

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

(10) **Patent No.:** US 7,593,740 B2
(45) **Date of Patent:** Sep. 22, 2009

(54) **LOCATION-BASED SOCIAL SOFTWARE FOR MOBILE DEVICES**

(75) Inventors: **Dennis P. Crowley**, New York, NY (US);
Alexander M. Rainert, Brooklyn, NY (US)

(73) Assignee: **Google, Inc.**, Mountain View, CA (US)

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

2004/0215793	A1 *	10/2004	Ryan et al.	709/229
2004/0235493	A1 *	11/2004	Ekerborn	455/456.1
2004/0259641	A1	12/2004	Ho	
2005/0003804	A1 *	1/2005	Huomo et al.	455/414.1
2005/0021750	A1	1/2005	Abrams	
2005/0174975	A1 *	8/2005	Mgrdechian et al.	370/338
2005/0177614	A1 *	8/2005	Bourne	709/200
2005/0250516	A1 *	11/2005	Shim	455/456.1
2006/0003804	A1 *	1/2006	Liu	455/557
2006/0080283	A1 *	4/2006	Shipman	707/3

(21) Appl. No.: **11/126,762**

(22) Filed: **May 11, 2005**

(65) **Prior Publication Data**

US 2006/0270419 A1 Nov. 30, 2006

Related U.S. Application Data

(60) Provisional application No. 60/570,410, filed on May 12, 2004.

(51) **Int. Cl.**
H04Q 7/20 (2006.01)

(52) **U.S. Cl.** **455/456.3**; 455/414.2; 455/456.1; 455/457

(58) **Field of Classification Search** 455/456.3, 455/414.1, 266, 414.3, 415, 412.2, 435.1, 455/456.1, 456.2, 463, 466, 517, 452.2, 552.1; 705/10

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,421,669	B1	7/2002	Gilmour et al.	
6,549,768	B1 *	4/2003	Fraccaroli	455/456.3
6,618,593	B1 *	9/2003	Drutman et al.	455/456.3
2003/0162555	A1 *	8/2003	Loveland	455/502
2003/0200192	A1 *	10/2003	Bell et al.	707/1
2004/0189476	A1	9/2004	Borovoy et al.	

OTHER PUBLICATIONS

Roush, "Social Machines," *Technology Review*, Aug. 2005, 11 pages.
"New Cell Phone Services Can Help Manage Your Social Life," at <http://www.ny1.com/ny1/content/index.jsp?stid=101&aid=49781>, Apr. 6, 2005, 2 pages.

"Network Rivalry. With technology, meeting people is a lot easier than getting rid of them," at <http://www.printthis.clickability.com/pt/cpt?action=cpt&title=Dodgeball+-+A+New+Tech> . . . , 2 pages, printed Jul. 20, 2005.

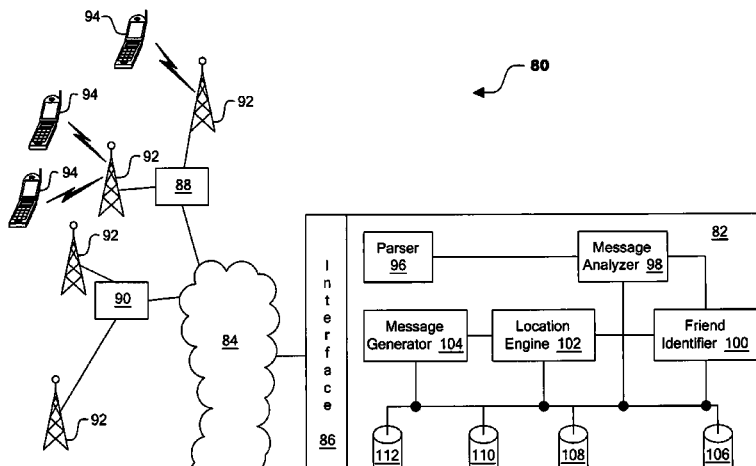
(Continued)

Primary Examiner—John J Lee
(74) *Attorney, Agent, or Firm*—Fish & Richardson P.C.

