

(12) **United States Patent**
Winkler et al.

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(54) **DYNAMIC ELEMENTS ON A MAP WITHIN A MOBILE DEVICE, SUCH AS ELEMENTS THAT FACILITATE COMMUNICATION BETWEEN USERS**

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455/414.1; 455/418; 455/419; 455/420; 340/988;
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701/201, 211, 212; 340/988-990, 995.1,
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,432,542 A 7/1995 Thibadeau et al.
5,740,538 A 4/1998 Joyce et al.

6,295,528 B1	9/2001	Marcus et al.
6,377,793 B1	4/2002	Jenkins
6,400,956 B1	6/2002	Richton
6,480,713 B2	11/2002	Jenkins
6,647,257 B2	11/2003	Owensby
6,681,107 B2	1/2004	Jenkins et al.
6,720,956 B1	4/2004	Honma et al.
6,741,835 B2	5/2004	Pulver
6,836,730 B2	12/2004	Root et al.
6,845,324 B2	1/2005	Smith
6,868,410 B2	3/2005	Fortin et al.
6,973,386 B2*	12/2005	Gibbs 340/995.14
7,116,985 B2	10/2006	Wilson et al.
7,167,910 B2*	1/2007	Farnham et al. 709/223
7,363,024 B2	4/2008	Jenkins
7,743,337 B1*	6/2010	Maeda et al. 715/781
7,822,539 B2*	10/2010	Akiyoshi et al. 701/201
7,853,273 B2*	12/2010	Beyer, Jr. 455/457
8,000,726 B2*	8/2011	Altman et al. 455/456.3
2002/0067308 A1	6/2002	Robertson
2003/0004743 A1	1/2003	Callegari
2003/0107490 A1	6/2003	Sznaider et al.
2003/0202104 A1	10/2003	Werner

(Continued)

OTHER PUBLICATIONS

US 2006/0276138 A1, 12/2006, Pummill et al. (withdrawn).

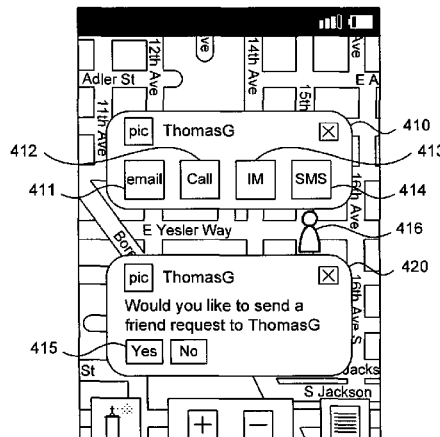
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Primary Examiner — Olumide T Ajibade Akonai

(57) **ABSTRACT**

A system and method for providing information on a map displayed by a mobile device is described. In some examples, the system facilitates user control of map elements, such as dynamically changing map elements based on events that occur at a user's mobile device or at locations associated with the map elements. In some examples, the system enables communication between users via map elements.

30 Claims, 9 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2004/0076279	A1	4/2004	Taschereau	
2004/0108375	A1	6/2004	Maillard	
2004/0192299	A1	9/2004	Wilson et al.	
2004/0264461	A1	12/2004	Janneteau et al.	
2005/0131639	A1	6/2005	Broussard et al.	
2005/0227711	A1	10/2005	Orwant et al.	
2005/0261012	A1	11/2005	Weiser	
2006/0089160	A1	4/2006	Othmer	
2006/0270421	A1	11/2006	Phillips et al.	
2007/0069923	A1*	3/2007	Mendelson	340/988
2007/0073717	A1	3/2007	Ramer et al.	
2007/0270163	A1	11/2007	Anupam et al.	
2008/0113614	A1	5/2008	Rosenblatt	
2008/0167004	A1	7/2008	Jenkins	
2009/0005981	A1*	1/2009	Forstall et al.	701/211
2009/0024315	A1*	1/2009	Scheibe	701/208
2009/0112467	A1*	4/2009	Jiang et al.	701/211
2009/0160859	A1*	6/2009	Horowitz et al.	345/440
2009/0191840	A1	7/2009	Piett et al.	
2009/0291630	A1	11/2009	Dunn et al.	
2010/0023895	A1	1/2010	Benko et al.	
2010/0093373	A1	4/2010	Olsson et al.	
2010/0182145	A1	7/2010	Ungari	
2010/0205242	A1*	8/2010	Marchioro et al.	709/203
2010/0234046	A1	9/2010	Wood	

