 or 504 of users and their locations on the activity map). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Crowley with the teachings Streenstra to achieve the goal of efficiently and reliably creating and maintaining location based service social network in a communication system (Streenstra, pp0006).

As to **claims 8, 21, and 32**, Crowley in view of Streenstra teaches wherein the symbol represents a facility or a person's home (Streenstra, fig. 5, and pp0026).

As to **claims 9, 22, and 33**, Crowley in view of Streenstra teaches wherein the device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer (Streenstra, pp0019, wireless terminals).

As to **claims 10, 23, and 34**, Crowley teaches further comprising: receiving a request for the map from one or more of the devices wherein the request comprises one or more parameters and wherein a parameter specifies a map location (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users) or a zoom indication; and sending the map to the one or more devices (fig. 3, fig. 7, col. 9, lines 15-19, transmit map to users).

As to **claims 11, 24, and 35**, Crowley teaches wherein the devices do not have access to a phone number or an Internet Protocol address of any other of the devices (col. 16, lines 16-20, address maybe kept private).

As to **claims 12, 25, and 36**, Crowley in view of Streenstra teaches wherein the first map is an aerial photograph, a satellite image, or a chart (Streenstra, fig. 5).

As to **claim 13**, Crowley teaches further comprising: receiving from one or more devices information corresponding to the location of fixed entities, said fixed entities comprising buildings, facilities, restaurants, or emergency locations; and transmitting to all other of the devices the information corresponding to the location of the fixed entities (fig. 3, and col. 7, Luna Lounge).

As to **claim 14**, Crowley teaches further comprising: receiving from one or more devices information corresponding to the location of events; and transmitting to all other

of the devices the information corresponding to the location of the events (fig. 3, and col. 7, Luna Lounge).

As to **claims 15 and 26**, Crowley in view of Streenstra teaches similar limitations as discussed in the method of claims 1 and 2 above.

As to **claims 59, 60 and 61**, Crowley in view of Streenstra teaches wherein transmitting the location to one or more other devices comprises pushing the location to the one or more other devices (Crowley, col. 6, lines 49-56, broadcast to other group member) (Streenstra, pp0052, Push concept).

Claims 37-40, 42-51, 53-58, 62, and 63, are rejected under 35 U.S.C. 103 as being unpatentable over Streenstra et al. (US Publication No. 20060047825) in view of Mayer (US Publication No. 20030093405) and further in view of Tengler et al. (US Publication No. 20040252050).

As to **claims 37 and 48**, Streenstra teaches a computer-implemented method comprising: receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device (pp0038, fig. 4, display selection of the list of Qsocial users, and pp0019); obtaining a respective location for of each of the second devices (pp0042, provide locations of active users); presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the

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respective location of the second device (fig. 5, shows icon 502 or 504 of users and their locations on the activity map); identifying user interaction with the display specifying an action and, based thereon, initiating a communication with the second devices (pp0048, send invitation, and pp0025, user input). However, Streenstra fails to explicitly teach obtaining a respective contact information for of each of the second devices.

In an analogous field of endeavor, Mayer teaches obtaining a respective contact information for of each of the second devices (fig. 9, dates currently online includes email address or telephone number). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Streenstra with the teachings Mayer to achieve the goal of efficiently and reliably enhancing flexible communication between users in a communication system (Mayer, pp0009). However, they both failed to explicitly teach based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device.

In an analogous field of endeavor, Tengler teaches based on passage of a predetermined time interval since transmitting information comprising a location of the first device (fig. 1, and pp0023, pp0007, transmitting signal to update positional information of devices at a predetermined spaced time interval), a displacement of the first device by a predetermined distance relative to a previous location of the first

device, or both, transmitting information comprising an updated location of the first device (fig. 1, and pp0023, pp0007, transmitting signal to update positional information of devices at a predetermined spaced time interval). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Streenstra and Mayer with the teachings Tengler to achieve the goal of efficiently and reliably monitoring and/or tracking the location of plurality of devices in a communication system (Tengler, pp0008).

As to **claims 38 and 49**, Streenstra in view of Mayer teaches the limitations of the independent claims as discussed above. Mayer further teaches wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video (pp0070, pp0076, and pp0090, different communication protocol).

As to **claims 39 and 50**, Streenstra in view of Mayer teaches the limitations of the independent claims as discussed above. Mayer further teaches wherein the group of users is within a user-specified distance from a current location of the first device (pp0072, and claim 40, distance to the potential date).

As to **claims 40 and 51**, Streenstra teaches wherein each user is associated with a same category (pp0037, matched profile).

As to **claims 42 and 53**, Streenstra teaches further comprising: identifying user interaction with the display specifying a new symbol and a location of the new symbol; presenting the new symbol on the map at the specified location (fig. 5, shows icon 502 or 504 of users and their locations on the activity map); and sending the new symbol

and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location (fig. 5, shows icon 502 or 504 of users and their locations on the activity map).

As to **claims 43 and 54**, Streenstra in view of Mayer teaches the limitations of the independent claims as discussed above. Streenstra further teaches the concept of removing the selected symbol from the presentation of the map (fig. 5, shows icon 502 or 504 of users and their locations on the activity map and pp0045, expanding or shrinking the activity map). Mayer further teaches further comprising: identifying user interaction with the display specifying user to be deleted (pp0064, pp0065, delete user from list, and update contactee list); removing the selected user from the list (pp0064, pp0065, delete user from list, and update contactee list); and sending information identifying the user to the second devices wherein each of the second devices is configured to remove the user from a list (pp0064, pp0065, delete user from list, and update contactee list, and send the update to all people who have him/her on their contactee list).

As to **claims 44 and 55**, Streenstra in view of Mayer teaches the limitations of the independent claims as discussed above. Streenstra further teaches the concept of further comprising: identifying user interaction with the display selecting a new symbol and associating the new symbol with content (fig. 5, shows icon 502 or 504 of users and their locations on the activity map and pp0045, expanding or shrinking the activity map). Mayer further teaches wherein the content is an image, text, a voice recording, a video, an electronic mail address, or a Uniform Resource Locator (pp0070, pp0076, and

pp0090, different communication protocol, and fig. 9); and sending the content to the second devices wherein each of the second devices is configured to associate the content with the new list (pp0064, pp0065, update contactee list, and send the update to all people who have him/her on their contactee list, and fig. 9).

As to **claims 45 and 56**, Streenstra in view of Mayer teaches the limitations of the independent claims as discussed above. Streenstra further teaches wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer (pp0019, wireless terminals).

As to **claims 46 and 57**, Streenstra in view of Mayer teaches the limitations of the independent claims as discussed above. Mayer further teaches further comprising: presenting an alert when one of the second devices is within a user-specified distance of the first device (pp0072, pp0076, and claim 40, cellular devices can be notified automatically as soon as someone fitting a certain criterion is close to them below a certain distance).

As to **claims 47 and 58**, Streenstra in view of Mayer teaches the limitations of the independent claims as discussed above. Mayer further teaches further comprising: presenting an alert when a current location of the first device is within a user-specified distance of a facility (pp0072, and claim 40, alert the user anytime he/she is close to someone available for dating and compatible. This can be useful for example at a university, on a bus, on a train, in shopping malls, etc.).

As to **claims 62 and 63**, Streenstra in view of Mayer teaches wherein initiating the communication with the second devices comprises transmitting a text message to at

least one IP address corresponding to at least one of the second devices (Mayer, pp0075 and fig. 9).

Claims 41 and 52 are rejected under 35 U.S.C. 103 as being unpatentable over Streenstra et al. (US Publication No. 20060047825) in view of Mayer (US Publication No. 20030093405) and further in view of Tengler et al. (US Publication No. 20040252050) and Melen (US Publication No. 20040148090).

As to **claims 41 and 52**, Streenstra in view of Mayer and Tengler teaches the limitations of the independent claims as discussed above. However, they failed to explicitly teach wherein receiving user selection of the group of one or more users in the interactive display comprises identifying user interaction with the interactive map via the display, the user interaction comprising selecting the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map.

