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(54) **EMERGENCY 911 DATA MESSAGING**

(71) Applicant: **TeleCommunication Systems, Inc.**, Annapolis, MD (US)

(72) Inventors: **Donald L. Mitchell, Jr.**, Bellevue, WA (US); **Yinjun Zhu**, Sammamish, WA (US); **Myron D'Souza**, Seattle, WA (US); **Roger S. Marshall**, Auburn, WA (US)

(73) Assignee: **TeleCommunication Systems, Inc.**, Annapolis, MD (US)

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,103,073	A	7/1914	O'Connell
4,494,119	A	1/1985	Wimbush
4,651,156	A	3/1987	Martinez

(Continued)

FOREIGN PATENT DOCUMENTS

DE	WO/2004021726	3/2004
WO	WO/02011407	7/2001
WO	WO2007/025227	3/2007

OTHER PUBLICATIONS

International Preliminary Report on Patentability in PCT/US2008/10828 dated May 6, 2010.

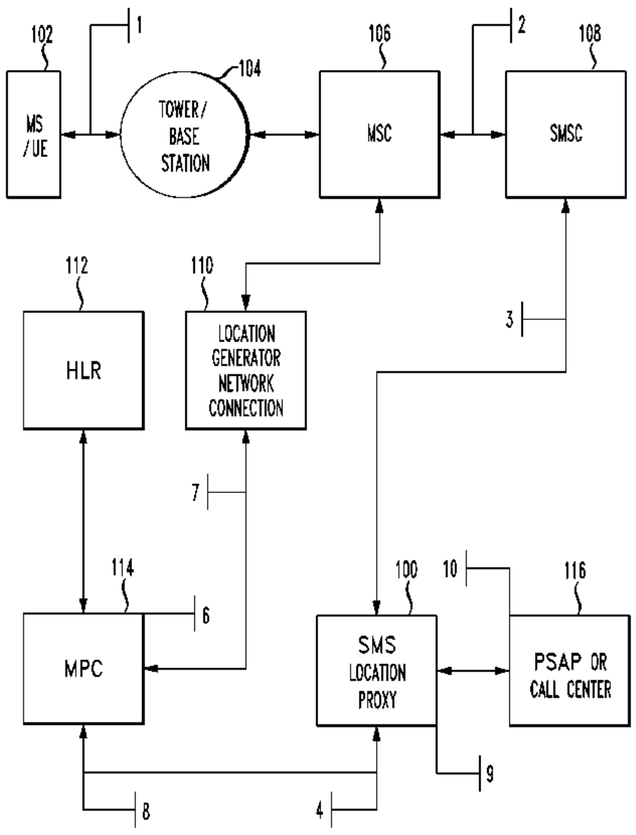
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Primary Examiner — Kiet Doan
Assistant Examiner — Dung Lam
(74) *Attorney, Agent, or Firm* — William H. Bollman

(57) **ABSTRACT**

A data request is generated (e.g., text, email, SMS, multimedia messaging system (MMS), etc.) from a source device. The data request is delivered to a PSAP or other emergency monitoring service location in a useable format. Exemplary useable formats include a canned voice message, delivery to a call center that translates data to voice, text to speech, and text to instant messaging (IM). Additional information and location are staged for use by the PSAP or other monitoring service location.

