EXHIBIT E

(12) United States Patent

Beyer, Jr. et al.

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

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patent is extended or adjusted under 35

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Related U.S. Application Data

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H04W 24/00

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(52) U.S. Cl.

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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(45) Date of Patent:

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(58) Field of Classification Search

CPC H04W 4/02

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)

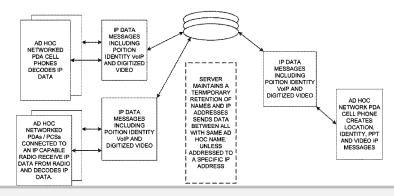
Primary Examiner — Omoniyi Obayanju (74) Attorney, Agent, or Firm — Goodwin Procter LLP

(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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	H04M 1/725	(2006.01)
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	H04W 12/08	(2009.01)
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	G06F 3/0484	(2013.01)
	H04L 29/06	(2006.01)
	H04L 29/08	(2006.01)
	H04W 76/02	(2009.01)
	H04W 4/10	(2009.01)
	H04M 1/2745	(2006.01)

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(56) References Cited

U.S. PATENT DOCUMENTS

6,204,844	В1	3/2001	Fumarolo et al.
6,292,747	В1	9/2001	Amro et al.
6,366,782	В1	4/2002	Fumarolo et al.
6,377,210	В1	4/2002	Moore
6,385,465	В1	5/2002	Yoshioka
6,434,403		8/2002	Ausems et al.
6,490,521	B2	12/2002	Wiener
6,518,957	B1	2/2003	Lehtinen et al.
6,542,475	В1	4/2003	Bala et al.
6,549,768	В1	4/2003	Fraccaroli
6,662,016	B1	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	B2	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	A1	5/2003	Mayer
2003/0139150	A1	7/2003	Rodriguez et al.
2003/0149527	A1	8/2003	Sikila
2003/0200259	$\mathbf{A}1$	10/2003	Tsuge
2004/0054428	A1	3/2004	Sheha et al.
2004/0137884	$\mathbf{A}1$	7/2004	Engstrom et al.
2004/0143391	$\mathbf{A}1$	7/2004	King et al.
2004/0148090	A1*	7/2004	Melen 701/200
2004/0192299	$\mathbf{A}1$	9/2004	Wilson et al.
2004/0204070	$\mathbf{A}1$	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	$\mathbf{A}1$	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, http://archive.wired.com/gadgets/wireless/news/2002/05152852?currentPage=all.

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

Page 3

(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-re-leases/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

Sep. 13, 2016

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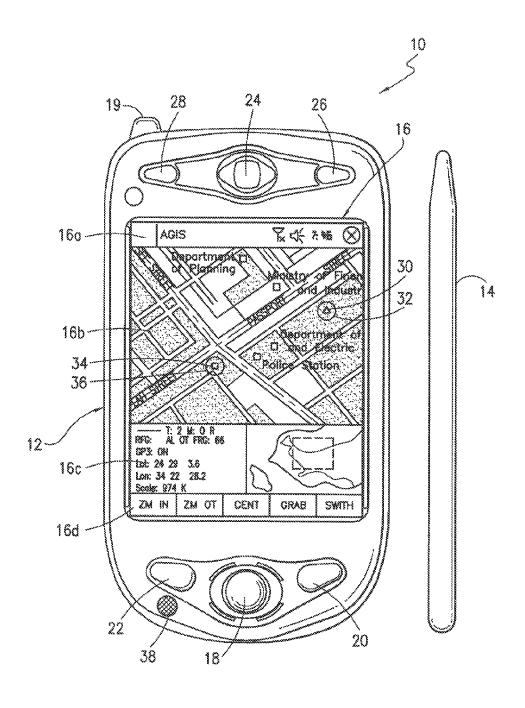


FIG. 1

DOCKET

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