In an analogous field of endeavor, Melen teaches wherein receiving user selection of the group of one or more users in the interactive display comprises identifying user interaction with the interactive map via the display (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063), the user interaction comprising selecting the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map (fig. 4, fig. 5, #509, #510, touch selection of icon on the map, and pp0063). Thus it would have been obvious to one of ordinary skill in the art at time invention was made to combine the teachings of Streenstra, Mayer,

and Tengler with the teachings Melen to achieve the goal of efficiently and conveniently communicating or interacting with other members of the group in a communication system (Melen, pp0003).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMONIYI OBAYANJU whose telephone number is (571)270-5885. The examiner can normally be reached on Mon - Fri, 7:30 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMRAN AFSHAR can be reached on 571-272-7796. 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.

/OMONIYI OBAYANJU/
Primary Examiner, Art Unit 2646

Notice of References Cited	Application/Control No. 14/529,978	Applicant(s)/Patent Under Reexamination BEYER ET AL.	
	Examiner OMONIYI OBAYANJU	Art Unit 2646	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2004/0148090	07-2004	Melen, Roger D.	701/200
*	B US-2004/0252050	12-2004	Tengler et al.	342/357.08
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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	R				
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*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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EAST Search History

EAST Search History (Prior Art)


Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L5	4	"20030093405"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 04:01
S1	0	"14529978"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:57
S2	2334	((((social\$9 near2 network\$3) or dating) same (location\$3 or position\$3 or location\$base\$2))) and (map same updat\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:58
S3	16286	((H04W4/02).CPC.)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:58
S4	5696	455/404.2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S5	4375	455/404.2.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S6	16313	455/456.1.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/31 21:59
S7	2	"8880042"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 00:45
S8	3	"20060047825"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:02
S9	106	"7593740"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:03

EAST Search History

S10	182	((location or position) with ((other or different or another or second) adj2 (vehid\$5 or car or truck or auto or automobile or plane or aircraft or ship or boat))) same ((display\$3 or view\$3) near5 (map)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 01:16
S11	47	S10 and (@ad<"20040921" or @pd<"20040921" or @rlad<"20040921")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/13 02:12

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Search Notes 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

CPC- SEARCHED		
Symbol	Date	Examiner
H04W4/02	3/31/2015	OO


CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	404.2, 456.1	3/31/2015	OO

SEARCH NOTES		
Search Notes	Date	Examiner
See Attached East Search History	3/31/2015	OO
See Attached East Search History (Updated)	8/13/2015	OO

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

--	--

Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

✓	Rejected
=	Allowed


-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

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

CLAIM		DATE							
Final	Original	03/31/2015	08/13/2015						
	1	✓	✓						
	2	✓	✓						
	3	✓	✓						
	4	✓	✓						
	5	✓	✓						
	6	✓	✓						
	7	✓	✓						
	8	✓	✓						
	9	✓	✓						
	10	✓	✓						
	11	✓	✓						
	12	✓	✓						
	13	✓	✓						
	14	✓	✓						
	15	✓	✓						
	16	✓	✓						
	17	✓	✓						
	18	✓	✓						
	19	✓	✓						
	20	✓	✓						
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	22	✓	✓						
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	24	✓	✓						
	25	✓	✓						
	26	✓	✓						
	27	✓	✓						
	28	✓	✓						
	29	✓	✓						
	30	✓	✓						
	31	✓	✓						
	32	✓	✓						
	33	✓	✓						
	34	✓	✓						
	35	✓	✓						
	36	✓	✓						

Index of Claims 	Application/Control No. 14529978	Applicant(s)/Patent Under Reexamination BEYER ET AL.
	Examiner OMONIYI OBAYANJU	Art Unit 2646

✓	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	03/31/2015	08/13/2015						
	37	✓	✓						
	38	✓	✓						
	39	✓	✓						
	40	✓	✓						
	41	✓	✓						
	42	✓	✓						
	43	✓	✓						
	44	✓	✓						
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	51	✓	✓						
	52	✓	✓						
	53	✓	✓						
	54	✓	✓						
	55	✓	✓						
	56	✓	✓						
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	58	✓	✓						
	59		✓						
	60		✓						
	61		✓						
	62		✓						
	63		✓						



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/529,978	10/31/2014	Malcolm K. Beyer Jr.	MOC-001

CONFIRMATION NO. 1092

POA ACCEPTANCE LETTER



51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

Date Mailed: 06/12/2015

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/08/2015.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mtekle michael/



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/529,978	10/31/2014	Malcolm K. Beyer Jr.	10963.3834

CONFIRMATION NO. 1092

POWER OF ATTORNEY NOTICE

22235
Malin Haley DiMaggio & Bowen, P.A.
1936 S ANDREWS AVENUE
FORT LAUDERDALE, FL 33316



Date Mailed: 06/12/2015

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/08/2015.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mtekle michael/



UNITED STATES PATENT AND TRADEMARK OFFICE

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

Table with 4 columns: APPLICATION NUMBER (14/529,978), FILING OR 371(C) DATE (10/31/2014), FIRST NAMED APPLICANT (Malcolm K. Beyer Jr.), ATTY. DOCKET NO./TITLE (MOC-001)

51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

CONFIRMATION NO. 1092
NONPUBLICATION RESCISSION
LETTER



Date Mailed: 06/12/2015

Communication Regarding Rescission Of
Nonpublication Request and/or Notice of Foreign Filing

Applicant's rescission of the previously-filed nonpublication request and/or notice of foreign filing is acknowledged. The paper has been reflected in the Patent and Trademark Office's (USPTO's) computer records so that the earliest possible projected publication date can be assigned.

The projected publication date is 09/17/2015.

If applicant rescinded the nonpublication request before or on the date of "foreign filing,"1 then no notice of foreign filing is required.

If applicant foreign filed the application after filing the above application and before filing the rescission, and the rescission did not also include a notice of foreign filing, then a notice of foreign filing (not merely a rescission) is required to be filed within 45 days of the date of foreign filing. See 35 U.S.C. § 122(b)(2)(B)(iii), and Clarification of the United States Patent and Trademark Office's Interpretation of the Provisions of 35 U.S.C. § 122(b)(2)(B)(ii)-(iv), 1272 Off. Gaz. Pat. Office 22 (July 1, 2003).

If a notice of foreign filing is required and is not filed within 45 days of the date of foreign filing, then the application becomes abandoned pursuant to 35 U.S.C. § 122(b)(2)(B)(iii). In this situation, applicant should either file a petition to revive or notify the Office that the application is abandoned. See 37 CFR 1.137(f). Any such petition to revive will be forwarded to the Office of Petitions for a decision. Note that the filing of the petition will not operate to stay any period of reply that may be running against the application.

Questions regarding petitions to revive should be directed to the Office of Petitions at (571) 272-3282.

1 Note, for purpose of this notice, that "foreign filing" means "filing an application directed to the same invention in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing".

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mmasfaw/



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

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 14/529,978, 10/31/2014, 2646, 2870, MOC-001, 58, 5

CONFIRMATION NO. 1092
REPLACEMENT FILING RECEIPT



51414
GOODWIN PROCTER LLP
PATENT ADMINISTRATOR
53 STATE STREET
EXCHANGE PLACE
BOSTON, MA 02109-2881

Date Mailed: 06/12/2015

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)

Malcolm K. Beyer Jr., Jupiter, FL;
Sandel Blackwell, Shawnee Mission, KS;
Christopher R. Rice, Redmond, WA;

Applicant(s)

Advanced Ground Information Systems, Inc, Jupiter, FL;

Assignment For Published Patent Application

Advanced Ground Information Systems, Inc, Jupiter, FL

Power of Attorney: The patent practitioners associated with Customer Number 051414

Domestic Priority data as claimed by applicant

This application is a CON of 14/027,410 09/16/2013 PAT 8880042
which is a CON of 13/751,453 01/28/2013 PAT 8538393
which is a CIP of 12/761,533 04/16/2010 PAT 8364129
which is a CIP of 11/615,472 12/22/2006 PAT 8126441
which is a CIP of 11/308,648 04/17/2006 PAT 7630724
which is a CIP of 10/711,490 09/21/2004 PAT 7031728

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 11/17/2014

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/529,978**

Projected Publication Date: 09/17/2015

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

Preliminary Class

455

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 Assets Control, 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).