(57) **ABSTRACT**

A method of establishing connection between users of mobile devices includes receiving at a computer a location of a first user from a first mobile device, receiving from a second mobile device a location of a second user having an acquaintance relationship to the first user, and sending a message to the first mobile device based on the proximity of the first user to the second user.

21 Claims, 16 Drawing Sheets



OTHER PUBLICATIONS

- Terdiman, "MoSoSos Not So So-So," *Wired News*, at <http://www.wired.com/news/culture/0,1284,66813,00.html?tw=rss.TOP>, Mar. 8, 2005, 3 pages.
- Dixit, "The Artful-and Mobile-Dodger," *IEEE Spectrum Online*, at <http://dodgeball.com/press/ieee/>, 3 pages, printed Jul. 20, 2005.
- Baig, "Love growing strong on Web," *USA TODAY*, at <http://usatoday1.printthis.clickability.compt/cpt?action=cpt&title=USATODAY.com++Lo> . . . , 4 pages, printed Jul. 21, 2005.
- Spanbauer and Bass, "The New Web Challengers," *PC World*, at <http://www.pcworld.com/resource/printable/article/0,aid,118794,00.asp>, 10 pages, Feb. 2005.
- "The Future of Wireless," *Corante*, at <http://www.corante.com/vision/wireless/dodgeball.php>, 6 pages, printed Jul. 21, 2005.
- Chapell, "2005 Privacy & Marketing Predictions," *iMedia Connection*, at <http://www.imediaconnection.com/content/4881.asp>, 3 pages, printed Jul. 21, 2005.
- Stephenson, "10 homeland security technologies to watch in 2005," at <http://www.stephensonstrategies.com/stories/2005/01/05/10HomelandSecurity/Technolo.ht> . . . , 4 pages, printed Jul. 21, 2005.
- "Only Disconnect. What the man who gave us the answering machine means to the story of technological avoidance," *The New York Times Magazine*, Dec. 26, 2004, 2 pages.
- "Spotlight. On the Move. What will shape our mobile lifestyle in 2005," *Fast Forward 2005*, Nov. 2004, 2 pages.
- "Coming Together," *Newsweek*, Nov. 1, 2004, 2 pages.
- "Automate Your Nightlife. With Dodgeball.com, You May Never Drink Alone Again," *Mobile PC*, Oct. 2004, 1 page.
- "Mobile Dodgeball," *The San Diego Union—Tribune*, at <http://signonsandiego.printthis.clickability.com/pt/cptaction=cpt?&title=Site+seeing+%7C> . . . , 1 page, Sep. 27, 2004.
- "Cell Phone Tag," *Philadelphia Citypaper.net*, at <http://citypaper.net/articles/2004-09-23/naked.shtml>, Sep. 23-29, 2004, 2 pages.
- "Giving serendipity a nudge," *Newsday*, Sep. 7, 2004, 2 pages.
- "Dodgeball.com Sets Friends in Motion," *NPR*, at <http://www.npr.org/templates/story/story.php?storyId=3866348>, Aug. 23, 2004, 1 page.
- "Mobile phone tag," *Red Herring*, at <http://www.redherring.com/PrintArticle.aspx?a=10792§or=Industries>, Aug. 11, 2004, 3 pages.
- "Community Chest," *LA Weekly*, at <http://www.dodgeball.com/press/laweekly.php>, Aug. 6-12, 2004, 2 pages.
- "Roger Dodger," *Los Angeles Magazine*, Aug. 2004, 1 page.
- "For More Advertisers, the Medium Is the Text Message," *The Wall Street Journal*, Aug. 2, 2004, 1 page.
- "Social Lives of a Cell Phone," *TechnologyReview.com*, at http://www.technologyreview.com/articles/04/07/wo_bender071204.asp?p=0, Jul. 12, 2004, 3 pages.
- "We R@Star Shoes, send reinforcements," *The Los Angeles Times*, Jul. 8, 2004, 2 pages.
- "Jargon Watch," *Wired*, Jul. 2004, 2 pages.
- "That's what friends R 4," *Wireless Review*, at http://wirelessreview.com/art/wireless_thats_friends, Jun. 1, 2004, 2 pages.
- "Mobile Party Finder," *Wired*, Jun. 2004, 2 pages.
- "A Posse That Fits in the Palm of Your Hand," *Time*, May 31, 2004, 2 pages.
