# EXHIBIT C

## (12) United States Patent

Beyer, Jr. et al.

#### (54) METHOD TO PROVIDE AD HOC AND PASSWORD PROTECTED DIGITAL AND VOICE NETWORKS

(71) Applicant: Advanced Ground Information

Systems, Inc., Jupiter, FL (US)

Inventors: Malcolm K. Beyer, Jr., Jupiter, FL (US); Christopher R. Rice, Redmond,

WA (US)

Assignee: Advanced Ground Information

Systems, Inc., Jupiter, FL (US)

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CPC ...... H04W 4/22 (2013.01); G06F 3/0482 (2013.01); G06F 3/04842 (2013.01); H04L 63/083 (2013.01); H04L 67/18 (2013.01);

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(58) Field of Classification Search

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See application file for complete search history.

#### (56)References Cited

#### U.S. PATENT DOCUMENTS

5,555,286 A 9/1996 Tendler 5,898,434 A 4/1999 Small et al.

(Continued)

#### FOREIGN PATENT DOCUMENTS

H085394 ΙP 1/1996 JP H09113288 5/1997

(Continued)

#### OTHER PUBLICATIONS

Benefon ESCI GSM + GPS Personal Navigation Phone, 1999, Benefon Oyj, Salo, Finland.

(Continued)

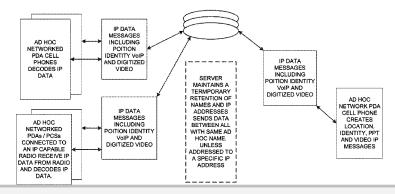
Primary Examiner — Omoniyi Obayanju (74) Attorney, Agent, or Firm — Goodwin Procter LLP

#### (57)ABSTRACT

A method and system includes the ability for individuals to set up an ad hoc digital and voice network easily and rapidly to allow users to coordinate their activities by eliminating the need for pre-entry of data into a web or identifying others by name, phone numbers or email. This method is especially useful for police, fire fighters, military, first responders or other emergency situations for coordinating different organizations at the scene of a disaster to elevate conventional communication problems either up and down the chain of command or cross communication between different emergency units. The method and system provides that the users are only required to enter a specific Server IP address and an ad hoc event name, a password and perhaps the name of the particular unit.

#### 35 Claims, 7 Drawing Sheets

#### ENABLING LOCATION, STATUS, VoIP, PTT AND VIDEO COMMUNICATIONS BETWEEN RADIOS AND CELL PHONES





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#### Related U.S. Application Data

application No. 13/751,453, filed on Jan. 28, 2013, now Pat. No. 8,538,393, which is a continuation-in-part of application No. 12/761,533, filed on Apr. 16, 2010, now Pat. No. 8,364,129, which is a continuation-in-part of application No. 11/615,472, filed on Dec. 22, 2006, now Pat. No. 8,126,441, which is a continuation-in-part of application No. 11/308,648, filed on Apr. 17, 2006, now Pat. No. 7,630,724, which is a continuation-in-part of application No. 10/711, 490, filed on Sep. 21, 2004, now Pat. No. 7,031,728.

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(2013.01); H04W 4/10 (2013.01); H04W

76/005 (2013.01); H04W 76/021 (2013.01)

#### (56) References Cited

#### U.S. PATENT DOCUMENTS

| 6,204,844 | В1 | 3/2001  | Fumarolo et al. |
|-----------|----|---------|-----------------|
| 6,292,747 | B1 | 9/2001  | Amro et al.     |
| 6,366,782 | В1 | 4/2002  | Fumarolo et al. |
| 6,377,210 | B1 | 4/2002  | Moore           |
| 6,385,465 | В1 | 5/2002  | Yoshioka        |
| 6,434,403 | В1 | 8/2002  | Ausems et al.   |
| 6,490,521 | B2 | 12/2002 | Wiener          |
| 6,518,957 | В1 | 2/2003  | Lehtinen et al. |
| 6,542,475 | В1 | 4/2003  | Bala et al.     |
| 6,549,768 | B1 | 4/2003  | Fraccaroli      |
| 6,662,016 | В1 | 12/2003 | Buckham et al.  |
| 6,716,101 | В1 | 4/2004  | Meadows et al.  |
| 6,775,560 | B2 | 8/2004  | King et al.     |
| 6,868,333 | B2 | 3/2005  | Melen           |
| 6,868,337 | B2 | 3/2005  | Muramatsu       |