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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.

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.

<p align="center">RESCISSION OF PREVIOUS NONPUBLICATION REQUEST (35 U.S.C. 122(b)(2)(B)(ii)) AND, IF APPLICABLE, NOTICE OF FOREIGN FILING (35 U.S.C. 122(b)(2)(B)(iii))</p> <p>Send completed form to: Mail Stop PG Pub Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 FAX: (571) 273-8300</p>	Application Number		14/529,978
	Filing Date		10/31/2014
	First Named Inventor		Malcolm K. Beyer Jr.
	Title	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS	
	Atty Docket Number		MOC-001
	Art Unit		2646
	Examiner		Omoniyi Obayanju

A request that the above-identified application not be published under 35 U.S.C. 122(b) (nonpublication request) was included with the above-identified application on filing pursuant to 35 U.S.C. 122(b)(2)(B)(i). I hereby **rescind** the previous nonpublication request.

If a notice of foreign or international filing is or will be required by 35 U.S.C. 122(b)(2)(B)(iii) and 37 CFR 1.213(c), I hereby provide such notice. ~~This notice is being provided no later than forty-five (45) days after the date of such foreign or international filing.~~

~~If a notice of subsequent foreign or international filing required by 35 U.S.C. 122(b)(2)(B)(iii) and 37 CFR 1.213(e) was not filed within forty-five (45) days after the date of filing of the foreign or international application, the application is ABANDONED, and a petition to revive under 37 CFR 1.137(b) is required. See 37 CFR 1.137(f).~~

_____ /Daniel J. Burns/ Signature	_____ 06/08/2015 Date
_____ Daniel J. Burns Typed or printed name	_____ 50,222 Registration Number, if applicable
_____ 650-752-3137 Telephone Number	

This request must be signed in compliance with 37 CFR 1.33(b).

If information or assistance is needed in completing this form, please contact the Pre-Grant Publication Division at (703)605-4283 or by e-mail at PGPub@USPTO.gov.

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop PG Pub, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature	
Name (Print/Type)	Date

This collection of information is required by 37 CFR 1.213(b). 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 6 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: Mail Stop PG Pub, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Electronic Acknowledgement Receipt	
EFS ID:	22552183
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	22235
Filer:	Daniel J. Burns/Deanna Bridges
Filer Authorized By:	Daniel J. Burns
Attorney Docket Number:	10963.3834
Receipt Date:	08-JUN-2015
Filing Date:	31-OCT-2014
Time Stamp:	16:02:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	MOC-001_Transmittal.pdf	29432 <small>ca56a6ae9447b64108d5e0963e97c7694f559d14</small>	no	2

Warnings:

Information:

2		MOC-001_POA.pdf	2148693 5c74bc143c86aa1e3efdf6568665a2ba0a5759e7f	yes	3
Multipart Description/PDF files in .zip description					
		Document Description	Start	End	
		Power of Attorney	1	1	
		Assignee showing of ownership per 37 CFR 3.73	2	3	
Warnings:					
Information:					
3	Application Data Sheet	MOC-001_Corrected_ADS.pdf	30147 f0d544a49970245a13a1426dfb9e9f6244177e2	no	7
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
4	Rescind Nonpublication Request for Pre Grant Pub	MOC-001_Nonpublication_Rescission.pdf	499897 9d33ab9ba8b31299caca4f736f65c44750b92ae7	no	1
Warnings:					
Information:					
Total Files Size (in bytes):			2708169		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Beyer, Jr. Art Unit : 2646
Serial No. : 14/529,978 Examiner : Omoniyi Obayanju
Filed: October 31, 2014 Conf. No. : 1092
Title: METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED
 DIGITAL AND VOICE NETWORKS

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

TRANSMITTAL LETTER

In connection with the patent application identified above, the following are submitted:

- Statement Under 37 C.F.R 3.73(c)
- Power of Attorney
- Corrected Application Data Sheet
- Rescission Of Previous Nonpublication Request

It is hereby requested, under 37 C.F.R. 1.46(c), that the Applicant for the present application be changed to the Assignee, Advanced Ground Information Systems, Inc.

In addition, it is noted that the Nonpublication Request filed on October 31, 2014, may have been improper, because an international application (PCT/US2005/033384) claiming priority to U.S. Application No. 10/711,490 (“the ‘490 application”) was filed prior to the filing of the present application, and the ‘490 application is included in the priority claim of the present application.

Serial No. : 14/529,978
Filed : October 31, 2014

Attorney Docket No.: MOC-001

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 50-4634, under Order No. MOC-001.

Respectfully submitted,

Date: June 8, 2015

/Daniel J. Burns/
Daniel J. Burns
Reg. No. 50,222

Customer Number 51414
GOODWIN PROCTER LLP
Telephone: (650) 752-3137
Facsimile: (650) 853-1038

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

Practitioners associated with the Customer Number:

051414

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

The address associated with Customer Number:

051414

OR

Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

Assignee Name and Address:

Advanced Ground Information Systems, Inc.

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/58/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature

Malcolm K. Beyer, Jr.

Date

April 17, 2015

Name

Malcolm K. Beyer, Jr.

Telephone

561 744 3213

Title

CEO / CHAIRMAN.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Beyer Jr. et al.
Application No./Patent No.: 14/529,978 Filed/Issue Date: 10/31/2014
Titled: METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
Advanced Ground Information Systems, Inc., a corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. The assignee of the entire right, title, and interest.
2. An assignee of less than the entire right, title, and interest (check applicable box):
- The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
 - There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 035556, Frame 0370, or for which a copy thereof is attached.

- B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

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4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Daniel J. Burns/
Signature

06/08/2015
Date

Daniel J. Burns
Printed or Typed Name

50,222
Title or Registration Number

Corrected Application Data Sheet

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Application Information

Application Type:: Nonprovisional
Subject Matter:: Utility
CD-ROM or CD-R?:: None
Sequence submission?:: None

Computer Readable Form (CRF)?::	No
Title::	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
Attorney Docket Number::	10963.3834 <u>MOC-001</u>
Request for Early Publication?::	No
Request for Non-Publication?::	Yes No
Small Entity?::	Yes
<u>Drawing Sheets</u> ::	<u>7</u>
Petition included?::	No
Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2::	No
Authorization to Permit Access to the Instant Application by the Participating Offices::	No
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::	No

Representative Information

Representative Customer Number::	22235 <u>51414</u>
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Domestic Benefit/National Stage Information

Prior Application Status:: Pending Patented
Application Number:: 14/529,978
Continuity Type:: Continuation of
Prior Application Number:: 14/027,410
Filing Date:: 09/16/2013
Patent Number:: 8,880,042
Issue Date:: 11/04/2014

Prior Application Status:: Pending Patented
Application Number:: 14/027,410
Continuity Type:: Continuation of
Prior Application Number:: 13/751,453
Filing Date:: 01/28/2013
Patent Number:: 8,538,393
Issue Date:: 09/17/2013

Prior Application Status:: Patented
Application Number:: 13/751,453
Continuity Type:: Continuation in part of
Prior Application Number:: 12/761,533
Filing Date:: 04/16/2010
Patent Number:: 8,364,129
Issue Date:: 01/29/2013

Prior Application Status:: Patented
Application Number:: 12/761,533
Continuity Type:: Continuation in part of
Prior Application Number:: 11/615,472
Filing Date:: 12/22/2006
Patent Number:: 8,126,441
Issue Date:: 02/28/2012