OTHER PUBLICATIONS

““WARN” Act Rules Released,” Commercial Mobile Alert System: CommLaw Blog, Aug. 14, 2008, <http://www.commlawblog.com/tags/commercial-mobile-alert-system/> [Last Accessed Apr. 27, 2010], 2 pages.

“Enkin Blog: Navigation reinvented,” Max Braun & Rafael Spring, Dec. 7, 2009, <http://enkinblog.blogspot.com/> [Last Accessed Apr. 27, 2010], 4 pages.

“Enkin on Vimeo,” <http://vimeo.com/843168> [Last Accessed Apr. 27, 2010], 5 pages.

“GeoRSS,” Wikipedia, <http://en.wikipedia.org/wiki/GeoRSS>, May 19, 2009 [Last Accessed Apr. 26, 2010], 4 pages.

“GeoRSS: Geographically Encoded Objects for RSS feeds,” <http://georss.org> [Last Accessed Apr. 26, 2010], 2 pages.

“Google Maps Help Center,” Google Maps, <http://maps.google.com/support/bin/answer.py?hl=en&answer=68480> [Accessed Apr. 26, 2010], 8 pages.

“Lan-based uma network controller with proxy connection,” FreshPatents.com, Dec. 17, 2006, <http://www.freshpatents.com/Lan-based-uma-network-controller-with-proxy-connection-dt20061207ptan20060276138.php> [Accessed Apr. 27, 2010], 4 pages.

“What is Slam?”, SLAM, <http://www.msslam.com/About.aspx> [Last Accessed Apr. 26, 2010], 4 pages.

Bourke, Paul, “Determining If a Point Lies on the Interior of a Polygon,” Nov. 1987, <http://local.wasp.uwa.edu.au/~pbourke/geometry/insidepoly/> [Last Accessed Apr. 27, 2010], 6 pages.

Charles, Dan, “GPS is Smartening Up Your Cell Phone,” NPR, May 20, 2008, <http://www.npr.org/templates/story/story.php?storyId=6097216> [Last Accessed Apr. 27, 2010], 4 pages.

International Search Report and Written Opinion, International Application No. PCT/US2009/037450, Filed on Mar. 17, 2009, Applicant: T-Mobile, USA, Inc., Date of Mailing: May 14, 2009, 10 pages.

Jaffe, Alexander et al., “Generating Summaries and Visualization for Large Collections of Geo-Referenced Photographs,” MIR '06, Oct. 26-27, 2006, Santa Barbara, California, USA, 10 pages.

Mologogo, <http://www.mologogo.com> [Last Accessed Apr. 26, 2010], 3 pages.

Reardon, Marguerite, “Verizon Wireless adds friend-finding service,” CNET Reviews, Mar. 28, 2008, http://reviews.cnet.com/8300-12261_7-51.html?keyword=GPS [Last Accessed May 20, 2008], 1 page.

“Global Imagination—Creators of the Dynamic and Interactive Planet Video Globe,” Copyright 2008, <http://www.globeimagination.com/index.html> [Last Accessed Jun. 3, 2010], 2 pages.

“Interactive Talking Globe, Gray Base,” National Geographic Society, Copyright 2009, 5 pages.

“Video: Microsoft’s Sphere display in action,” Seattle pi Blogs, <http://blog.seattlepi.com/microsoft/archives/144629.asp> [Last Accessed Jun. 3, 2010], 10 pages.

“Whrrl—Are You In? Check In to Join Societies,” <http://whrrl.com/home> [Last Accessed Jun. 3, 2010], 1 page.

Honan, Mathew, “I Am Here: One Man’s Experience With the Location-Aware Lifestyle,” Wired Magazine, Jan. 19, 2009, 5 pages.

