

# EXHIBIT 5



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(12) **United States Patent**  
**Beyer, Jr. et al.**

(10) **Patent No.:** **US 9,749,829 B2**  
 (45) **Date of Patent:** **\*Aug. 29, 2017**

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

(58) **Field of Classification Search**  
 CPC ..... H04W 4/02  
 (Continued)

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(56) **References Cited**

U.S. PATENT DOCUMENTS

(72) Inventors: **Malcolm K. Beyer, Jr.**, Jupiter, FL  
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5,555,286 A 9/1996 Tendler  
 5,898,434 A 4/1999 Small et al.  
 (Continued)

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FOREIGN PATENT DOCUMENTS

(\*) Notice: Subject to any disclaimer, the term of this  
 patent is extended or adjusted under 35  
 U.S.C. 154(b) by 0 days.

JP H085394 1/1996  
 JP H09113288 5/1997  
 (Continued)

This patent is subject to a terminal dis-  
 claimer.

OTHER PUBLICATIONS

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

(21) Appl. No.: **14/633,764**

(Continued)

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*Primary Examiner* — Omoniyi Obayanju

(65) **Prior Publication Data**

(74) *Attorney, Agent, or Firm* — Goodwin Procter LLP

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(57) **ABSTRACT**

**Related U.S. Application Data**

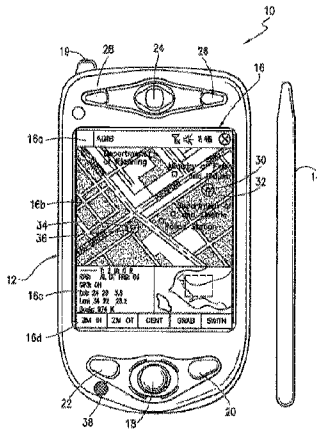
A method and system includes the ability for individuals to  
 set up an ad hoc digital and voice network easily and rapidly  
 to allow users to coordinate their activities by eliminating  
 the need for pre-entry of data into a web or identifying others  
 by name, phone numbers or email. This method is especially  
 useful for police, fire fighters, military, first responders or  
 other emergency situations for coordinating different orga-  
 nizations at the scene of a disaster to elevate conventional  
 communication problems either up and down the chain of  
 command or cross communication between different emer-  
 gency 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.

(63) Continuation of application No. **14/529,978**, filed on  
 Oct. 31, 2014, now Pat. No. 9,467,838, which is a  
 (Continued)

(51) **Int. Cl.**  
**H04W 4/22** (2009.01)  
**H04W 76/00** (2009.01)  
 (Continued)

(52) **U.S. Cl.**  
 CPC ..... **H04W 4/22** (2013.01); **G06F 3/0482**  
 (2013.01); **G06F 3/04842** (2013.01);  
 (Continued)

**68 Claims, 7 Drawing Sheets**



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Related U.S. Application Data

continuation-in-part of application No. 14/027,410, filed on Sep. 16, 2013, now Pat. No. 8,880,042, which is a continuation of 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.

- (51) **Int. Cl.**
  - H04M 1/725* (2006.01)
  - H04W 68/00* (2009.01)
  - H04W 4/02* (2009.01)
  - H04M 1/2745* (2006.01)
  - H04W 4/08* (2009.01)
  - H04W 64/00* (2009.01)
  - H04W 84/18* (2009.01)
  - H04W 12/08* (2009.01)
  - H04W 12/02* (2009.01)
  - G06F 3/0482* (2013.01)
  - G06F 3/0484* (2013.01)
  - H04L 29/06* (2006.01)
  - H04L 29/08* (2006.01)
  - H04W 12/06* (2009.01)
  - H04W 68/04* (2009.01)
  - H04W 76/02* (2009.01)
  - H04W 4/10* (2009.01)
  - H04W 12/04* (2009.01)
  - H04L 29/12* (2006.01)
  - H04M 7/00* (2006.01)
  - H04W 84/04* (2009.01)
- (52) **U.S. Cl.**
  - CPC ..... *H04L 61/605* (2013.01); *H04L 63/065* (2013.01); *H04L 63/083* (2013.01); *H04L 63/104* (2013.01); *H04L 67/18* (2013.01); *H04M 1/27455* (2013.01); *H04M 1/72519* (2013.01); *H04M 1/72536* (2013.01); *H04M 1/72547* (2013.01); *H04M 1/72572* (2013.01); *H04M 1/72583* (2013.01); *H04W 4/02* (2013.01); *H04W 4/021* (2013.01); *H04W 4/023* (2013.01); *H04W 4/026* (2013.01); *H04W 4/027* (2013.01); *H04W 4/08* (2013.01); *H04W 12/02* (2013.01); *H04W 12/06* (2013.01); *H04W 12/08* (2013.01); *H04W 64/00* (2013.01); *H04W 68/00* (2013.01); *H04W 68/04* (2013.01); *H04W 76/007* (2013.01); *H04W 84/18* (2013.01); *H04L 61/2007* (2013.01); *H04M 1/72525* (2013.01); *H04M 7/006* (2013.01); *H04M 2250/10* (2013.01); *H04M 2250/22* (2013.01); *H04M 2250/62* (2013.01); *H04W 4/10* (2013.01); *H04W 12/04* (2013.01); *H04W 76/005* (2013.01); *H04W 76/021* (2013.01); *H04W 84/042* (2013.01)
- (58) **Field of Classification Search**
  - USPC ..... 455/404.2, 456.1
  - See application file for complete search history.