Prior Application Status:: Patented
Application Number:: 11/615,472
Continuity Type:: Continuation in part of
Prior Application Number:: 11/308,648
Filing Date:: 04/17/2006
Patent Number:: 7,630,724
Issue Date:: 12/08/2009

Prior Application Status:: Patented
Application Number:: 11/308,648
Continuity Type:: Continuation in part of
Prior Application Number:: 10/711,490
Filing Date:: 09/21/2004
Patent Number:: 7,031,728
Issue Date:: 04/18/2006

Foreign Priority Information

Applicant Information

Applicant Number:: 1
Applicant Type:: Assignee
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State or Province of mailing address:: FL
Country of mailing address:: US
Postal or Zip Code of mailing address:: 33469

Non-Applicant Assignee Information

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City of mailing address:: Jupiter
State or Province of mailing address:: FL
Country of mailing address:: US
Postal or Zip Code of mailing address:: 33469

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.			
Signature	/Daniel J. Burns/	Date	06/08/2015
Name (Print/Type)	Daniel J. Burns	Registration No. (Attorney/Agent)	50,222

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently amended) A computer-implemented method comprising:
 - transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map;
 - for each of the devices, based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,
 - ~~receiving at various times from one or more of the devices~~ the device information comprising ~~a respective~~ an updated location of the device and transmitting the updated location of the device to one or more other devices;
 - transmitting to each of the other devices information comprising a symbol corresponding to the location on the map of each of the one or more devices; and
 - receiving from [[a]] one or more of the devices information indicating user selection of at least one of the displayed symbols corresponding to one or more other devices.
2. (Original) The method of claim 1, further comprising
 - receiving from one or more of the devices information comprising the respective contact information for the device; and
 - facilitating communication between the one or more devices using the received contact information.
3. (Original) The method of claim 2 wherein the communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
4. (Original) The method of claim 2 wherein particular contact information is a phone number or an Internet Protocol address.

5. (Original) The method of claim 1 wherein at the devices are part of a same group within a user-specified geographic area.
6. (Original) The method of claim 5 wherein the group is a friends or family group.
7. (Original) The method of claim 1, further comprising:
 - performed by one of the devices:
 - receiving user selection of the symbol on the map;
 - obtaining contact information associated with the symbol; and
 - performing an action using the contact information wherein the action is initiating a phone call, transferring data, sending an electronic mail message, or opening a web page.
8. (Original) The method of claim 7 wherein the symbol represents a facility or a person's home.
9. (Original) The method of claim 1 wherein the device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
10. (Original) The method of claim 1, further comprising:
 - receiving a request for the map from one or more of the devices wherein the request comprises one or more parameters and wherein a parameter specifies a map location or a zoom indication; and
 - sending the map to the one or more devices.
11. (Original) The method of claim 1 wherein the devices do not have access to a phone number or an Internet Protocol address of any other of the devices.
12. (Original) The method of claim 1 wherein the first map is an aerial photograph, a satellite image, or a chart.

13. (Original) The method of claim 1, further comprising:
 - receiving from one or more devices information corresponding to the location of fixed entities, said fixed entities comprising buildings, facilities, restaurants, or emergency locations; and
 - transmitting to all other of the devices the information corresponding to the location of the fixed entities.

14. (Original) The method of claim 1, further comprising:
 - receiving from one or more devices information corresponding to the location of events; and
 - transmitting to all other of the devices the information corresponding to the location of the events.

15. (Currently amended) A computer-implemented method comprising:
 - sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;
 - for each of the devices, based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,
 - ~~receiving at various times from one or more of the devices respective~~ the device information comprising ~~[[a]]~~ an updated location of the device and sending the updated location of the device to one or more other devices, wherein each of the other devices is configured to display ~~[[a]]~~ respective symbols representing the ~~location~~ locations on the first map;
 - receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:
 - obtaining a respective contact information for each of the second devices; and
 - facilitating a respective communication between the first device and each of the second devices using the contact information of the second device.

16. (Original) The method of claim 15 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
17. (Original) The method of claim 15 wherein first device and the second devices are part of a same group or within a user-specified geographic area.
18. (Original) The method of claim 17 wherein the group is a friends or family group.
19. (Original) The method of claim 15 wherein particular contact information is a phone number or an Internet Protocol address.
20. (Original) The method of claim 15, further comprising:
 - performed by one of the devices:
 - receiving user selection of a symbol on the first map;
 - obtaining contact information associated with the symbol; and
 - performing an action using the contact information wherein the action is initiating a phone call, transferring data, sending an electronic mail message, or opening a web page.
21. (Original) The method of claim 20 wherein the symbol represents a facility or a person's home.
22. (Original) The method of claim 15 wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
23. (Original) The method of claim 15, further comprising:
 - receiving a request for a map from a third device wherein the request comprises one or more parameters and wherein a parameter specifies a map location or a zoom indication;
 - obtaining a second map that conforms to the attributes; and
 - sending the second map to the third device.

24. (Original) The method of claim 15 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the second devices.
25. (Original) The method of claim 15 wherein the first map is an aerial photograph, a satellite image, or a chart.
26. (Currently amended) A system comprising:
 - one or more computers programmed to perform operations comprising:
 - sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;
 - for each of the devices, based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,
 - ~~receiving at various times from one or more of the devices respective the device~~
 - information comprising [[a]] an updated location of the device and sending the updated location of the device to one or more other devices, wherein each of the other devices is configured to display [[a]] respective ~~symbol~~ symbols representing the ~~location~~ locations on the first map;
 - receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:
 - obtaining a respective contact information for each of the second devices; and
 - facilitating a respective communication between the first device and each of the second devices using the contact information of the second device.
27. (Original) The system of claim 26 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
28. (Original) The system of claim 26 wherein first device and the second devices are part of a same group or within a user-specified geographic area.
29. (Original) The system of claim 26 wherein the group is a friends or family group.

30. (Original) The system of claim 26 wherein particular contact information is a phone number or an Internet Protocol address.
31. (Original) The system of claim 26, wherein the operations further comprise:
 - performed by one of the devices:
 - receiving user selection of a symbol on the first map;
 - obtaining contact information associated with the symbol; and
 - performing an action using the contact information wherein the action is initiating a phone call, transferring data, sending an electronic mail message, or opening a web page.
32. (Original) The system of claim 31 wherein the symbol represents a facility or a person's home.
33. (Original) The system of claim 26 wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
34. (Original) The system of claim 26, wherein the operations further comprise:
 - receiving a request for a map from a third device wherein the request comprises one or more parameters and wherein a parameter specifies a map location or a zoom indication;
 - obtaining a second map that conforms to the attributes; and
 - sending the second map to the third device.
35. (Original) The system of claim 26 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the second devices.
36. (Original) The system of claim 26 wherein the first map is an aerial photograph, a satellite image, or a chart.
37. (Currently amended) A computer-implemented method comprising:
 - receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;

based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device;

obtaining a respective location and contact information for of each of the second devices;

presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device;

identifying user interaction with the display specifying an action and, based thereon, initiating a communication with the second devices.

38. (Original) The method of claim 37 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
39. (Original) The method of claim 37 wherein the group of users is within a user-specified distance from a current location of the first device.
40. (Original) The method of claim 37 wherein each user is associated with a same category.
41. (Currently amended) The method of claim 37, ~~further comprising:~~ wherein receiving user selection of the group of one or more users on the interactive display comprises identifying user interaction with the interactive map via the display, the user interaction comprising selecting a user the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map,; and adding the selected user to the group.
42. (Original) The method of claim 37, further comprising:
 - identifying user interaction with the display specifying a new symbol and a location of the new symbol;
 - presenting the new symbol on the map at the specified location; and

sending the new symbol and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location.