* cited by examiner

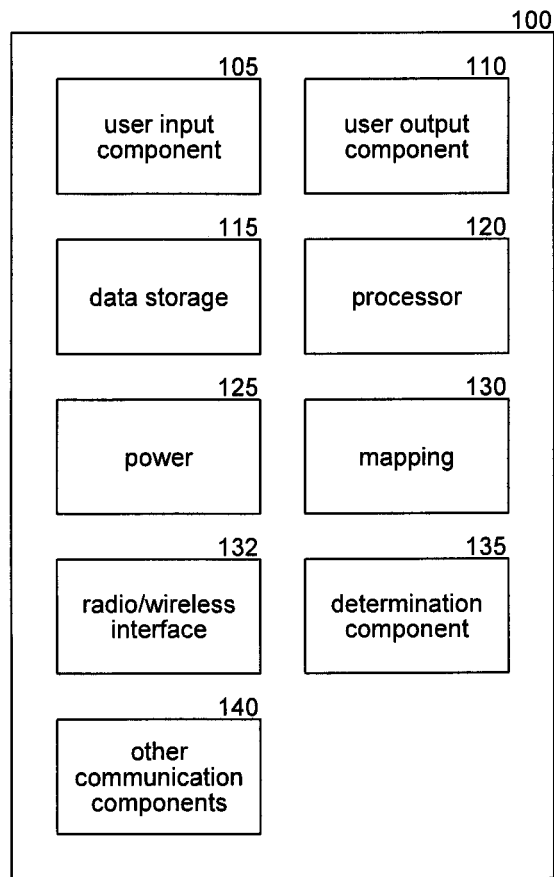


FIG. 1

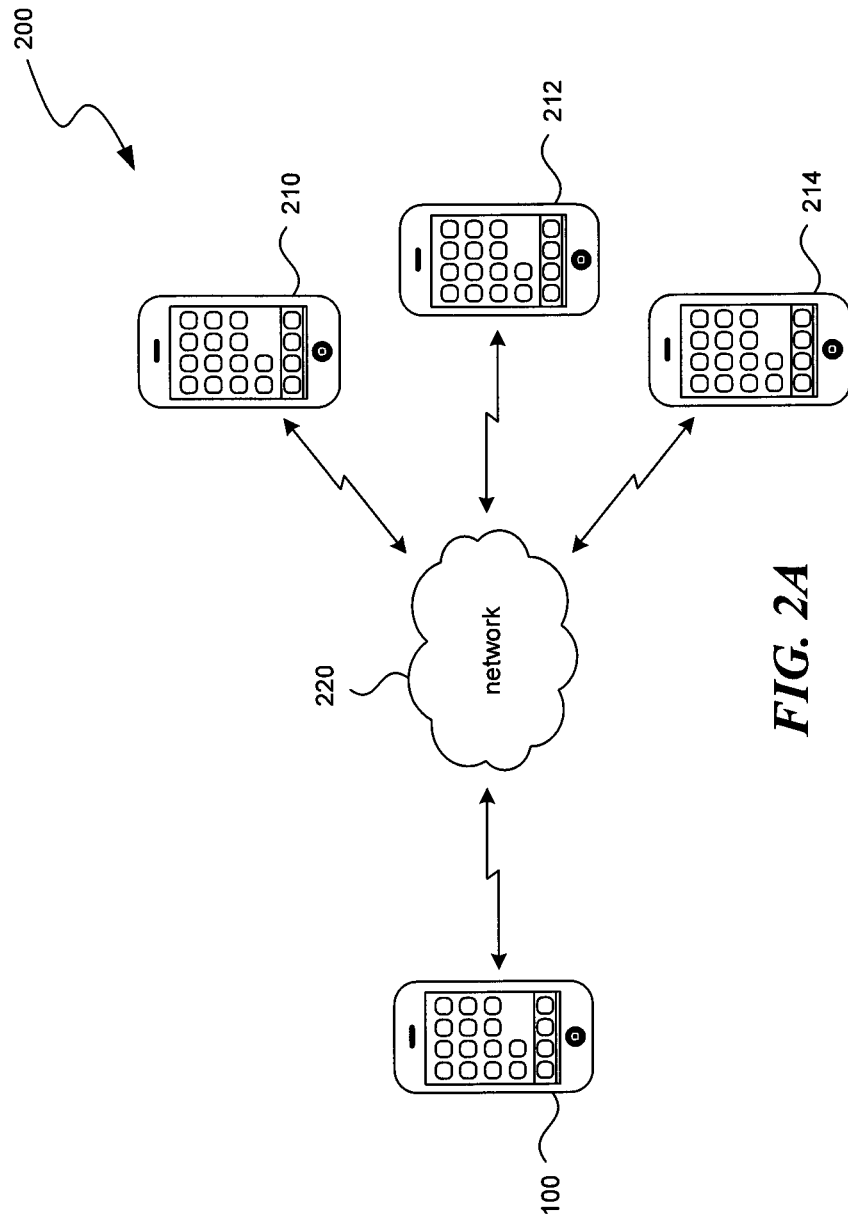