| 7,024,207    |               | 4/2006  | Gorday et al.           |
|--------------|---------------|---------|-------------------------|
| 7,031,700    | B1            | 4/2006  | Weaver et al.           |
| 7,292,935    | B2            | 11/2007 | Yoon                    |
| 7,299,075    | B2            | 11/2007 | Gottlieb et al.         |
| 7,330,112    | B1            | 2/2008  | Emigh et al.            |
| 7,486,648    | B1            | 2/2009  | Baranowski              |
| 7,499,799    | B2            | 3/2009  | Park                    |
| 7,593,740    | B2 *          | 9/2009  | Crowley et al 455/456.3 |
| 8,014,763    | B2 *          | 9/2011  | Hymes H04M 1/26         |
|              |               |         | 455/414.2               |
| 8,139,514    | B2            | 3/2012  | Weber et al.            |
| 2001/0044321 | A1            | 11/2001 | Ausems et al.           |
| 2003/0013461 | A1            | 1/2003  | Mizune et al.           |
| 2003/0093405 | $\mathbf{A}1$ | 5/2003  | Mayer                   |
| 2003/0139150 | A1            | 7/2003  | Rodriguez et al.        |
| 2003/0149527 | A1            | 8/2003  | Sikila                  |
| 2003/0200259 | A1            | 10/2003 | Tsuge                   |
| 2004/0054428 | A1            | 3/2004  | Sheha et al.            |
| 2004/0137884 | A1            | 7/2004  | Engstrom et al.         |
| 2004/0143391 | A1            | 7/2004  | King et al.             |
| 2004/0148090 | A1*           | 7/2004  | Melen 701/200           |
| 2004/0192299 | A1            | 9/2004  | Wilson et al.           |
| 2004/0204070 | A1            | 10/2004 | August et al.           |
| 2004/0252050 | A1*           | 12/2004 | Tengler G01S 5/0072     |
|              |               |         | 342/357.31              |
| 2004/0266456 | A1            | 12/2004 | Bostrom et al.          |
| 2005/0060069 | A1            | 3/2005  | Breed et al.            |
| 2005/0130634 | A1            | 6/2005  | Godfrey                 |
| 2005/0130666 | A1*           | 6/2005  | Levy H04W 8/24          |
|              |               |         | 455/452.2               |
| 2005/0227705 | A1            | 10/2005 | Rousu et al.            |
| 2006/0030339 | A1            | 2/2006  | Zhovnirovsky et al.     |
| 2006/0031927 | A1            | 2/2006  | Mizuno et al.           |
| 2006/0047825 | A1*           | 3/2006  | Steenstra et al 709/229 |
| 2007/0150444 | A1            | 6/2007  | Chesnais et al.         |
| 2007/0281689 | A1            | 12/2007 | Altman et al.           |
| 2008/0132243 | A1            | 6/2008  | Spalink et al.          |
| 2010/0052945 | A1            | 3/2010  | Breed                   |
|              |               |         |                         |

#### FOREIGN PATENT DOCUMENTS

| JP | 2000-357296 A | 12/2000 |
|----|---------------|---------|
| JP | 2002245336    | 8/2002  |
| JP | 2002-277256 A | 9/2002  |
| WO | 03074973 A2   | 9/2003  |

#### OTHER PUBLICATIONS

Elisa Batista, Your Boss May Know Where You Are, May 31, 2002, <a href="http://archive.wired.com/gadgets/wireless/news/2002/05152852?currentPage=all">http://archive.wired.com/gadgets/wireless/news/2002/05152852?currentPage=all</a>.