43. (Original) The method of claim 37, further comprising:
 - identifying user interaction with the display specifying a symbol to be deleted;
 - removing the selected symbol from the presentation of the map; and
 - sending information identifying the selected symbol to the second devices wherein each of the second devices is configured to remove the selected symbol from a presentation of an interactive map.
44. (Original) The method of claim 37, further comprising:
 - identifying user interaction with the display selecting a new symbol and associating the new symbol with content wherein the content is an image, text, a voice recording, a video, an electronic mail address, or a Uniform Resource Locator; and
 - sending the content to the second devices wherein each of the second devices is configured to associate the content with the new symbol.
45. (Original) The method of claim 37, wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
46. (Original) The method of claim 37, further comprising:
 - presenting an alert when one of the second devices is within a user-specified distance of the first device.
47. (Original) The method of claim 37, further comprising:
 - presenting an alert when a current location of the first device is within a user-specified distance of a facility.
48. (Currently amended) A system comprising:
 - one or more computers programmed to perform operations comprising:
 - receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;

based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device;

obtaining a respective location and contact information for of each of the second devices;

presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device;

identifying user interaction with the display specifying an action and, based thereon, initiating a communication with the second devices.

49. (Original) The system of claim 48 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
50. (Original) The system of claim 48 wherein the group of users is within a user-specified distance from a current location of the first device.
51. (Original) The system of claim 48 wherein each user is associated with a same category.
52. (Currently amended) The system of claim 48, wherein ~~the operations further comprise:~~ receiving user selection of the group of one or more users on the interactive display comprises identifying user interaction with the interactive map via the display, the user interaction comprising selecting a user the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map.; ~~and adding the selected user to the group.~~
53. (Original) The system of claim 48, wherein the operations further comprise:
 - identifying user interaction with the display specifying a new symbol and a location of the new symbol;
 - presenting the new symbol on the map at the specified location; and

sending the new symbol and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location.

54. (Original) The system of claim 48, wherein the operations further comprise:
 - identifying user interaction with the display specifying a symbol to be deleted;
 - removing the selected symbol from the presentation of the map; and
 - sending information identifying the selected symbol to the second devices wherein each of the second devices is configured to remove the selected symbol from a presentation of an interactive map.
55. (Original) The system of claim 48, wherein the operations further comprise:
 - identifying user interaction with the display selecting a new symbol and associating the new symbol with content wherein the content is an image, text, a voice recording, a video, an electronic mail address, or a Uniform Resource Locator; and
 - sending the content to the second devices wherein each of the second devices is configured to associate the content with the new symbol.
56. (Original) The system of claim 48 wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
57. (Original) The system of claim 48, wherein the operations further comprise:
 - presenting an alert when one of the second devices is within a user-specified distance of the first device.
58. (Original) The system of claim 48, wherein the operations further comprise:
 - presenting an alert when a current location of the first device is within a user-specified distance of a facility.
59. (New) The method of claim 1, wherein transmitting the location to one or more other devices comprises pushing the location to the one or more other devices.

Applicant : Beyer Jr.et al.
Serial No. : 14/529,978
Filed : October 31, 2014

Attorney Docket No.: MOC-001

60. (New) The method of claim 15, wherein transmitting the location to one or more other devices comprises pushing the location to the one or more other devices.

61. (New) The system of claim 26, wherein transmitting the location to one or more other devices comprises pushing the location to the one or more other devices.

62. (New) The method of claim 37, wherein initiating the communication with the second devices comprises transmitting a text message to at least one IP address corresponding to at least one of the second devices.

63. (New) The system of claim 48, wherein initiating the communication with the second devices comprises transmitting a text message to at least one IP address corresponding to at least one of the second devices.

REMARKS

Claim Status

Claims 1-58 were presented for examination and were rejected. In this Amendment and Response, Applicants have amended claims 1, 15, 26, 37, 41, 48, and 52, and have added new claims 59-63. Support for the amendments can be found, for example, in the Specification, at least in paragraphs [0010], [0013], [0030], [0032], [0035], [0040], [0044], [0047], and [0054].

Summary of Examiner Interview

Applicants thank Examiner Obayanju for conducting a telephonic interview on May 7, 2015. The participants included Examiner Obayanju, Applicants' undersigned representative (Dan Burns), and Applicants' legal representative, Samuel Stone. An interview agenda was emailed to Examiner Obayanju on May 6, 2015, in the form of a Proposed Amendment and Response to the Office Action. A copy of the interview agenda is attached, and a summary of the interview is provided below.

During the interview, the participants discussed the double patenting rejections. Applicants' representatives pointed out that all of the double patenting rejections were provisional rejections, and indicated that these rejections would be addressed substantively if a double patenting rejection was made in the future when the claims of the present application were otherwise in allowable condition. The Examiner requested that claims 37-58 be amended to overcome the provisional statutory double patenting rejections. Without acceding to the rejections, independent claims 37 and 48 have been amended.

The participants also discussed the rejection of independent claim 1 under 35 U.S.C. 103. Without acceding to the rejection, the Applicants' representatives proposed an amendment to claim 1, as shown in the attached interview agenda, and pointed out that the cited references do not teach or suggest transmitting the location of a device based on passage of a predetermined time interval, a displacement of at least one of the devices by a predetermined distance, or both. The Examiner appreciated the point, and requested that claim 1 be further amended to indicate that the transmitted location was an updated location. Accordingly, claim 1 is amended herein to recite "transmitting the updated location of the device." The Examiner indicated that a new search would be performed.

The participants also discussed the rejection of independent claim 37 under 35 U.S.C. 103. Applicants' representatives pointed out that the cited references do not teach or suggest "presenting an interactive map on the display comprising one or more user-selectable symbols," as recited in claim 37. The Examiner suggested that presenting an interactive map on the display comprising one or more user-selectable symbols would have been obvious in view of Steenstra. No agreement was reached on this point. However, the Examiner invited the Applicants to submit amendments clarifying the distinctions over the cited references. Without acceding to the rejection, claim 37 is amended herein.

Double Patenting Rejections

Claims 1-36 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as purportedly being obvious over claims 1-20 of co-pending U.S. Patent Application No. 14/633,764 ("the '764 application"). Claims 37-58 were provisionally rejected under 35 U.S.C. § 101 on the ground of statutory double patenting as purportedly being drawn to identical subject matter as claims 1-28 of the '764 application.

The Applicants recognize that the scopes of the claims in the present application and/or in the '764 application may change during prosecution such that the Examiner would no longer believe that the double patenting rejections are appropriate. The Applicants will therefore address the provisional double patenting rejections substantively if a double patenting rejection is made in the future when the claims of the present application are otherwise in allowable condition. In addition, the Applicants note that each of the independent claims in the present application is amended by the present Amendment and Response. However, the Applicants do not concede that the double patenting rejections based on the '764 application are proper.

Claim Rejections Under 35 U.S.C. § 103

I. Claims 1-36 and 59-61

Claims 1-36 are rejected under 35 U.S.C. § 103 as purportedly being obvious over U.S. Patent No. 7,593,740 ("Crowley") in view of U.S. Pub. No. 2006/0047825 ("Steenstra"). Applicants respectfully traverse the rejections as applied to the claims, as amended.

A. Independent claim 1 and the claims depending therefrom

As amended, independent claim 1 recites a computer-implemented method comprising:

transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map;

for each of the devices, ***based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,*** receiving from the device information comprising an updated location of the device and ***transmitting the updated location of the device to one or more other devices;***

transmitting to each of the other devices information comprising a symbol corresponding to the location on the map of each of the one or more devices; and

receiving from one or more of the devices information indicating user selection of at least one of the displayed symbols corresponding to one or more other devices.

(Emphasis added.)