FIG. 2A

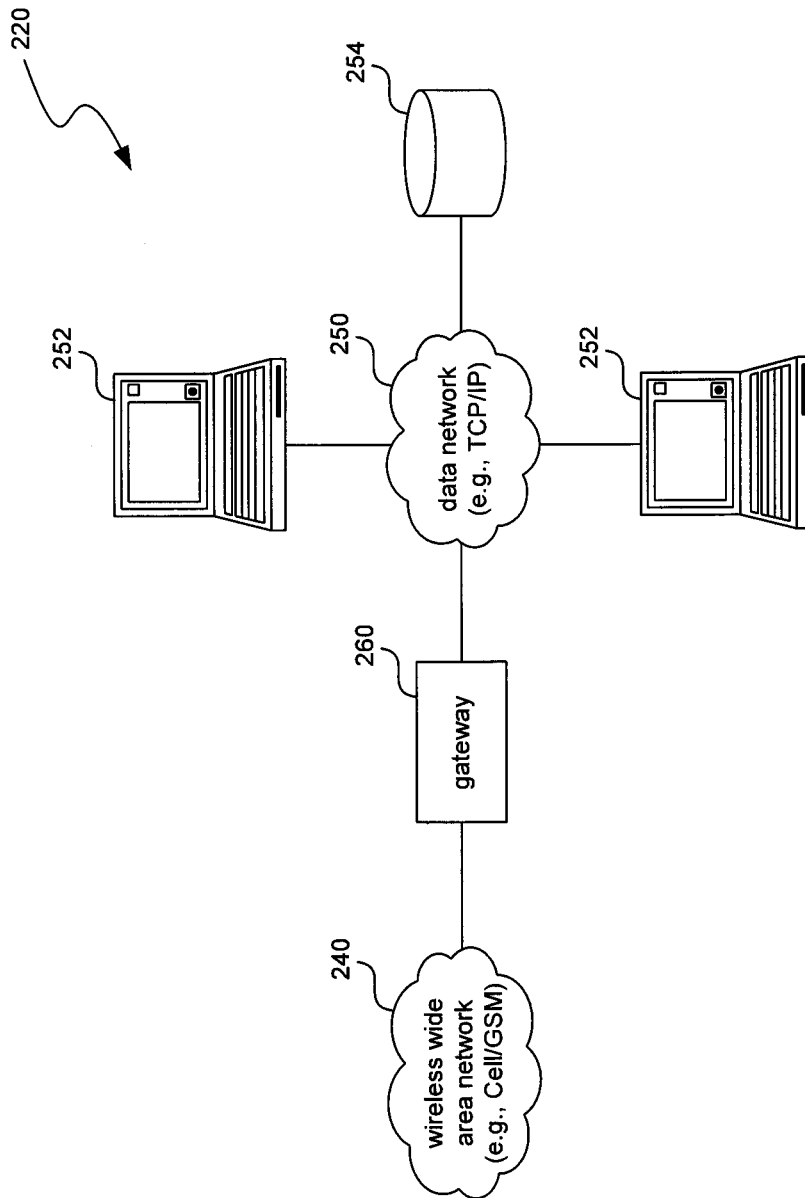


FIG. 2B

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