- "Language of Love for the High-Tech Set," at http://foxnews.com/printer_friendly_story/0.3566.120921.00.html, May 27, 2004, 2 pages.
- Kandel, "A Mobile Link for 90 Mutual Friends," *The New York Times*, May 13, 2004, 3 pages.
- "So Happy Together," *Newsweek*, May 10, 2004, 2 pages.
- "Dodgeball Expanding," at http://smartmobs.com/archive/2004/04/20/dodgeball_expan.html, Apr. 20, 2004, 1 page.
- "The Dodgeball circle expands," at <http://www.engadget.com/entry/4979865886576287/>, Apr. 21, 2004, 2 pages.
- "Dodgeball" at <http://weblogs.macromedia.com/jd/archives/2004/04/dodgeball.cfm>, Apr. 20, 2004, 1 page.
- "Friendster for Mobile Phones' Expands," at <http://www.textually.org/textually/archives/2004/04/003575.htm>, Apr. 20, 2004, 1 page.
- "Friendster for your mobile phone," at <http://www.trendcentral.com/trends/trendarticle.asp?tcArticleId=1082>, printed Jul. 21, 2005, 1 page.
- "MoSoSo," at <http://www.boingboing.net/2004/04/13/mososo.html>, Apr. 13, 2004, 1 page.
- "MoSoSo," at <http://crystalstips.typepad.com/wonderland/2004/04/dodgeball.html>, Apr. 2004, 3 pages.
- "More Reminders: Dodgeball = Phonester," at http://www.gawker.com/topic/more_reminders_dodgeball_phonester_014834.php, Apr. 7, 2004, 1 page.
- "Friendster for your mobile phone," at <http://www.kottke.org/re-mainder/04/04/5343.html>, Apr. 6, 2004, 3 pages.
- Frauenfelder, "The Wireless Hook-Up," at http://www.thefeaturearchives.com/topic/Culture/The_Wireless_Hook-Up.html, Jan. 7, 2004, 2 pages.
- Sweetingham, "Circle line. Let your cell phone keep tabs on your friends," *Time Out NY*, Dec. 4-11, 2003, p. 174.
- "dodgeball.com is like Friendster for your mobile phone," at <http://www.smartfone.net/19/435.html>, Apr. 7, 2004, 2 pages.
- "Mobile Beacons," at <http://socialtwister.com/archives/000132.html>, Apr. 7, 2004, 1 page.
- "Dodgeball.Social Beta Launch . . .," at <http://wireless.webloginsinc.com/entry/1365141061548149/>, Apr. 6, 2004, 2 pages.
- "Dodgeball.social," at <http://www.smartmobs.com/archive/2004/04/06/dodgeballsocia.html>, Apr. 6, 2004, 1 page.
- "Dodgeball.com," at <http://www.zephorio.org/thoughts/archives/2004/04/07/dodgeballcom.html>, Apr. 7, 2004, 1 page.
- "Dodgeball.social . . . NJASNT (Not Just Another Social Networking Tool)," at <http://www.splatt.com/au/blog/archives/000329.html>, Apr. 7, 2004, 1 page.
- "Dodgeball.com is like Friendster for your mobile phone," at <http://www.esato.com/board/viewtopic.php?topic=55533>, Apr. 7, 2004, 1 page.
- Dodgeball.com. "About Dodgeball.com." [retrieved on Feb. 21, 2009] Retrieved from the Internet: <URL:http://web.archive.org/web/20031206011504/dodgeball.com/mktg_about.pphp>.
- Dodgeball.com. "Create a circle and invite your friends." [retrieved on Feb. 21, 2009] Retrieved from the Internet: <URL:http://web.archive.org/web/20031207092536/dodgeball.com/main_circles.php>.
- Dodgeball.com. "Home Page." [retrieved on Feb. 21, 2009] Retrieved from the Internet: <URL:<http://web.archive.org/web/2001109202500/www.dodgeball.com/city/>>.
- Dodgeball.com. "Join Dodgeball.Circles." [retrieved on Feb. 21, 2009] Retrieved from the Internet: <URL:<http://web.archive.org/web/20030803174729/www.dodgeball.com/city/circles/join.aspx>>.
- Dodgeball.com. "New York City Edition." [retrieved on Feb. 21, 2009] Retrieved from the Internet: <URL:<http://web.archive.org/web/20040102160151/http://dodgeball.com/>>.
- Flickr. "The Dodgeball Shut-Down Party." [retrieved on Feb. 21, 2009] Retrieved from the Internet: <URL:<http://flickr.com/photos/dpstyles/3294855253/>>.