Even assuming the cited references could have properly been combined, no combination of the cited references would teach or suggest at least “based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both ... transmitting the updated location of the device to one or more other devices,” as recited in claim 1. Rather, Crowley describes a technique for connecting acquaintances for activities such as socialization (col. 1, lines 15-17). According to Crowley, “users of a system may employ portable devices ... to identify their location to their acquaintances, such as through a server that keeps track of relationships established between users” (col. 1, lines 56-60). In particular, a user 42 can send a message to a server 40 indicating the user’s location (e.g., a text message “@ Luna Lounge” to indicate that the user is at an establishment known as the “Luna Lounge”) (col. 5, lines 65-67; col. 6, lines 27-29; col. 7, lines 12-17; FIG. 4). In response to user 42 sending such a message, server 40 sends messages to the user’s acquaintances regarding the user’s location (col. 7, lines 18-60), and sends messages to user 42 regarding the locations of the user’s acquaintances (col. 7, line 61 – col. 8, line 3). Thus, the cited portions of Crowley describe sending locations of users to each other in response to one of the users sending his location to a server, which does not teach or suggest transmitting the updated location of a device to one or more other devices “based on passage of a predetermined time interval since receiving information comprising a

location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both,” as recited in claim 1.

Steenstra also does not teach or suggest at least the above-emphasized limitations of claim 1. Steenstra describes “performing location determination and providing location information via a location based services (LBS) architecture to create a social network” ([0002]). In particular, Steenstra describes “Qsocial,” an online dating application in which active users can view an “activity map” that shows locations of other active users within a geographic area ([0042-0043]; FIG. 5). However, the cited portions of Steenstra do not teach or suggest that the user locations on the activity map are transmitted based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both. Thus, the cited portions of Steenstra do not teach or suggest “based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both, ... transmitting the updated location of the device to one or more other devices” as recited in claim 1.

Accordingly, Crowley and Steenstra, whether alone or in combination, do not teach or suggest at least the above-emphasized limitations of claim 1. Claim 1 therefore patentably distinguishes over Crowley and Steenstra. Claims 2-14 and 59 depend from claim 1 and patentably distinguish over Crowley and Steenstra for at least the same reasons. Withdrawal of the rejections of claims 1-14 and 59 under 35 U.S.C. § 103 is respectfully requested.

B. Independent claim 15 and the claims depending therefrom

As amended, claim 15 recites a computer-implemented method comprising:

 sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;

 for each of the devices, *based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both*, receiving from the device information comprising an updated location of the device and *sending the updated location of the device to one or more other devices*, wherein each of the other devices is configured to display respective symbols representing the locations on the first map;

receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:

obtaining a respective contact information for each of the second devices; and

facilitating a respective communication between the first device and each of the second devices using the contact information of the second device. (Emphasis added.)

For reasons that should be apparent from the discussion above, Crowley and Steenstra do not teach or suggest at least “based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both ... sending the updated location of the device to one or more other devices,” as recited in claim 15. Claim 15 therefore patentably distinguishes over Crowley and Steenstra. Claims 16-25 and 60 depend from claim 15 and patentably distinguish over Crowley and Steenstra for at least the same reasons. Withdrawal of the rejections of claims 15-25 and 60 under 35 U.S.C. § 103 is respectfully requested.

C. Independent claim 26 and the claims depending therefrom

As amended, independent claim 26 recites a system comprising one or more computers programmed to perform operations comprising:

sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;

for each of the devices, *based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined distance relative to a previous location of the device, or both*, receiving from the device information comprising an updated location of the device and *sending the updated location of the device to one or more other devices*, wherein each of the other devices is configured to display respective symbols representing the locations on the first map;

receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:

obtaining a respective contact information for each of the second devices; and

facilitating a respective communication between the first device and each of the second devices using the contact information of the second device. (Emphasis added.)

For reasons that should be apparent from the discussion above, Crowley and Steenstra do not teach or suggest at least “based on passage of a predetermined time interval since receiving information comprising a location of the device, a displacement of the device by a predetermined

distance relative to a previous location of the device, or both ... sending the updated location of the device to one or more other devices,” as recited in claim 26. Claim 26 therefore patentably distinguishes over Crowley and Steenstra. Claims 27-36 and 61 depend from claim 26 and patentably distinguish over Crowley and Steenstra for at least the same reasons. Withdrawal of the rejections of claims 26-36 and 61 under 35 U.S.C. § 103 is respectfully requested.

II. Claims 37-58

Claims 37-58 are rejected under 35 U.S.C. 103 as purportedly being obvious over Steenstra in view of US Pub. No. 2003/0093405 (“Mayer”). Applicants respectfully traverse the rejections.

A. Independent claim 37 and the claims depending therefrom

Independent claim 37 recites a computer-implemented method comprising:

receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;

based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device;

obtaining a respective location and contact information for of each of the second devices;

presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device;

identifying user interaction with the display specifying an action and, based thereon, initiating a communication with the second devices. (Emphasis added.)

Even assuming the cited references could have properly been combined, no combination of the cited references would teach or suggest at least “based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device,” as recited in claim 37. For reasons that should be apparent from the discussion above, the cited portions of Steenstra do not teach or suggest the transmission of a device’s location “based on passage of a

predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both.” The cited portions of Mayer do not remedy the deficiencies of Steenstra at least with respect to the above-emphasized limitation of claim 37.

Accordingly, Steenstra and Mayer, whether alone or in combination, do not teach or suggest at least “based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device,” as recited in claim 37. Claim 37 therefore patentably distinguishes over Steenstra and Mayer. Claims 38-47 and 62 depend from claim 37 and patentably distinguish over Steenstra and Mayer for at least the same reasons. Withdrawal of the rejections of claims 37-47 and 62 under 35 U.S.C. § 103 is respectfully requested.

B. Independent claim 48 and the claims depending therefrom

Independent claim 48 recites a system comprising one or more computers programmed to perform operations comprising:

receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;

obtaining a respective location and contact information for of each of the second devices;

based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device;

presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device;

identifying user interaction with the display specifying an action and, based thereon, initiating a communication with the second devices. (Emphasis added.)

For reasons that should be apparent from the discussion above, Steenstra and Mayer do not teach or suggest at least “based on passage of a predetermined time interval since transmitting information comprising a location of the first device, a displacement of the first

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Filed : October 31, 2014

Attorney Docket No.: MOC-001

device by a predetermined distance relative to a previous location of the first device, or both, transmitting information comprising an updated location of the first device,” as recited in claim 48. Claim 48 therefore patentably distinguishes over Steenstra and Mayer. Claims 49-58 and 63 depend from claim 48 and patentably distinguish over Steenstra and Mayer for at least the same reasons. Withdrawal of the rejections of claims 48-58 and 63 under 35 U.S.C. § 103 is respectfully requested.

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Serial No. : 14/529,978
Filed : October 31, 2014

Attorney Docket No.: MOC-001

CONCLUSION

In view of the above amendments, Applicants respectfully submit that the pending application is in condition for allowance. If, in the Examiner's opinion, further communication would expedite the favorable prosecution of the present application, the undersigned would welcome the opportunity to discuss any outstanding issues and to work with the Examiner toward placing the application in condition for allowance.

Respectfully submitted,

Date: May 28, 2015

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Electronic Acknowledgement Receipt	
EFS ID:	22455259
Application Number:	14529978
International Application Number:	
Confirmation Number:	1092
Title of Invention:	METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS
First Named Inventor/Applicant Name:	Malcolm K. Beyer
Customer Number:	22235
Filer:	Daniel J. Burns/Deanna Bridges
Filer Authorized By:	Daniel J. Burns
Attorney Docket Number:	10963.3834
Receipt Date:	28-MAY-2015
Filing Date:	31-OCT-2014
Time Stamp:	12:05:51
Application Type:	Utility under 35 USC 111(a)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Examination support document	MOC-001_Interview_Agenda.pdf	251552 e4f9d56c48e2c30bc26f690d44b7edc5da d04f	no	19

Warnings:

Information:

2		MOC-001_Amendment_Respo nse.pdf	211968 <small>baffbcb838514c5caaeaced79e0db63a8b7c58b</small>	yes	21
Multipart Description/PDF files in .zip description					
Document Description		Start	End		
Amendment/Req. Reconsideration-After Non-Final Reject		1	1		
Claims		2	12		
Applicant Arguments/Remarks Made in an Amendment		13	21		
Warnings:					
Information:					
Total Files Size (in bytes):			463520		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

Bridges, Deanna

From: Stone, Samuel S.
Sent: Wednesday, May 06, 2015 4:55 PM
To: omoniyi.obayanju@uspto.gov
Cc: Burns, Dan
Subject: Proposed Interview Agenda for Application Serial No. 14/529,978
Attachments: Proposed Response for Application No. 14 529,978.DOCX

Dear Examiner Obayanju,

Thank you for your courtesy in granting a telephone interview on May 7, 2015, at 2:00 PM EDT, in Application Serial No. 14/529,978. During the interview, I would like to discuss the rejections of the independent claims under 35 U.S.C. 103 in the Office Action of April 8, 2015. A proposed Amendment in response to the Office Action is attached.