25 Claims, 3 Drawing Sheets



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(56) **References Cited**

U.S. PATENT DOCUMENTS

4,706,275	A	11/1987	Kamil
4,891,638	A	1/1990	Davis
4,891,650	A	1/1990	Sheffer
4,952,928	A	8/1990	Carroll
4,972,484	A	11/1990	Theile et al.
5,014,206	A	5/1991	Scribner
5,043,736	A	8/1991	Darnell
5,055,851	A	10/1991	Sheffer
5,068,656	A	11/1991	Sutherland
5,068,891	A	11/1991	Marshall
5,119,104	A	6/1992	Heller
5,144,283	A	9/1992	Arens
5,161,180	A	11/1992	Chavous
5,177,479	A	1/1993	Cotton
5,193,215	A	3/1993	Olmer
5,208,756	A	5/1993	Song
5,214,789	A	5/1993	George
5,218,367	A	6/1993	Sheffer
5,223,844	A	6/1993	Mansell
5,239,570	A	8/1993	Koster
5,265,630	A	11/1993	Hartmann
5,266,944	A	11/1993	Carroll
5,283,570	A	2/1994	DeLuca
5,289,527	A	2/1994	Tiedemann, Jr.
5,293,642	A	3/1994	Lo
5,299,132	A	3/1994	Wortham
5,311,516	A	5/1994	Kuznicki
5,325,302	A	6/1994	Izidon
5,327,529	A	7/1994	Fults et al.
5,334,974	A	8/1994	Simms
5,343,493	A	8/1994	Karimullah
5,347,568	A	9/1994	Moody
5,351,235	A	9/1994	Lahtinen
5,361,212	A	11/1994	Class
5,363,425	A	11/1994	Mufti
5,374,936	A	12/1994	Feng
5,379,451	A	1/1995	Nakagoshi
5,381,338	A	1/1995	Wysocki
5,387,993	A	2/1995	Heller
5,388,147	A	2/1995	Grimes
5,390,339	A	2/1995	Bruckert
5,394,158	A	2/1995	Chia
5,396,227	A	3/1995	Carroll
5,398,190	A	3/1995	Wortham
5,406,614	A	4/1995	Hara
5,418,537	A	5/1995	Bird
5,423,076	A	6/1995	Westergren
5,434,789	A	7/1995	Fraker
5,454,024	A	9/1995	Lebowitz
5,461,390	A	10/1995	Hosher
5,470,233	A	11/1995	Fruchterman
5,479,408	A	12/1995	Will
5,479,482	A	12/1995	Grimes
5,485,161	A	1/1996	Vaughn
5,485,163	A	1/1996	Singer
5,488,563	A	1/1996	Chazelle
5,494,091	A	2/1996	Freeman
5,497,149	A	3/1996	Fast
5,508,931	A	4/1996	Snider
5,513,243	A	4/1996	Kage
5,515,287	A	5/1996	Hakoyama
5,519,403	A	5/1996	Bickley
5,530,655	A	6/1996	Lokhoff et al.
5,530,914	A	6/1996	McPheters
5,532,690	A	7/1996	Hertel
5,535,434	A	7/1996	Siddoway
5,539,398	A	7/1996	Hall
5,539,829	A	7/1996	Lokhoff et al.
5,543,776	A	8/1996	L'Esperance
5,552,772	A	9/1996	Janky
5,555,286	A	9/1996	Tendler
5,568,119	A	10/1996	Schipper
5,574,648	A	11/1996	Pilley
5,579,372	A	11/1996	Angstrom
5,588,009	A	12/1996	Will
5,592,535	A	1/1997	Klotz
5,604,486	A	2/1997	Lauro
5,606,313	A	2/1997	Allen
5,606,618	A	2/1997	Lokhoff et al.
5,606,850	A	3/1997	Nakamura
5,610,815	A	3/1997	Gudat
5,614,890	A	3/1997	Fox
5,615,116	A	3/1997	Gudat
5,621,793	A	4/1997	Bednarek et al.
5,628,051	A	5/1997	Salin
5,633,912	A	5/1997	Tsoi
5,636,276	A	6/1997	Brugger
5,661,755	A	8/1997	Van De Kerkhof et al.
5,682,600	A	10/1997	Salin
5,699,053	A	12/1997	Jonsson
5,704,029	A	12/1997	Wright, Jr.
5,712,900	A	1/1998	Maupin
5,717,688	A	2/1998	Belanger et al.
5,721,781	A	2/1998	Deo
5,740,534	A	4/1998	Ayerst
5,761,618	A	6/1998	Lynch
5,765,152	A	6/1998	Erickson
5,767,795	A	6/1998	Schaphorst
5,768,509	A	6/1998	Gunluk
5,771,353	A	6/1998	Eggleston
5,774,533	A	6/1998	Patel
5,774,670	A	6/1998	Montully
5,787,357	A	7/1998	Salin
5,794,142	A	8/1998	Vantilla
5,797,094	A	8/1998	Houde
5,797,096	A	8/1998	Lupien
5,802,492	A	9/1998	DeLorme
5,806,000	A	9/1998	Vo
5,809,415	A	9/1998	Rossmann
5,812,087	A	9/1998	Krasner
5,822,700	A	10/1998	Hult
5,828,740	A	10/1998	Khue
5,841,396	A	11/1998	Krasner
5,857,201	A	1/1999	Wright, Jr. et al.
5,864,667	A	1/1999	Barkan
5,874,914	A	2/1999	Krasner
5,896,369	A	4/1999	Warsta
5,920,821	A	7/1999	Seazholtz
5,922,074	A	7/1999	Richard et al.
5,930,250	A	7/1999	Klok
5,930,701	A	7/1999	Skog
5,943,399	A	8/1999	Bannister
5,945,944	A	8/1999	Krasner
5,946,629	A	8/1999	Sawyer
5,946,630	A	8/1999	Willars
5,950,130	A	9/1999	Coursey
5,953,398	A	9/1999	Hill
5,960,362	A	9/1999	Grob
5,974,054	A	10/1999	Couts
5,978,685	A	11/1999	Laiho
5,983,099	A	11/1999	Yao et al.
5,987,323	A	11/1999	Huotari
5,998,111	A	12/1999	Abe
5,999,124	A	12/1999	Sheynblat
6,032,051	A	2/2000	Hall
6,035,025	A	3/2000	Hanson
6,049,710	A	4/2000	Nilsson
6,052,081	A	4/2000	Krasner
6,058,300	A	5/2000	Hanson
6,058,338	A	5/2000	Agashe et al.
6,061,018	A	5/2000	Sheynblat
6,061,346	A	5/2000	Nordman
6,064,336	A	5/2000	Krasner
6,064,875	A	5/2000	Morgan
6,070,067	A	5/2000	Nguyen et al.
6,075,982	A	6/2000	Donovan
6,081,229	A	6/2000	Soliman
6,081,508	A	6/2000	West
6,085,320	A	7/2000	Kaliski, Jr.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,101,378	A	8/2000	Barabash
6,104,931	A	8/2000	Havinis
6,122,503	A	9/2000	Daly
6,122,520	A	9/2000	Want
6,124,810	A	9/2000	Segal et al.
6,128,664	A	10/2000	Yanagidate et al.
6,131,067	A	10/2000	Girerd
6,133,874	A	10/2000	Krasner
6,134,316	A	10/2000	Kallioniemi
6,134,483	A	10/2000	Vayanos et al.
6,148,197	A	11/2000	Bridges
6,148,198	A	11/2000	Anderson
6,149,353	A	11/2000	Nillsson
6,150,980	A	11/2000	Krasner
6,169,891	B1	1/2001	Gorham
6,173,181	B1	1/2001	Losh
6,178,505	B1	1/2001	Schneider
6,178,506	B1	1/2001	Quick, Jr.
6,181,935	B1	1/2001	Gossman
6,181,939	B1	1/2001	Ahvenainen
6,185,427	B1	2/2001	Krasner
6,188,354	B1	2/2001	Soliman et al.
6,188,752	B1	2/2001	Wesley
6,188,909	B1	2/2001	Alanara
6,189,098	B1	2/2001	Kaliski, Jr.
6,198,431	B1	3/2001	Gibson
6,199,045	B1	3/2001	Giniger
6,199,113	B1	3/2001	Alegre
6,205,330	B1	3/2001	Winbladh
6,208,290	B1	3/2001	Krasner
6,208,854	B1	3/2001	Roberts
6,215,441	B1	4/2001	Moeglein
6,219,557	B1	4/2001	Havinis
6,223,046	B1	4/2001	Hamill-Keays
6,226,529	B1	5/2001	Bruno
6,239,742	B1	5/2001	Krasner
6,247,135	B1	6/2001	Feague
6,249,680	B1	6/2001	Wax
6,249,744	B1	6/2001	Morita
6,249,873	B1	6/2001	Richard et al.
6,253,074	B1	6/2001	Carllson
6,260,147	B1	7/2001	Quick, Jr.
6,266,614	B1	7/2001	Alumbaugh
6,275,692	B1	8/2001	Skog
6,275,849	B1	8/2001	Ludwig
6,275,937	B1	8/2001	Hailpern
6,289,373	B1	9/2001	DeZonno
6,307,504	B1	10/2001	Sheynblat
6,308,269	B2	10/2001	Proidl
6,313,786	B1	11/2001	Sheynblat et al.
6,317,594	B1	11/2001	Gossman
6,321,091	B1	11/2001	Holland
6,321,250	B1	11/2001	Knape
6,321,257	B1	11/2001	Kotola
6,324,542	B1	11/2001	Wright, Jr.
6,327,473	B1	12/2001	Soliman et al.
6,327,479	B1	12/2001	Mikkola
6,333,919	B2	12/2001	Gafney
6,360,093	B1	3/2002	Ross et al.
6,367,019	B1	4/2002	Ansell
6,370,389	B1	4/2002	Isomursu
6,377,209	B1	4/2002	Krasner
6,400,314	B1	6/2002	Krasner
6,400,958	B1	6/2002	Isomursu
6,411,254	B1	6/2002	Moeglein
6,421,002	B2	7/2002	Krasner
6,433,734	B1	8/2002	Krasner
6,449,473	B1	9/2002	Raivisto
6,449,476	B1	9/2002	Hutchison, IV
6,456,852	B2	9/2002	Bar
6,477,150	B1	11/2002	Maggenti
6,504,491	B1	1/2003	Christians
6,505,049	B1	1/2003	Dorenbosch
6,510,387	B2	1/2003	Fuchs et al.
6,512,922	B1	1/2003	Burg et al.
6,512,930	B2	1/2003	Sandegren
6,515,623	B2	2/2003	Johnson
6,519,466	B2	2/2003	Pande et al.
6,522,682	B1	2/2003	Kohli et al.
6,529,490	B1	3/2003	Oh
6,529,722	B1	3/2003	Heinrich
6,529,829	B2	3/2003	Turetzky et al.
6,531,982	B1	3/2003	White et al.
6,538,757	B1	3/2003	Sansone
6,539,200	B1	3/2003	Schiff
6,539,304	B1	3/2003	Chansarkar
6,542,464	B1	4/2003	Takeda
6,542,734	B1	4/2003	Abrol et al.
6,542,743	B1	4/2003	Soliman
6,549,522	B1	4/2003	Flynn
6,549,776	B1	4/2003	Joong
6,549,844	B1	4/2003	Egberts
6,556,832	B1	4/2003	Soliman
6,560,534	B2	5/2003	Abraham et al.
6,570,530	B2	5/2003	Gaal et al.
6,571,095	B1	5/2003	Koodli
6,574,558	B2	6/2003	Kohli
6,584,307	B1	6/2003	Antonucci
6,584,552	B1	6/2003	Nishimura et al.
6,594,500	B2	7/2003	Bender et al.
6,597,311	B2	7/2003	Sheynblat et al.
6,600,927	B2	7/2003	Hamilton
6,606,495	B1	8/2003	Korpi et al.
6,606,554	B2	8/2003	Edge
6,609,004	B1	8/2003	Morse et al.
6,611,757	B2	8/2003	Brodie
6,618,670	B1	9/2003	Chansarkar
6,621,452	B2	9/2003	Knockeart et al.
6,621,810	B1	9/2003	Leung
6,628,233	B2	9/2003	Knockeart et al.
6,633,255	B2	10/2003	Krasner
6,640,184	B1	10/2003	Rabe
6,650,901	B1	11/2003	Schuster
6,661,372	B1	12/2003	Girerd
6,665,539	B2	12/2003	Sih et al.
6,665,541	B1	12/2003	Krasner et al.
6,671,620	B1	12/2003	Garin et al.
6,675,017	B1	1/2004	Zellner
6,677,894	B2	1/2004	Sheynblat
6,678,357	B2	1/2004	Stumer
6,680,694	B1	1/2004	Knockeart et al.
6,680,695	B2	1/2004	Turetzky et al.
6,694,258	B2	2/2004	Johnson et al.
6,697,629	B1	2/2004	Grilli et al.
6,701,144	B2	3/2004	Kirbas et al.
6,703,971	B2	3/2004	Pande et al.
6,703,972	B2	3/2004	van Diggelen
6,704,651	B2	3/2004	van Diggelen
6,707,421	B1	3/2004	Drury et al.
6,714,793	B1	3/2004	Carey et al.
6,718,174	B2	4/2004	Vayanos
6,720,915	B2	4/2004	Sheynblat
6,721,396	B2	4/2004	Chin
6,721,578	B2	4/2004	Minear et al.
6,721,871	B2	4/2004	Piispanen
6,724,342	B2	4/2004	Bloebaum et al.
6,725,159	B2	4/2004	Krasner
6,731,940	B1	5/2004	Nagendran
6,734,821	B2	5/2004	van Diggelen
6,738,013	B2	5/2004	Orler
6,738,800	B1	5/2004	Aquilon
6,741,842	B2	5/2004	Goldberg et al.
6,744,856	B2	6/2004	Karnik
6,744,858	B1	6/2004	Ryan
6,745,038	B2	6/2004	Callaway
6,747,596	B2	6/2004	Orler
6,748,195	B1	6/2004	Phillips
6,751,464	B1	6/2004	Burg et al.
6,756,938	B2	6/2004	Zhao et al.
6,757,266	B1	6/2004	Hundscheidt
6,757,544	B2	6/2004	Rangarajan et al.
6,771,742	B2	8/2004	Mathis et al.
6,772,340	B1	8/2004	Peinado
6,775,655	B1	8/2004	Peinado