* cited by examiner

10 →

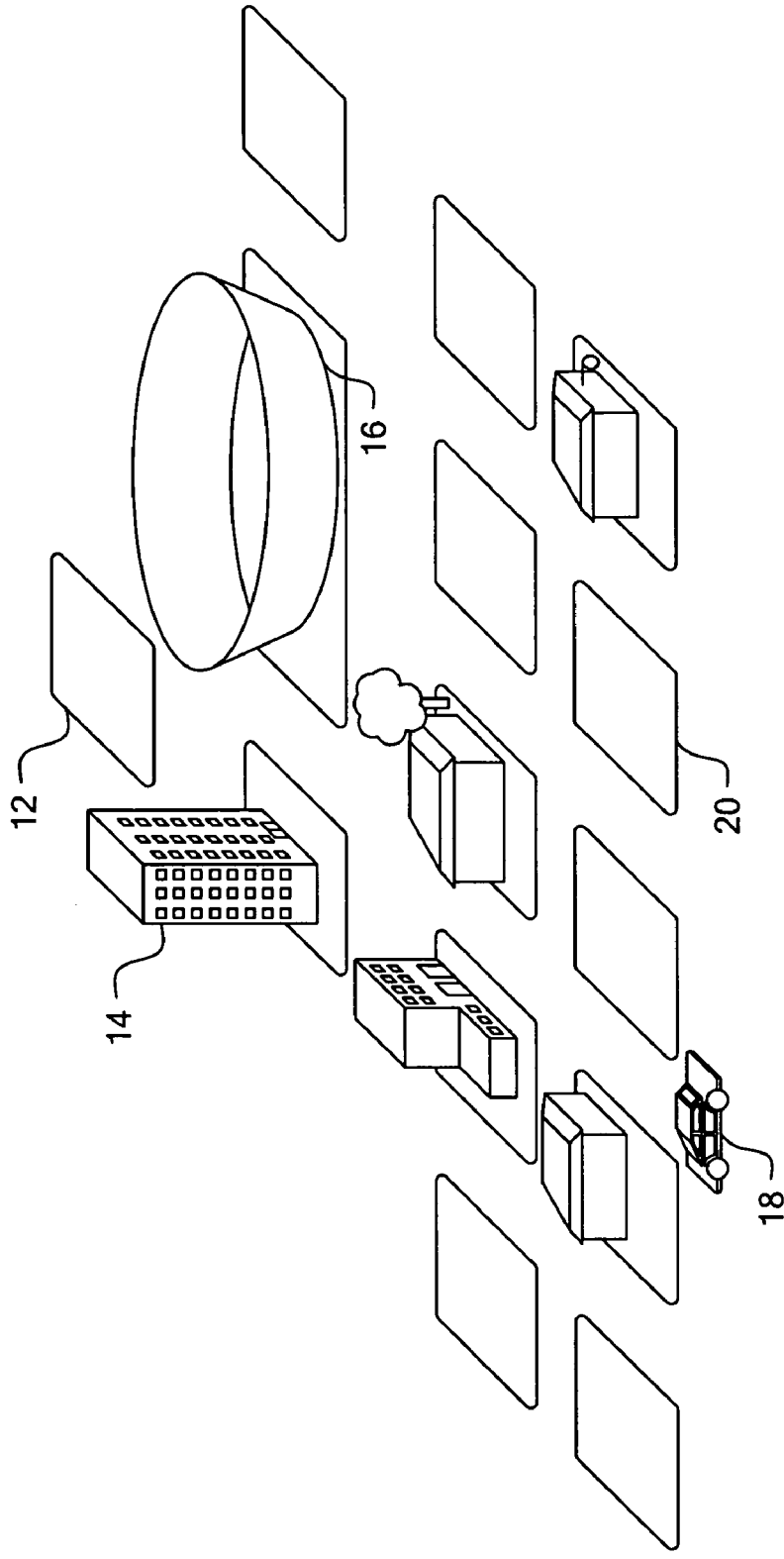