(56)

References Cited

U.S. PATENT DOCUMENTS

6,204,844 B1	3/2001	Fumarolo et al.	
6,292,747 B1	9/2001	Amro et al.	
6,366,782 B1	4/2002	Fumarolo et al.	
6,377,210 B1	4/2002	Moore	
6,385,465 B1	5/2002	Yoshioka	
6,434,403 B1	8/2002	Ausems et al.	
6,490,521 B2	12/2002	Wiener	
6,518,957 B1	2/2003	Lehtinen et al.	
6,542,475 B1	4/2003	Bala et al.	
6,549,768 B1	4/2003	Fraccaroli	
6,661,353 B1	12/2003	Gopen	
6,662,016 B1	12/2003	Buckham et al.	
6,716,101 B1	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	
6,882,856 B1	4/2005	Alterman et al.	
6,885,874 B2	4/2005	Grube et al.	
7,024,207 B2 *	4/2006	Gorday	H04W 4/14 455/456.1
7,031,700 B1	4/2006	Weaver et al.	
7,031,728 B2	4/2006	Beyer, Jr.	
7,158,878 B2	1/2007	Rasmussen 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.	
7,421,270 B2 *	9/2008	Serafat	H04W 8/22 455/419
7,486,648 B1	2/2009	Baranowski	
7,499,799 B2	3/2009	Park	
7,593,740 B2 *	9/2009	Crowley	H04L 12/58 455/414.2
7,630,724 B2	12/2009	Beyer, Jr. et al.	
8,014,763 B2 *	9/2011	Hymes	H04M 1/26 455/414.2
8,126,441 B2	2/2012	Beyer, Jr.	
8,139,514 B2	3/2012	Weber et al.	
8,364,129 B1	1/2013	Beyer, Jr.	
8,538,393 B1	9/2013	Beyer, Jr. et al.	
8,880,042 B1	11/2014	Beyer, Jr. et al.	
9,408,055 B2	8/2016	Beyer, Jr.	
9,445,251 B2	9/2016	Beyer, Jr. et al.	
9,467,838 B2	10/2016	Beyer, Jr. et al.	
2001/0044321 A1	11/2001	Ausems et al.	
2003/0013461 A1	1/2003	Mizune et al.	
2003/0093405 A1 *	5/2003	Mayer	707/1
2003/0100326 A1	5/2003	Grube et al.	
2003/0103088 A1 *	6/2003	Dresti	G06F 3/0481 715/835
2003/0114171 A1 *	6/2003	Miyamoto	H04W 4/02 455/456.1
2003/0139150 A1	7/2003	Rodriguez et al.	
2003/0149527 A1	8/2003	Sikila	
2003/0200259 A1	10/2003	Tsuge	
2003/0224762 A1 *	12/2003	Lau	G06Q 10/109 455/412.2
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	G01C 21/26 701/482
2004/0192299 A1	9/2004	Wilson et al.	
2004/0204070 A1	10/2004	August et al.	
2004/0252050 A1	12/2004	Tengler et al.	
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	H04W 76/005 455/456.1
2005/0270311 A1	12/2005	Rasmussen et al.	
2006/0030339 A1	2/2006	Zhovnirovsky et al.	
2006/0031927 A1	2/2006	Mizuno et al.	