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,775,802	B2	8/2004	Gaal
6,778,136	B2	8/2004	Gronemeyer
6,778,885	B2	8/2004	Agashe et al.
6,781,963	B2	8/2004	Crockett
6,788,249	B1	9/2004	Farmer et al.
6,795,699	B1	9/2004	McCraw et al.
6,799,049	B1	9/2004	Zellner
6,799,050	B1	9/2004	Krasner
6,801,159	B2	10/2004	Swope et al.
6,804,524	B1	10/2004	Vandermeijden
6,807,534	B1	10/2004	Erickson
6,810,323	B1	10/2004	Bullock et al.
6,813,560	B2	11/2004	van Diggelen
6,816,111	B2	11/2004	Krasner
6,816,710	B2	11/2004	Krasner
6,816,719	B1	11/2004	Kronström et al.
6,816,734	B2	11/2004	Wong et al.
6,820,269	B2	11/2004	Baucke et al.
6,829,475	B1	12/2004	Lee et al.
6,832,373	B2	12/2004	O'Neill
6,839,020	B2	1/2005	Geier et al.
6,839,021	B2	1/2005	Sheynblat et al.
6,842,715	B1	1/2005	Gaal
6,853,916	B2	2/2005	Fuchs et al.
6,856,282	B2	2/2005	Mauro et al.
6,861,980	B1	3/2005	Rowitch et al.
6,865,171	B1	3/2005	Nilsson
6,865,395	B2	3/2005	Riley
6,867,734	B2	3/2005	Voor
6,873,854	B2	3/2005	Crockett
6,885,940	B2	4/2005	Brodie et al.
6,888,497	B2	5/2005	King et al.
6,888,932	B2	5/2005	Snip
6,895,238	B2	5/2005	Newell et al.
6,895,249	B2	5/2005	Gaal
6,900,758	B1	5/2005	Mann et al.
6,903,684	B1	6/2005	Simic et al.
6,904,029	B2	6/2005	Fors et al.
6,907,224	B2	6/2005	Younis
6,907,238	B2	6/2005	Leung
6,912,395	B2	6/2005	Benes et al.
6,912,545	B1	6/2005	Lundy
6,915,208	B2	7/2005	Garin et al.
6,917,331	B2	7/2005	Gronemeyer
6,925,504	B1	8/2005	Liskov
6,930,634	B2	8/2005	Peng et al.
6,937,187	B2	8/2005	van Diggelen
6,937,597	B1	8/2005	Rosenberg
6,937,872	B2	8/2005	Krasner
6,940,950	B2	9/2005	Dickinson
6,941,144	B2	9/2005	Stein
6,944,540	B2	9/2005	King et al.
6,947,772	B2	9/2005	Minear et al.
6,950,058	B1	9/2005	Davis et al.
6,957,073	B2	10/2005	Bye
6,961,019	B1	11/2005	McConnell et al.
6,961,562	B2	11/2005	Ross
6,963,557	B2	11/2005	Knox
6,965,754	B2	11/2005	King
6,965,767	B2	11/2005	Maggenti
6,968,195	B2	11/2005	Nowak
6,970,917	B1	11/2005	Kushwaha
6,973,320	B2	12/2005	Brown et al.
6,975,266	B2	12/2005	Abraham et al.
6,978,453	B2	12/2005	Rao
6,980,816	B2	12/2005	Rohles
6,996,720	B1	2/2006	DeMello
6,999,782	B2	2/2006	Shaughnessy
7,020,480	B2	3/2006	Coskun
7,024,321	B1	4/2006	Deninger et al.
7,024,393	B1	4/2006	Peinado
7,047,411	B1	5/2006	DeMello
7,065,351	B2	6/2006	Carter et al.
7,065,507	B2	6/2006	Mohammed
7,079,857	B2	7/2006	Maggenti
7,092,385	B2	8/2006	Gallant
7,103,018	B1	9/2006	Hansen
7,103,574	B1	9/2006	Peinado
7,106,717	B2	9/2006	Rousseau
7,136,838	B1	11/2006	Peinado
7,151,946	B2	12/2006	Maggenti
7,200,380	B2	4/2007	Havlark
7,209,969	B2	4/2007	Lahti
7,218,940	B2	5/2007	Niemenmaa
7,221,959	B2	5/2007	Lindqvist
7,246,187	B1	7/2007	Ezra
7,260,186	B2	8/2007	Zhu
7,277,938	B2	10/2007	Duimovich
7,321,773	B2	1/2008	Hines
7,366,157	B1	4/2008	Valentine
7,440,442	B2	10/2008	Grabelsky
7,519,198	B2	4/2009	Endoh
7,522,581	B2	4/2009	Acharya
7,526,563	B2	4/2009	Ingimundarson
7,573,982	B2	8/2009	Breen
7,623,447	B1	11/2009	Faccon
7,627,331	B2	12/2009	Winterbotton
7,684,782	B2	3/2010	Ashly
7,702,081	B1	4/2010	Klesper
7,783,297	B2	8/2010	Alshii
7,822,391	B1	10/2010	Delker
7,822,871	B2	10/2010	Stolorz
7,895,263	B1	2/2011	Kirchmeier
8,014,945	B2	9/2011	Cooper
2002/0037735	A1	3/2002	Maggenti
2002/0052214	A1	5/2002	Maggenti
2002/0058515	A1	5/2002	Holler
2002/0061760	A1	5/2002	Maggenti
2002/0069079	A1	6/2002	Vega
2002/0069529	A1	6/2002	Wieres
2002/0085538	A1	7/2002	Leung
2002/0086659	A1	7/2002	Lauper
2002/0099802	A1	7/2002	March
2002/0102999	A1	8/2002	Maggenti
2002/0112047	A1	8/2002	Kushwaha
2002/0113797	A1	8/2002	Potter
2002/0141386	A1	10/2002	Minert
2002/0154221	A1	10/2002	IshimarHoucku
2002/0174073	A1	11/2002	Nordman
2002/0197991	A1	12/2002	Anvekar
2003/0009602	A1	1/2003	Jacobs
2003/0016804	A1	1/2003	Sheha
2003/0037163	A1	2/2003	Kitada et al.
2003/0063730	A1	4/2003	Woodring
2003/0065788	A1	4/2003	Salomaki
2003/0072318	A1	4/2003	Lam
2003/0078064	A1	4/2003	Chan
2003/0078886	A1	4/2003	Minear
2003/0081557	A1	5/2003	Mettala
2003/0081752	A1	5/2003	Tandal
2003/0086539	A1	5/2003	McCalmont
2003/0101329	A1	5/2003	Lahti
2003/0103484	A1	6/2003	Oommen et al.
2003/0114148	A1	6/2003	Albertsson
2003/0115328	A1	6/2003	Saliminen
2003/0125045	A1	7/2003	Riley
2003/0137961	A1	7/2003	Tsirtsis
2003/0153340	A1	8/2003	Crockett
2003/0153341	A1	8/2003	Crockett
2003/0153342	A1	8/2003	Crockett
2003/0153343	A1	8/2003	Crockett
2003/0161298	A1	8/2003	Bergman
2003/0163483	A1	8/2003	Zingher
2003/0186709	A1	10/2003	Rhodes
2003/0187803	A1	10/2003	Pitt
2003/0196105	A1	10/2003	Fineberg
2003/0204640	A1	10/2003	Sahinoja
2003/0222901	A1	12/2003	Houck
2003/0223381	A1	12/2003	Schroderus
2004/0002326	A1	1/2004	Maher
2004/0044623	A1	3/2004	Wake
2004/0068724	A1	4/2004	Gardner
2004/0093217	A1	5/2004	Yeh
2004/0098497	A1	5/2004	Banet