Regards,

Sent by Sam Stone on behalf of:

Daniel J. Burns
Goodwin Procter LLP
T: 650-752-3100
dburns@goodwinprocter.com

***** PROPOSED *****

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently amended) A computer-implemented method comprising:
 - transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map;
 - based on passage of a predetermined time interval, a displacement of at least one of the devices by a predetermined distance, or both, receiving ~~at various times from one or more of the devices~~ the at least one device information comprising a ~~respective~~ location of the at least one device and transmitting the location of the at least one device to one or more other devices;
 - transmitting to each of the other devices information comprising a symbol corresponding to the location on the map of each of the one or more devices; and
 - receiving from a one or more of the devices information indicating user selection of at least one of the displayed symbols corresponding to one or more other devices.
2. (Original) The method of claim 1, further comprising
 - receiving from one or more of the devices information comprising the respective contact information for the device; and
 - facilitating communication between the one or more devices using the received contact information.
3. (Original) The method of claim 2 wherein the communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
4. (Original) The method of claim 2 wherein particular contact information is a phone number or an Internet Protocol address.

5. (Original) The method of claim 1 wherein at the devices are part of a same group within a user-specified geographic area.
6. (Original) The method of claim 5 wherein the group is a friends or family group.
7. (Original) The method of claim 1, further comprising:
 - performed by one of the devices:
 - receiving user selection of the symbol on the map;
 - obtaining contact information associated with the symbol; and
 - performing an action using the contact information wherein the action is initiating a phone call, transferring data, sending an electronic mail message, or opening a web page.
8. (Original) The method of claim 7 wherein the symbol represents a facility or a person's home.
9. (Original) The method of claim 1 wherein the device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
10. (Original) The method of claim 1, further comprising:
 - receiving a request for the map from one or more of the devices wherein the request comprises one or more parameters and wherein a parameter specifies a map location or a zoom indication; and
 - sending the map to the one or more devices.
11. (Original) The method of claim 1 wherein the devices do not have access to a phone number or an Internet Protocol address of any other of the devices.
12. (Original) The method of claim 1 wherein the first map is an aerial photograph, a satellite image, or a chart.

13. (Original) The method of claim 1, further comprising:
 - receiving from one or more devices information corresponding to the location of fixed entities, said fixed entities comprising buildings, facilities, restaurants, or emergency locations; and
 - transmitting to all other of the devices the information corresponding to the location of the fixed entities.

14. (Original) The method of claim 1, further comprising:
 - receiving from one or more devices information corresponding to the location of events; and
 - transmitting to all other of the devices the information corresponding to the location of the events.

15. (Currently amended) A computer-implemented method comprising:
 - sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;
 - based on passage of a predetermined time interval, a displacement of at least one of the devices by a predetermined distance, or both, receiving ~~at various times from one or more of the devices respective~~ the at least one device information comprising a location of the at least one device and sending the location of the at least one device to one or more other devices, wherein each of the other devices is configured to display a respective symbol representing the location on the first map;
 - receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:
 - obtaining a respective contact information for each of the second devices; and
 - facilitating a respective communication between the first device and each of the second devices using the contact information of the second device.

16. (Original) The method of claim 15 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.

17. (Original) The method of claim 15 wherein first device and the second devices are part of a same group or within a user-specified geographic area.
18. (Original) The method of claim 17 wherein the group is a friends or family group.
19. (Original) The method of claim 15 wherein particular contact information is a phone number or an Internet Protocol address.
20. (Original) The method of claim 15, further comprising:
 - performed by one of the devices:
 - receiving user selection of a symbol on the first map;
 - obtaining contact information associated with the symbol; and
 - performing an action using the contact information wherein the action is initiating a phone call, transferring data, sending an electronic mail message, or opening a web page.
21. (Original) The method of claim 20 wherein the symbol represents a facility or a person's home.
22. (Original) The method of claim 15 wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
23. (Original) The method of claim 15, further comprising:
 - receiving a request for a map from a third device wherein the request comprises one or more parameters and wherein a parameter specifies a map location or a zoom indication;
 - obtaining a second map that conforms to the attributes; and
 - sending the second map to the third device.
24. (Original) The method of claim 15 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the second devices.
25. (Original) The method of claim 15 wherein the first map is an aerial photograph, a satellite image, or a chart.

26. (Currently amended) A system comprising:
- one or more computers programmed to perform operations comprising:
 - sending a respective first map to each one of a plurality of devices wherein the device is configured to display the first map;
 - based on passage of a predetermined time interval, a displacement of at least one of the devices by a predetermined distance, or both, receiving ~~at various times from one or more of the devices~~ respective the at least one device information comprising a location of the at least one device and sending the location of the at least one device to one or more other devices, wherein each of the other devices is configured to display a respective symbol representing the location on the first map;
 - receiving from a first device information indicating user selection of one or more of the displayed symbols corresponding to second devices and, based thereon:
 - obtaining a respective contact information for each of the second devices; and
 - facilitating a respective communication between the first device and each of the second devices using the contact information of the second device.
27. (Original) The system of claim 26 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
28. (Original) The system of claim 26 wherein first device and the second devices are part of a same group or within a user-specified geographic area.
29. (Original) The system of claim 26 wherein the group is a friends or family group.
30. (Original) The system of claim 26 wherein particular contact information is a phone number or an Internet Protocol address.
31. (Original) The system of claim 26, wherein the operations further comprise:
- performed by one of the devices:
 - receiving user selection of a symbol on the first map;
 - obtaining contact information associated with the symbol; and
 - performing an action using the contact information wherein the action is initiating

a phone call, transferring data, sending an electronic mail message, or opening a web page.

32. (Original) The system of claim 31 wherein the symbol represents a facility or a person's home.
33. (Original) The system of claim 26 wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
34. (Original) The system of claim 26, wherein the operations further comprise:
 - receiving a request for a map from a third device wherein the request comprises one or more parameters and wherein a parameter specifies a map location or a zoom indication;
 - obtaining a second map that conforms to the attributes; and
 - sending the second map to the third device.
35. (Original) The system of claim 26 wherein the first device does not have access to the phone numbers or Internet Protocol addresses of the second devices.
36. (Original) The system of claim 26 wherein the first map is an aerial photograph, a satellite image, or a chart.
37. (Original) A computer-implemented method comprising:
 - receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;
 - obtaining a respective location and contact information for of each of the second devices;
 - presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device;
 - identifying user interaction with the display specifying an action and, based thereon, initiating a communication with the second devices.