## US 9,749,829 B2

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(56)

## References Cited

## U.S. PATENT DOCUMENTS

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	
2015/0264167	A1	9/2015	Beyer, Jr. et al.	
2015/0319789	A1	11/2015	Beyer, Jr. et al.	
2016/0057598	A1	2/2016	Beyer, Jr. et al.	
2017/0026815	A1	1/2017	Beyer, Jr. et al.	

## 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

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.

Irdlund, 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 publicly used within the U.S. prior to 2004 and at least as early as 2003.

Luna, Lynnette, "This Man Knows You Live . . . and Work and Play," Wireless Review, Sep. 2002; pp. 24-32.

Moggers, 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.

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

Elisa Batista, Your Boss May Know Where You Are, May 31, 2002, <<http://archive.wired.com/gadgets/wireless/news/2002/05/52852?currentPage=all>>.

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. 14/633,804, 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.

U.S. Appl. No. 15/287,638, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, filed Oct. 6, 2016.

U.S. Appl. No. 15/255,046, Method to Provide Ad Hoc and Password Protected Digital and Voice Networks, filed Sep. 1, 2016.

\* cited by examiner

U.S. Patent

Aug. 29, 2017

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US 9,749,829 B2

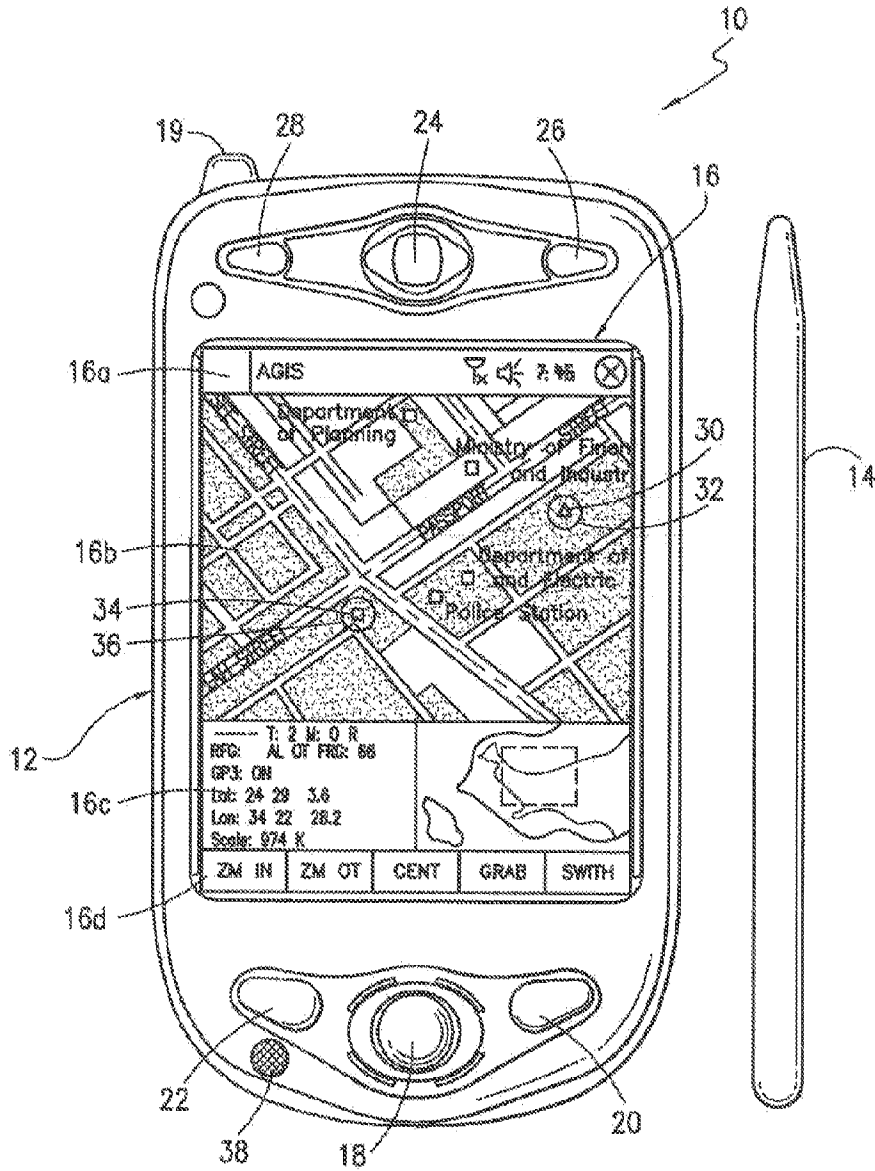


FIG. 1

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