(56) **References Cited**

U.S. PATENT DOCUMENTS

2004/0107143	A1	6/2004	Niemi	
2004/0132465	A1	7/2004	Mattila	
2004/0146040	A1	7/2004	Phan-Anh	
2004/0156394	A1	8/2004	Westman	
2004/0157175	A1	8/2004	Matsumoto	
2004/0176123	A1	9/2004	Chin	
2004/0184584	A1	9/2004	McCalmont	
2004/0203732	A1	10/2004	Brusilovsky	
2004/0205151	A1	10/2004	Sprigg	
2004/0215687	A1	10/2004	Klemba	
2004/0225740	A1	11/2004	Klemba	
2004/0229632	A1	11/2004	Flynn	
2004/0242238	A1	12/2004	Wang	
2004/0267445	A1	12/2004	De Luca	
2005/0021769	A1	1/2005	Kim	
2005/0028034	A1	2/2005	Gantman	
2005/0039178	A1	2/2005	Marolia	
2005/0041578	A1	2/2005	Huotari	
2005/0043037	A1	2/2005	Loope	
2005/0043038	A1	2/2005	Maanoja	
2005/0047399	A1	3/2005	Lee	
2005/0053209	A1	3/2005	D'Evelyn	
2005/0071251	A1	3/2005	Linden	
2005/0086467	A1	4/2005	Asokan	
2005/0111630	A1	5/2005	Potorney	
2005/0112030	A1	5/2005	Gaus	
2005/0119012	A1	6/2005	Merheb	
2005/0135569	A1	6/2005	Dicksinson	
2005/0153706	A1	7/2005	Niemenmaa	
2005/0169248	A1	8/2005	Truesdale	
2005/0190892	A1	9/2005	Dawson	
2005/0201358	A1	9/2005	Nelson	
2005/0201528	A1	9/2005	Meer	
2005/0201529	A1	9/2005	Nelson	
2005/0209995	A1	9/2005	Aksu	
2005/0213537	A1	9/2005	Ingimundarson	
2005/0213716	A1	9/2005	Zhu	
2005/0215233	A1	9/2005	Perera	
2005/0216300	A1	9/2005	Appelman	
2005/0259675	A1	11/2005	Tuohino et al.	
2005/0282518	A1	12/2005	D'Evelyn	
2005/0287979	A1	12/2005	Rollender	
2006/0044407	A1	3/2006	Barbeau	
2006/0053225	A1	3/2006	Poikselka	
2006/0058951	A1	3/2006	Cooper	
2006/0068753	A1 *	3/2006	Karpen et al.	455/404.2
2006/0079236	A1	4/2006	Del Pino	
2006/0099935	A1	5/2006	Gallagher	
2006/0106774	A1	5/2006	Cohen	
2006/0128395	A1	6/2006	Muhonen	
2006/0135177	A1	6/2006	Winterbottom	
2006/0154665	A1	7/2006	Svensson	
2006/0184617	A1	8/2006	Nicholas	
2006/0189303	A1	8/2006	Rollender	
2006/0205383	A1	9/2006	Rollender	
2006/0206610	A1	9/2006	Ling	
2006/0212558	A1	9/2006	Sahinoja	
2006/0212562	A1	9/2006	Kushwaha	
2006/0224752	A1	10/2006	Parekh	
2006/0234639	A1	10/2006	Kushwaha	
2006/0234698	A1	10/2006	Fok	
2006/0239205	A1	10/2006	Warren	
2006/0258380	A1	11/2006	Liebowitz	
2006/0281470	A1	12/2006	Shi	
2006/0293066	A1	12/2006	Edge	
2007/0004429	A1	1/2007	Edge	
2007/0010248	A1	1/2007	Dravida	
2007/0021098	A1	1/2007	Rhodes	
2007/0026854	A1	2/2007	Nash	
2007/0026871	A1	2/2007	Wager	
2007/0027997	A1	2/2007	Polk	
2007/0030539	A1	2/2007	Nath	
2007/0041513	A1	2/2007	Gende	
2007/0049288	A1	3/2007	Lamprecht	
2007/0060097	A1	3/2007	Edge	
2007/0104138	A1	5/2007	Rudolf et al.	
2007/0117574	A1	5/2007	Watanabe	
2007/0117577	A1	5/2007	Harris	
2007/0135089	A1 *	6/2007	Edge et al.	455/404.1
2007/0149166	A1	6/2007	Turcotte	
2007/0149213	A1	6/2007	Lamba	
2007/0160036	A1	7/2007	Smith	
2007/0190968	A1	8/2007	Dickinson	
2007/0201623	A1	8/2007	Hines	
2007/0218871	A1	9/2007	Bonner	
2007/0253429	A1	11/2007	James	
2007/0254625	A1	11/2007	Edge	
2007/0291733	A1	12/2007	Doran	
2008/0045250	A1 *	2/2008	Hwang	455/466
2008/0137624	A1	6/2008	Silverstrim	
2008/0162637	A1	7/2008	Adamczyk	
2008/0176582	A1	7/2008	Ghai	
2008/0192731	A1	8/2008	Dickinson	
2008/0208671	A1	8/2008	Ehrlich	
2008/0268809	A1	10/2008	Busin	
2008/0313000	A1	12/2008	Degeratu	
2009/0003535	A1	1/2009	Grabelsky	
2009/0067417	A1	3/2009	Kalavade	
2009/0097450	A1	4/2009	Wallis	
2009/0128404	A1	5/2009	Martino	
2009/0020447	A1	8/2009	Elenbass	
2009/0198733	A1	8/2009	Gounares	
2009/0204600	A1	8/2009	Kalik	
2009/0221263	A1	9/2009	Titus	
2009/0237210	A1	9/2009	Ciesla	
2010/0010860	A1	1/2010	Bose	
2010/0054220	A1	3/2010	Bischinger et al.	
2010/0067444	A1	3/2010	Faccin	
2010/0076767	A1	3/2010	Vieri	
2010/0167760	A1	7/2010	Kim	
2010/0198933	A1	8/2010	Smith	
2010/0223222	A1	9/2010	Zhou et al.	
2010/0233991	A1	9/2010	Crawford	
2010/0262668	A1	10/2010	Piett	
2011/0207429	A1	8/2011	Maier	
2012/0079600	A1	3/2012	Kellerman	
2013/0012232	A1	1/2013	Titus et al.	