38. (Original) The method of claim 37 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.
39. (Original) The method of claim 37 wherein the group of users is within a user-specified distance from a current location of the first device.
40. (Original) The method of claim 37 wherein each user is associated with a same category.
41. (Currently amended) The method of claim 37, ~~further comprising:~~ wherein receiving user selection of the group of one or more users on the interactive display comprises identifying user interaction with the interactive map via the display, the user interaction comprising selecting a user the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map.; and ~~adding the selected user to the group.~~
42. (Original) The method of claim 37, further comprising:
 - identifying user interaction with the display specifying a new symbol and a location of the new symbol;
 - presenting the new symbol on the map at the specified location; and
 - sending the new symbol and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location.
43. (Original) The method of claim 37, further comprising:
 - identifying user interaction with the display specifying a symbol to be deleted;
 - removing the selected symbol from the presentation of the map; and
 - sending information identifying the selected symbol to the second devices wherein each of the second devices is configured to remove the selected symbol from a presentation of an interactive map.
44. (Original) The method of claim 37, further comprising:
 - identifying user interaction with the display selecting a new symbol and

associating the new symbol with content wherein the content is an image, text, a voice recording, a video, an electronic mail address, or a Uniform Resource Locator; and
sending the content to the second devices wherein each of the second devices is configured to associate the content with the new symbol.

45. (Original) The method of claim 37, wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
46. (Original) The method of claim 37, further comprising:
 - presenting an alert when one of the second devices is within a user-specified distance of the first device.
47. (Original) The method of claim 37, further comprising:
 - presenting an alert when a current location of the first device is within a user-specified distance of a facility.
48. (Original) A system comprising:
 - one or more computers programmed to perform operations comprising:
 - receiving user selection of a group of one or more users on an interactive display of a first device wherein each user is associated with a respective second device;
 - obtaining a respective location and contact information for of each of the second devices;
 - presenting an interactive map on the display comprising one or more user-selectable symbols wherein each symbol corresponds to one of the second devices and is positioned on the map at a location corresponding to the respective location of the second device;
 - identifying user interaction with the display specifying an action and, based thereon, initiating a communication with the second devices.
49. (Original) The system of claim 48 wherein a particular communication is a phone call, a short message service message, a voice message, a text message, an electronic mail message, an image, or a video.

50. (Original) The system of claim 48 wherein the group of users is within a user-specified distance from a current location of the first device.
51. (Original) The system of claim 48 wherein each user is associated with a same category.
52. (Currently amended) The system of claim 48, wherein ~~the operations further comprise:~~ receiving user selection of the group of one or more users on the interactive display ~~comprises~~ identifying user interaction with the interactive map via the display, the user interaction comprising selecting a user the one or more users by selecting one or more symbols corresponding to the one or more users on the interactive map.; ~~and adding the selected user to the group.~~
53. (Original) The system of claim 48, wherein the operations further comprise:
identifying user interaction with the display specifying a new symbol and a location of the new symbol;
presenting the new symbol on the map at the specified location; and
sending the new symbol and the location to the second devices wherein each of the second devices is configured to present the new symbol on an interactive map at the specified location.
54. (Original) The system of claim 48, wherein the operations further comprise:
identifying user interaction with the display specifying a symbol to be deleted;
removing the selected symbol from the presentation of the map; and
sending information identifying the selected symbol to the second devices wherein each of the second devices is configured to remove the selected symbol from a presentation of an interactive map.
55. (Original) The system of claim 48, wherein the operations further comprise:
identifying user interaction with the display selecting a new symbol and associating the new symbol with content wherein the content is an image, text, a voice recording, a video, an electronic mail address, or a Uniform Resource Locator; and
sending the content to the second devices wherein each of the second devices is configured to associate the content with the new symbol.

56. (Original) The system of claim 48 wherein a particular device is a smart phone, a personal data assistant, a tablet computer, a desktop computer, or a laptop computer.
57. (Original) The system of claim 48, wherein the operations further comprise:
presenting an alert when one of the second devices is within a user-specified distance of the first device.
58. (Original) The system of claim 48, wherein the operations further comprise:
presenting an alert when a current location of the first device is within a user-specified distance of a facility.
59. (New) The method of claim 1, wherein transmitting the location to one or more other devices comprises pushing the location to the one or more other devices.
60. (New) The method of claim 15, wherein transmitting the location to one or more other devices comprises pushing the location to the one or more other devices.
61. (New) The system of claim 26, wherein transmitting the location to one or more other devices comprises pushing the location to the one or more other devices.
62. (New) The method of claim 37, wherein initiating the communication with the second devices comprises transmitting a text message to at least one IP address corresponding to at least one of the second devices.
63. (New) The system of claim 48, wherein initiating the communication with the second devices comprises transmitting a text message to at least one IP address corresponding to at least one of the second devices.

***** PROPOSED *****

REMARKS

Claim Status

Claims 1-58 were presented for examination and were rejected. In this Amendment and Response, Applicants have amended claims 1, 15, 26, 41, and 52, and have added new claims 59-63. Support for the amendments can be found, for example, in the Specification, at least in paragraphs [0010], [0013], [0030], [0032], [0035], [0040], [0044], [0047], and [0054].

Double Patenting Rejections

Claims 1-36 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as purportedly being obvious over claims 1-20 of co-pending U.S. Patent Application No. 14/633,764 (“the ‘764 application”). Claims 37-58 were provisionally rejected under 35 U.S.C. § 101 on the ground of statutory double patenting as purportedly being drawn to identical subject matter as claims 1-28 of the ‘764 application.

The Applicants recognize that the scopes of the claims in the present application and/or in the ‘764 application may change during prosecution such that the Examiner would no longer believe that the double patenting rejections are appropriate. The Applicants will therefore address the provisional double patenting rejections substantively if a double patenting rejection is made in the future when the claims of the present application are otherwise in allowable condition. However, the Applicants do not concede that the double patenting rejections based on the ‘764 application are proper.

Claim Rejections Under 35 U.S.C. § 103

I. Claims 1-36 and 59-61

Claims 1-36 are rejected under 35 U.S.C. § 103 as purportedly being obvious over U.S. Patent No. 7,593,740 (“Crowley”) in view of U.S. Pub. No. 2006/0047825 (“Steenstra”). Applicants respectfully traverse the rejections as applied to the claims, as amended.

A. Independent claim 1 and the claims depending therefrom

As amended, independent claim 1 recites a computer-implemented method comprising:

transmitting a map to each one of a plurality of devices wherein the devices are each configured to display the map;

based on passage of a predetermined time interval, a displacement of at least one of the devices by a predetermined distance, or both, receiving from the at least one device information comprising a location of the at least one device and ***transmitting the location of the at least one device to one or more other devices***;

transmitting to each of the other devices information comprising a symbol corresponding to the location on the map of each of the one or more devices; and

receiving from a one or more of the devices information indicating user selection of at least one of the displayed symbols corresponding to one or more other devices.

(Emphasis added.)

Even assuming the cited references could have properly been combined, no combination of the cited references would teach or suggest at least “based on passage of a predetermined time interval, a displacement of at least one of the devices by a predetermined distance, or both, ... transmitting the location of the at least one device to one or more other devices,” as recited in claim 1. Rather, Crowley describes a technique for connecting acquaintances for activities such as socialization (col. 1, lines 15-17). According to Crowley, “users of a system may employ portable devices ... to identify their location to their acquaintances, such as through a server that keeps track of relationships established between users” (col. 1, lines 56-60). In particular, a user 42 can send a message to a server 40 indicating the user’s location (e.g., a text message “@ Luna Lounge” to indicate that the user is at an establishment known as the “Luna Lounge”) (col. 5, lines 65-67; col. 6, lines 27-29; col. 7, lines 12-17; FIG. 4). In response to user 42 sending such a message, server 40 sends messages to the user’s acquaintances regarding the user’s location (col. 7, lines 18-60), and sends messages to user 42 regarding the locations of the user’s acquaintances (col. 7, line 61 – col. 8, line 3). Thus, Crowley describes sending locations of users to each other in response to one of the users sending his location to a server, which does not teach or suggest transmitting the location of a device to one or more other devices “based on passage of a predetermined time interval, a displacement of at least one of the devices by a predetermined distance, or both,” as recited in claim 1.

Steenstra also does not teach or suggest at least the above-emphasized limitations of claim 1. Steenstra describes “performing location determination and providing location information via a location based services (LBS) architecture to create a social network” ([0002]). In particular, Steenstra describes “Qsocial,” an online dating application in which active users