Gate5, "Mobile Community Solution: Context-sensitive application suite for mobile communities," published in 2002.

Gate5, "Mobile Guide Solution: Context-sensitive applications for PDA based mobile city and travel guides," published in 2002.

Batista, "Your Boss May Know Where You Are," Wired News, published May 31, 2002.

Edlund, Therese et al., "Mobile Services for truck drivers," Master thesis in Mobile Informatics, IT University of Goteborg, Sweden, 2003.

The Gate5 system, which, upon information and belief, was sold and/or publicly used within the U.S. prior to 2004 and at least as early as 2002.

Kim, Ryan, "Find Friends by cell phone/Loopt application's Gps program can beam map location," published Nov. 14, 2006 by SFGate.

LocatioNet Press Release: "LocatioNet Releases Ground Breaking Mass Market LBS Application Suite—LocatioNet MyMap," published May 6, 2003.

LocatioNet LBS Applications: MyMap description web page, published before 2004 upon information and belief.

The LocatioNet system which, upon information and belief, was sold and/or publically used within the U.S. prior to 2004 and at least as early as 2003.



### US 9,445,251 B2

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#### (56) References Cited

#### OTHER PUBLICATIONS

Meggers, Jens et al., "A Multimedia Communication Architecture for Handheld Devices," IEEE Paper 0-7803-4872-9/98, published 1998

Memory Map Remote Tracking, available at https://web.archive.org/web/20060202161013/http://memory-map.com/.

Ostman, Lennart, "A Study of Location-Based Services Including a Design and Implementation of an Enhanced Friend Finder Client with Mapping Capabilities," Lulea Tekniska Univeritet, 2001.

U.S. Appl. No. 14/529,978, filed Oct. 31, 2014, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, Malcolm K. Beyer, et al.

U.S. Appl. No. 14/695,233, filed Apr. 24, 2015, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, Malcolm K. Beyer.

U.S. Appl. No. 14/633,764, filed Feb. 27, 2015, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, Malcolm K. Beyer, et al.

Garmin rino 110 2-way Radio & Personal Navigator; Owner's Manual and Reference Guide; Apr. 2003; 88pgs.

Int'l Preliminary Report on Patentability (IPRP); for Int'l Patent App. No. PCT/JP2004/000250 dated Jul. 5, 2005; 4pgs.

Life360's Rule 50(a) Motion for Judgment as a Matter of Law; AGIS, Inc. v. Life360, Inc. (S.D. Fl.); Mar. 12, 2015; 27pgs. Plaintiff Advanced Ground Information Systems, Inc.'s Motions in Limine; AGIS, Inc. v. Life360, Inc. (S.D. Fl.); Feb. 19, 2015; 54pgs.

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.

\* cited by examiner



U.S. Patent

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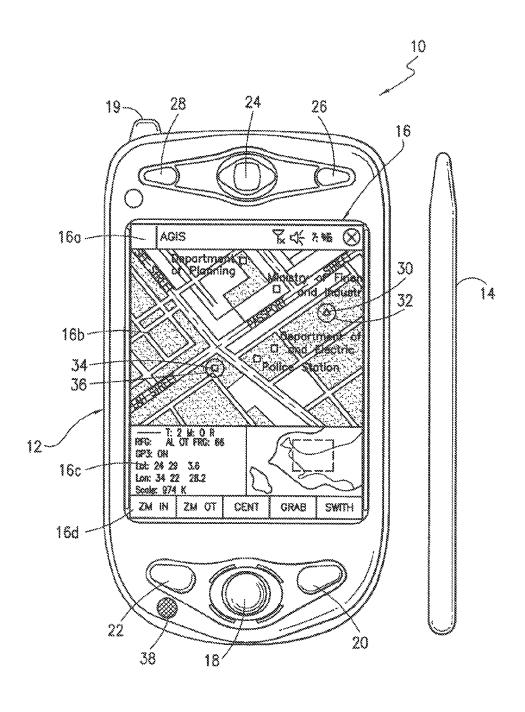


FIG. 1

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