OTHER PUBLICATIONS

European Search Report in Appl. No. EP07716216 dated Dec. 12, 2009.

Zehu et al., "On Querying Geospatial and Georeferenced Metadata Resources in G-Portal," IEEE Comp. SOC, May 31, 2003, pp. 245-255.

Peterson et al., "A Presence-Based GEOPRIV Location Object Format; rfc4119,txt," Neustar, Dec. 1, 2005, pp. 1-23.

Winterbotton, et al., "GEOPRIV PIDF-Lo Usage Clarification, Considerations and Recommendations; draft-ietf-geopriv-pidf-lo-profile-00.txt," Nortal Jul. 2, 2005, pp. 1-31.

Berners-Lee, et al., "Uniform Resource Identifier (URI) Generic Standard, Internet Engineering Task Force," Day Software, Jan. 1, 2005, pp. 1-61.

47 Code of Federal Regulations (Oct. 1, 2005 Edition).

Schulzrinne et al., Emergency Services for Internet Telephony Systems draft-schulzrinne-sipping-emergency-arch, IETF Standard Working Draft, Feb. 4, 2004, 1-22.

International Search Report received in PCT/US2008/10828 dated Nov. 21, 2008.

International Search Report received in PCT/US2011/02001 dated Apr. 17, 2012.

International Search Report received in PCT/US2012/00266 dated Aug. 3, 3012.

International Search Report received in PCT/US2012/066313 dated Feb. 4, 2013.

International Search Report received in PCT/US2012/067857 dated Feb. 20, 2013.

(56) **References Cited**

OTHER PUBLICATIONS

International Search Report received in PCT/US2012/67689 dated Feb. 22, 2013.

International Search Report received in PCT/US2012/000100 dated Apr. 24, 2012.

U.S. Appl. No. 09/539,495, filed Mar. 2000, Abrol.

* cited by examiner

FIG. 1

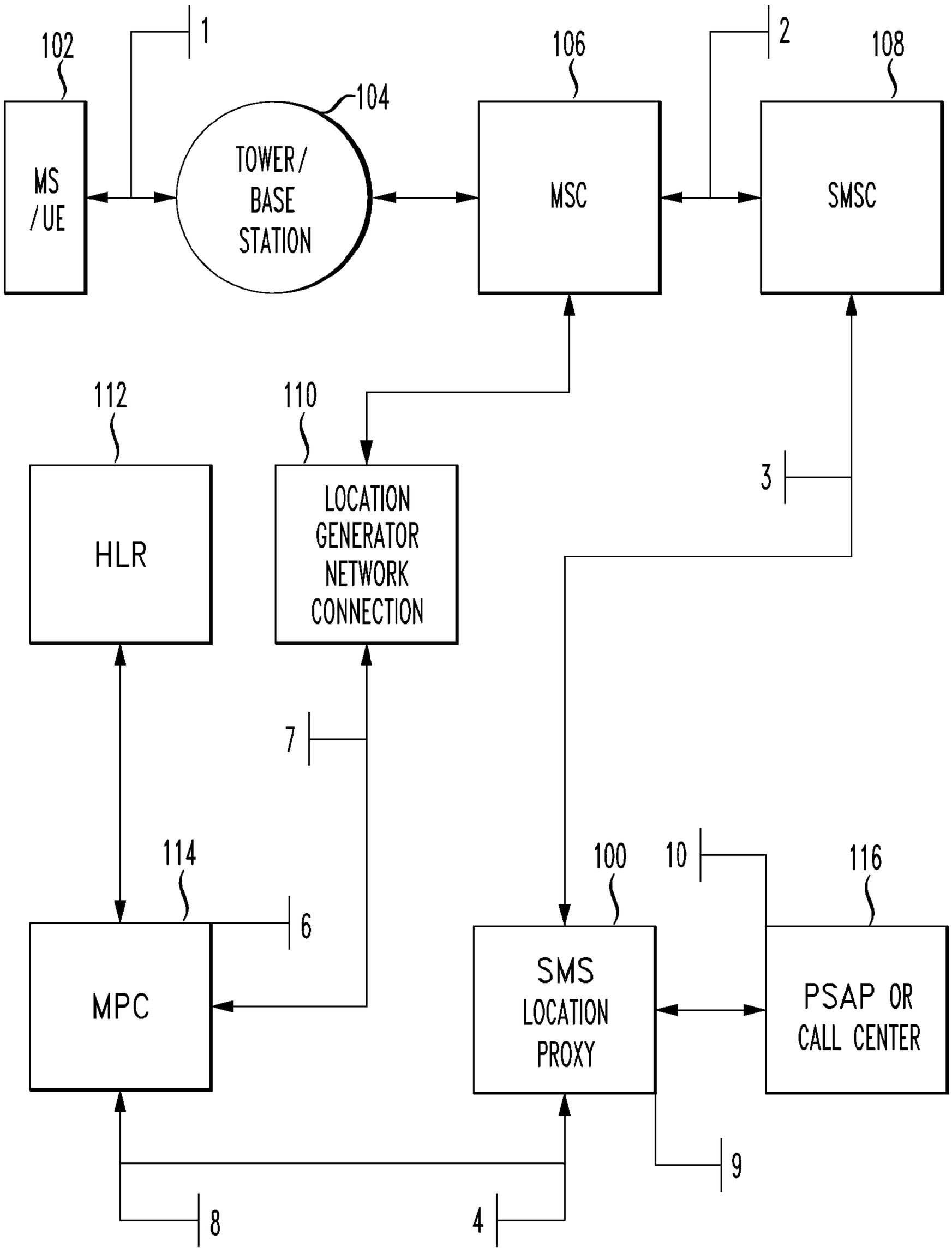

102
1
104
106
2
108
MS /UE
TOWER / BASE STATION
MSC
SMSC
112
110
3
HLR
LOCATION GENERATOR NETWORK CONNECTION
7
114
6
100
10
116
MPC
SMS LOCATION PROXY
PSAP OR CALL CENTER
9
8
4

FIG. 2

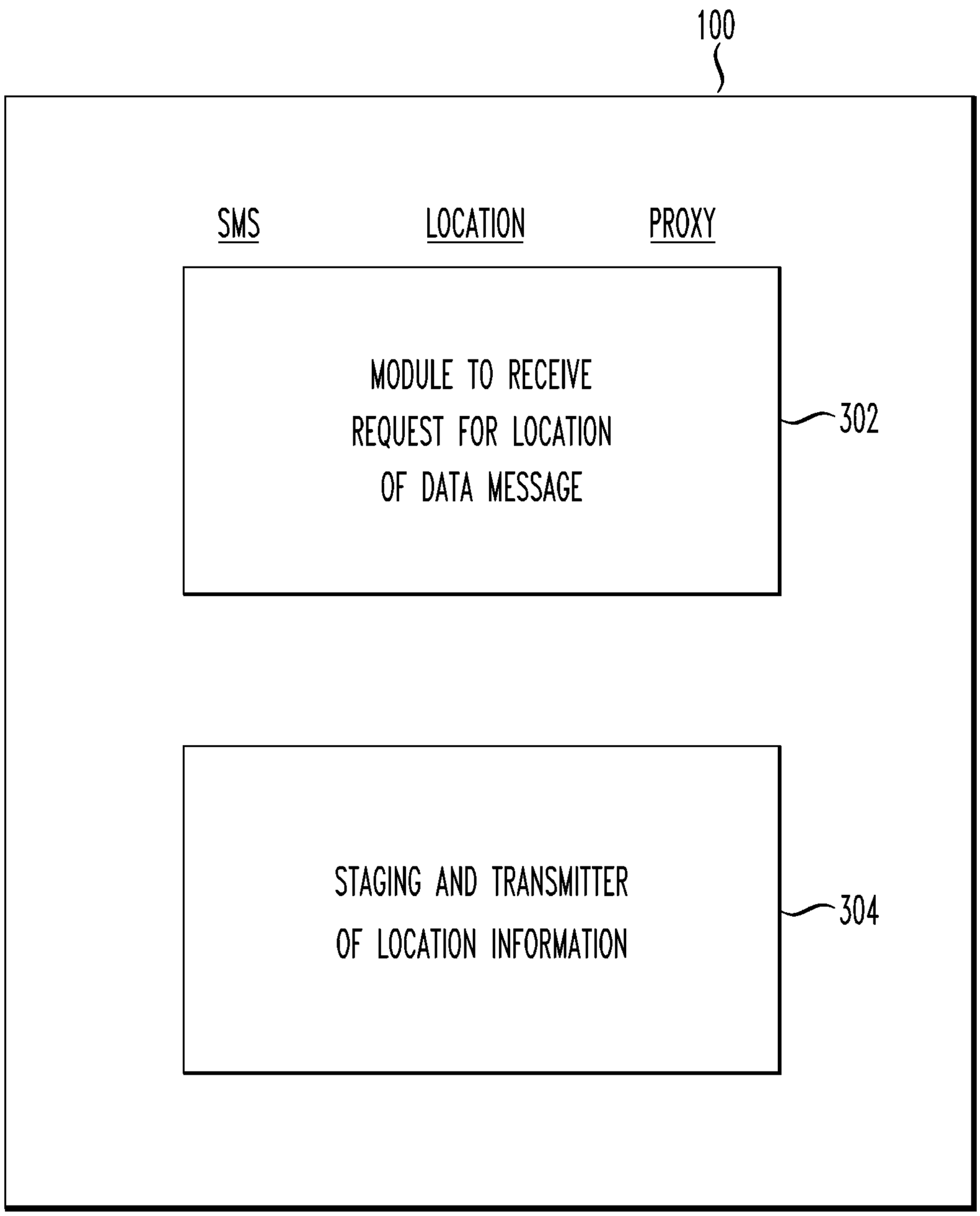
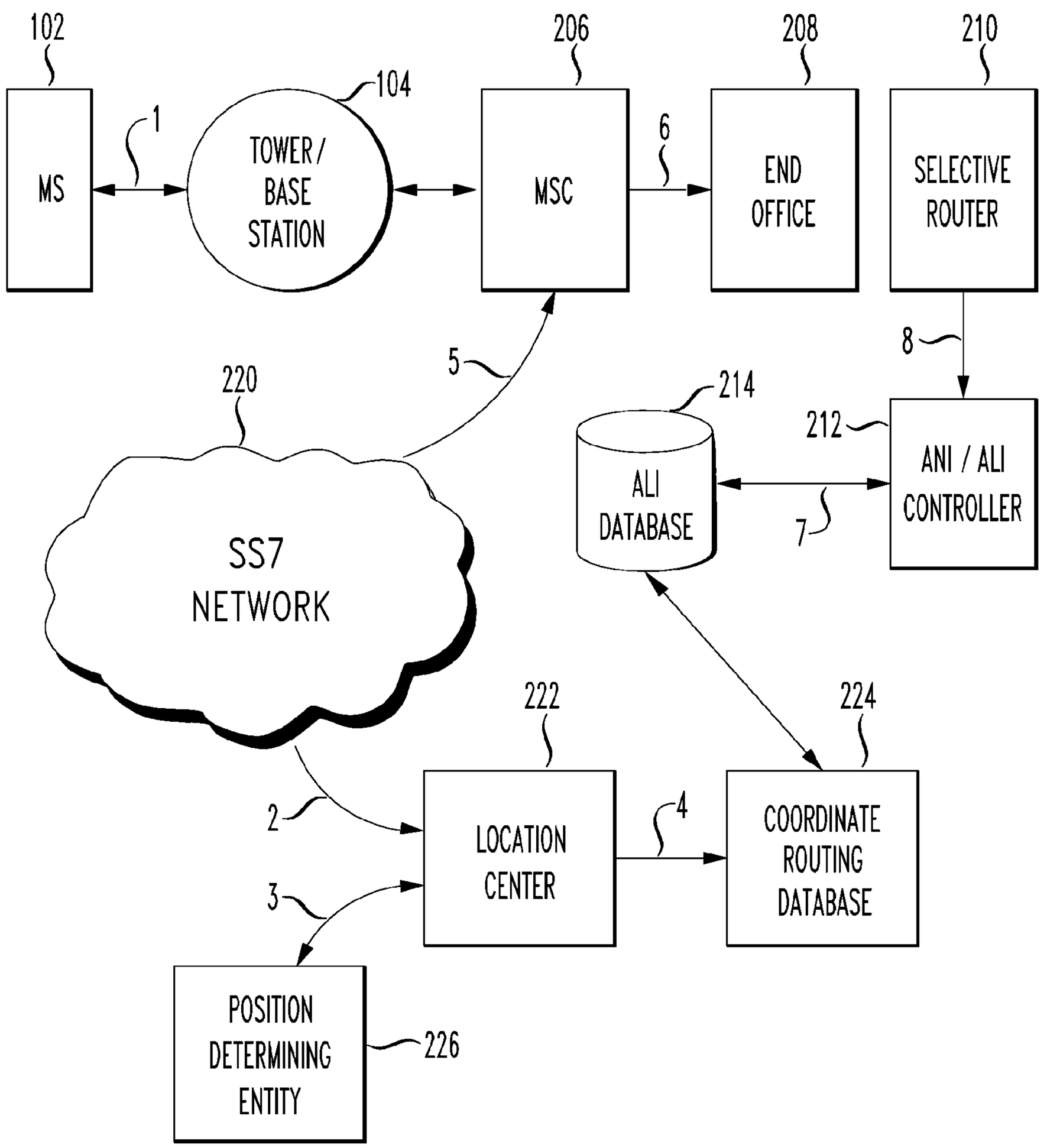

100
SMS
LOCATION
PROXY
MODULE TO RECEIVE REQUEST FOR LOCATION OF DATA MESSAGE
302
STAGING AND TRANSMITTER OF LOCATION INFORMATION
304

FIG. 3
(PRIOR ART)



EMERGENCY 911 DATA MESSAGING

This application is a continuation of U.S. patent application Ser. No. 13/431,016, entitled "Emergency 911 Data Messaging," filed on Mar. 27, 2012; which is a division of U.S. patent application Ser. No. 12/232,417, entitled "Emergency 911 Data Messaging," filed on Sep. 17, 2008, now U.S. Pat. No. 8,185,087; which claims priority from U.S. Provisional Application No. 60/960,119, to Mitchell, Jr., et al., entitled "Routing SMS Messages Upon Location in a CDMA Network For Emergency Services", filed Sep. 17, 2007, the entirety of all three of which is are expressly incorporated herein by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to telecommunications. More particularly, it relates to wireless messaging and wireless emergency services such as E911.

2. Background of the Related Art

9-1-1 is a phone number widely recognized in North America as an emergency phone number that is used to contact emergency dispatch personnel. Enhanced 9-1-1 (E9-1-1) is defined by an emergency call being selectively routed to an appropriate public service access point (PSAP), based on a special identifier (P-ANI, or "Pseudo Automatic Number Identifier", also referred to as "ESxK"), and includes the transmission of callback number and location information when 9-1-1 is used. E9-1-1 may be implemented for landline, cellular or VoIP networks. A Public Service Answering Point (PSAP) is a dispatch office that receives 9-1-1 calls from the public. A PSAP may be a local, fire or police department, an ambulance service or a regional office covering all services. As used herein, the term "PSAP" refers to either a public safety access point (PSAP), or to an Emergency Call Center (ECC), a VoIP term.

Regardless of the network type, a 9-1-1 service becomes E-9-1-1 when automatic number identification and automatic location information related to the call is provided to the 9-1-1 operator at the PSAP. A primary challenge results from the fact that calls may arrive at the PSAP without the caller's actual callback number or location information displayed at the emergency operator's terminal.

The result of an E911 call is a direct circuit connection between the requestor and the responder. 911 is further enhanced with the ability to deliver location information over a data channel in parallel to the emergency call. This data is typically staged in a database that is queried by the PSAP to determine location information.

FIG. **3** depicts an overview of conventional enhanced 9-1-1 (E9-1-1) voice call flow in currently deployed architecture.

In particular, as shown in FIG. **3**, an emergency voice call is initiated at a mobile station or handset **102**, delivered through a relevant radio tower and base station **104** to a Mobile Switching Center (MSC) **206**. The emergency voice call is then held while call setup information is delivered to a location center **222**. The location center **222** responds to the MSC **206** with appropriate call routing information, and triggers a request for precise location. The MSC **206** releases the call and routes it to the correct PSAP through a selective router **210** based on information provided from the location center **222**. The location center **222** then stages a record in an automatic location information (ALI) database **214**. When the precise location information is returned to the location center **222** from a position determining entity **226**, this location coordinate information is compared to a coordinate routing database **224**, and the matching address and call back information is then staged for retrieval by the ALI database **214**.

The current 911 infrastructure was designed to route a voice emergency call to the local PSAP. Unfortunately, this requires that voice circuits be available to carry the emergency call. During times of regional crises, such as a hurricane, the local wireless infrastructure can become overloaded by call volume. This was experienced during the September 11th terrorist attacks during which voice telecommunications along the East Coast was subject to service failures.

SUMMARY OF THE INVENTION

In accordance with the principles of the present invention, an emergency system short messaging system (SMS) location proxy comprises an interface between the SMS location proxy and a short messaging service center (SMSC), and an interface to an emergency services provider. A module provides location information relating to an emergency services data message routed via the SMSC and directed toward the emergency services provider.

In accordance with another embodiment of the present invention, apparatus for providing 911 equivalent data emergency services comprises a short messaging system (SMS) location proxy to provide location information relating to an emergency data message. A module receives a request for location of a data message, and a module provides requested location of a data message to an emergency services provider. In this way, data emergency services are provided using a non-persistent connection with an emergency data initiator.

In accordance with yet another embodiment of the present invention, 911 equivalent data emergency services are provided to an emergency data initiator using a non-persistent connection by associating a request for location relating to a non-persistent emergency data message with a geo-location. The request for location is delivered to an appropriate emergency services provider in a format useable by the emergency services provider. Location information is staged for use by the emergency services provider.

BRIEF DESCRIPTION OF THE DRAWINGS

Features and advantages of the present invention will become apparent to those skilled in the art from the following description with reference to the drawings:

FIG. **1** depicts an exemplary embodiment for generating an E9-1-1 text message with geographic location information for delivery to a PSAP, in accordance with the principles of the present invention.

FIG. **2** shows relevant elements of an SMS location proxy in more detail, in accordance with the principles of the present invention.

FIG. **3** depicts an overview of conventional enhanced 9-1-1 (E9-1-1) voice call flow in currently deployed architecture.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

Short message system (SMS) technology is available to generate SMS traffic from a handset and deliver the message to another handset or to an Internet Address. There is also a wireline SMS capability that has been introduced to deliver an SMS message to non-SMS enabled devices. But SMS is not a persistent connection, and there is no conventional

location capability associated with SMS. Moreover, conventional technologies do not have the capability to deliver SMS messages to a PSAP.

Public service answering point (PSAP) connectivity to the public switched telephone network (PSTN) is managed through dedicated switches called emergency services gateways (ESGW) that conventionally can not be directly dialed and do not support SMS traffic. Even if the switches were able to support the delivery of SMS to the PSAP, there is no currently available method for the PSAP to process and display or use the information from an SMS.

The inventors of the present invention have empirically recognized that during times of voice circuit overload, the signaling system No. 7 (SS7) signaling network had excess capacity available to carry short message traffic. The present invention enables a Short Message Service (SMS) capability for generating an emergency 911 "equivalent" call. This capability enables SMS savvy consumers to generate requests for assistance to the local Public Safety Answering Point (PSAP) that can be understood and translated to provide first responders with the information they need to offer timely assistance.

This invention offers a solution architecture and method for delivery of 911 equivalent requests for emergency assistance using non-voice centric, and importantly non-persistent connectivity sources such as SMS, email, and autonomous data/message generation devices.

According to the principles of the present invention, a data request is generated (e.g., text, email, SMS, multimedia messaging system (MMS), etc.) from a source device. The data request is delivered to a PSAP or other emergency monitoring service location in a useable format. Exemplary useable formats include a canned voice message, delivery to a call center that translates data to voice, text to speech, and text to instant messaging (IM). Additional information and location are staged for use by the PSAP or other monitoring service location.

An overview of the invention for data 911 is now described. While some similarities to conventional voice based persistent circuit technologies exist, the inventive data 911 call flow is broken down into more detail in subsequent sections to specifically delineate significant differences and uniqueness of the invention.

FIG. **1** depicts an exemplary embodiment for generating an E9-1-1 text message with geographic location information for delivery to a PSAP, in accordance with the principles of the present invention.

In particular, as shown in FIG. **1**, an example of the invention based on use of Short Message technology is presented. In this example, the source of the emergency data message is a handset type of device **102** also capable of making a voice call. However, while the handset device **102** sends a text message addressed by the user/caller simply as 911 instead of dialing a phone number.

In call flow, the 911 emergency text message from the mobile station/user equipment (MS/UE), or handset, **102** traverses the radio network and the base station controller **104**, and then is delivered to the mobile switching center (MSC) **106**. The MSC **106** routes the 911 emergency text message to an SMS platform (SMSC) **108**.

In step **1** of FIG. **1**, a user on a handset **102** sends an emergency data message (e.g., text) via their servicing Short-Message-Service (SMS) network addressed simply to "911" or other designated Emergency Services Identity. In the given example, the source of the emergency data message has a preferable form of MSISDN@carrierdomain.com, though any appropriate unique address scheme unique to the handset **102** or specific user is possible.

In step **2**, the exemplary emergency SMS data message (e.g., "Help me!") is routed from the MSC **106** to the relevant SMSC **108**.

In step **3**, the SMSC **108** routes the exemplary emergency SMS data message to the SMS location proxy **100**.

In step **4**, the SMS location proxy **100** initiates a request for routing to the MPC **114**. The emergency SMS data message originating MSISDN and the identity of the carrier is sent to a mobile positioning center (MPC) **114** with the request for routing.

In step **5**, the MPC **114** receives the request for routing, and then requests information from the network using the current method to derive the remaining information necessary to request location from the network.

In step **6**, the MPC **114** then requests information about the precise latitude/longitude (lat/lon) and/or rough position (tower/sector) of the emergency texter. The request for routing preferably includes an indicator of "Emergency Services" or similar designation.

In step **7**, the network calculates the position of the emergency texter and returns this information to the MPC **114**.

In step **8**, the MPC **114** uses the "rough" location information (or optionally: the precise) to determine the routing necessary for the emergency SMS data message, and returns a route destination to the SMS location proxy **100**.

In step **9**, the SMS location proxy **100** routes the emergency SMS data message (+appended Location Information—Rough and Precise (when available) to the appropriate PSAP or call center **116**.

In step **10**, the emergency texting user or emergency text message initiator is messaged that their emergency SMS data message has been received. An instant messaging (IM)-like non-persistent connection is made between the PSAP or call center **116** and the emergency texting user or emergency text message initiator through the SMS location proxy **100**.

FIG. **2** shows relevant elements of an SMS location proxy in more detail, in accordance with the principles of the present invention.

In particular, as shown in FIG. **2**, the exemplary SMS location proxy **100** includes an application module loaded into an appropriate gateway element to receive requests for location of a data message. The exemplary SMS location proxy **100** also includes an application module that stages the relevant location information relating to the location of emergency data messages (e.g., emergency 911 text messages) and transmits that location information (e.g., lat/long information and/or street address information) to an appropriate emergency services provider such as a PSAP or call center **116** (FIG. **1**).

While initially envisioned as a method for supporting SMS initiated emergency 911 text messages, the present invention can also be used for delivery of other types of non-voice initiated sources using non-persistent communications, such as in-vehicle monitoring systems, autonomous monitoring devices for dams/levies, health monitoring equipment, electronic mail, etc. However, in the given example the emergency texting device must be CDMA capable.

This invention enables PSAPs to receive, process, and act upon a wide variety of non-voice messaging information such as a simple text message to complex image messaging (e.g., MMS).

The present invention can be extended for use to enable automated systems to provide text message warnings or notifications to operator monitored services that have a specific geographic regional coverage.

The invention has particular applicability to the wireless E9-1-1 market, including to any US CDMA carrier, and to virtually any company which markets devices with CDMA connectivity.

The present invention permits a method for routing an emergency SMS data message based upon the general or precise location of an emergency texting sender's data messaging device.

While the invention has been described with reference to the exemplary embodiments thereof, those skilled in the art will be able to make various modifications to the described embodiments of the invention without departing from the true spirit and scope of the invention.

What is claimed is:

1. A mobile positioning center (MPC) server method for non-pearsistent data 911 communication with an emergency data initiator, comprising:

receiving, at a physical mobile positioning center (MPC) server, a request for routing an emergency text message addressed to "911" initiated by a physical emergency text-initiating mobile device;

receiving, at said physical MPC server, routing of a mobile station international subscriber directory number (MSISDN) in a form of MSISDN@carrierdomain.com identifying a carrier network providing communication service to the emergency text-initiating mobile device;

requesting, from said physical MPC server, a rough position of said emergency text-initiating mobile device;

receiving, in response to said request, a current geographic location of said emergency text-initiating device;

determining a route destination address for said emergency text message based on said received current geographic location; and

transmitting said route destination address to a location proxy server.

2. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **1**, wherein:

said MSISDN is received together with said emergency text message by said physical MPC server.

3. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **1**, wherein:

said location proxy server is a short messaging system (SMS) location proxy server.

4. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **1**, wherein:

said emergency text message and said current geographic location are routed to said route destination address by said location proxy server.

5. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **1**, wherein:

said rough position is a tower/sector.

6. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **1**, wherein:

said request for routing said emergency text message includes an indicator of emergency services content.

7. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **1**, wherein:

said emergency text message is a short messaging system (SMS) text message.

8. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **1**, wherein:

said emergency text message is routed to said physical MPC server from a mobile switching center (MSC).

9. A mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator, comprising:

receiving, at a physical mobile positioning center (MPC) server, a request for routing an emergency text message addressed to "911" initiated by a physical emergency text-initiating mobile device;

receiving, at said physical MPC server, routing of a mobile station international subscriber directory number (MSISDN) in a form of MSISDN@carrierdomain.com identifying a carrier network providing communication service to of the emergency text-initiating mobile device;

requesting, from said physical MPC server, a precise latitude/longitude (lat/lon) of said emergency text-initiating mobile device;

receiving, in response to said request, a current geographic location of said emergency text-initiating device;

determining a route destination address for said emergency text message based on said received current geographic location; and

transmitting said route destination address to a location proxy server.

10. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **9**, wherein:

said MSISDN is received together with said emergency text message by said physical MPC server.

11. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **9**, wherein:

said location proxy server is a short messaging system (SMS) location proxy server.

12. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **9**, wherein:

said emergency text message and said current geographic location are routed to said route destination address by said location proxy server.

13. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **9**, wherein:

said request for routing said emergency text message includes an indicator of emergency services content.

14. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **9**, wherein:

said emergency text message is a short messaging system (SMS) text message.

15. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **9**, wherein:

said emergency text message is routed to said physical MPC server from a mobile switching center (MSC).

16. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **9**, wherein:

said emergency email is routed to said physical MPC server from a mobile switching center (MSC).

17. A mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator, comprising:

receiving, at a physical mobile positioning center (MPC) server, a request for routing an email addressed to "911" initiated by a physical emergency email-initiating mobile device;

receiving, at said physical MPC server, routing of a mobile station international subscriber directory number (MSISDN) in a form of MSISDN@carrierdomain.com identifying a carrier network providing communication service to the emergency email-initiating mobile device;

requesting, from said physical MPC server, a current geographic location of said emergency email-initiating mobile device;

receiving, in response to said request, said requested current geographic location of said emergency email-initiating device;

determining a route destination address for said emergency email based on said received current geographic location; and

transmitting said route destination address to a location proxy server.

18. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **17**, wherein:

said MSISDN is received together with said emergency email by said physical MPC server.

19. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **17**, wherein:

said emergency email and said current geographic location are routed to said route destination address by said location proxy server.

20. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **17**, wherein:

said request for routing said emergency email includes an indicator of emergency services content.

21. A mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator, comprising:

receiving, at a physical mobile positioning center (MPC) server, a request for routing an emergency multimedia message addressed to "911" initiated by a physical emergency text-initiating mobile device;

receiving, at said physical MPC server, routing of a mobile station international subscriber directory number (MSISDN) in a form of MSISDN@carrierdomain.com identifying a carrier network providing communication service to of the emergency multimedia message-initiating mobile device;

requesting, from said physical MPC server, a current geographic location of said emergency multimedia message-initiating mobile device;

receiving, in response to said request, said current geographic location of said emergency multimedia message-initiating device;

determining a route destination address for said emergency multimedia message based on said received current geographic location; and

transmitting said route destination address to a location proxy server.

22. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **21**, wherein:

said MSISDN is received together with said emergency multimedia message by said physical MPC server.

23. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **21**, wherein:

said emergency multimedia message and said current geographic location are routed to said route destination address by said location proxy server.

24. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **21**, wherein:

said request for routing said emergency multimedia message includes an indicator of emergency services content.

25. The mobile positioning center (MPC) server method for non-persistent data 911 communication with an emergency data initiator according to claim **21**, wherein:

said emergency multimedia message is routed to said physical MPC server from a mobile switching center (MSC).

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