FIGURE 1

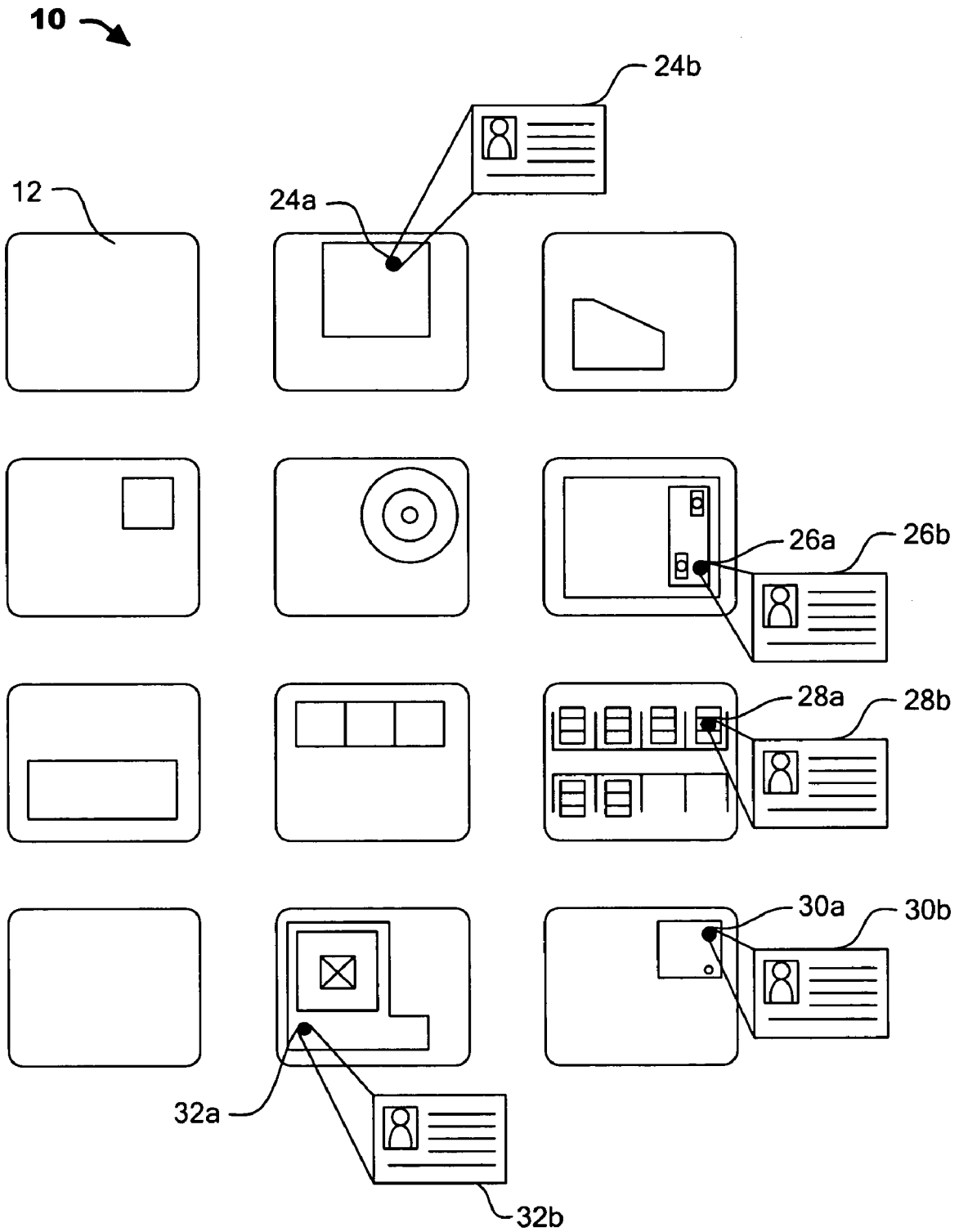
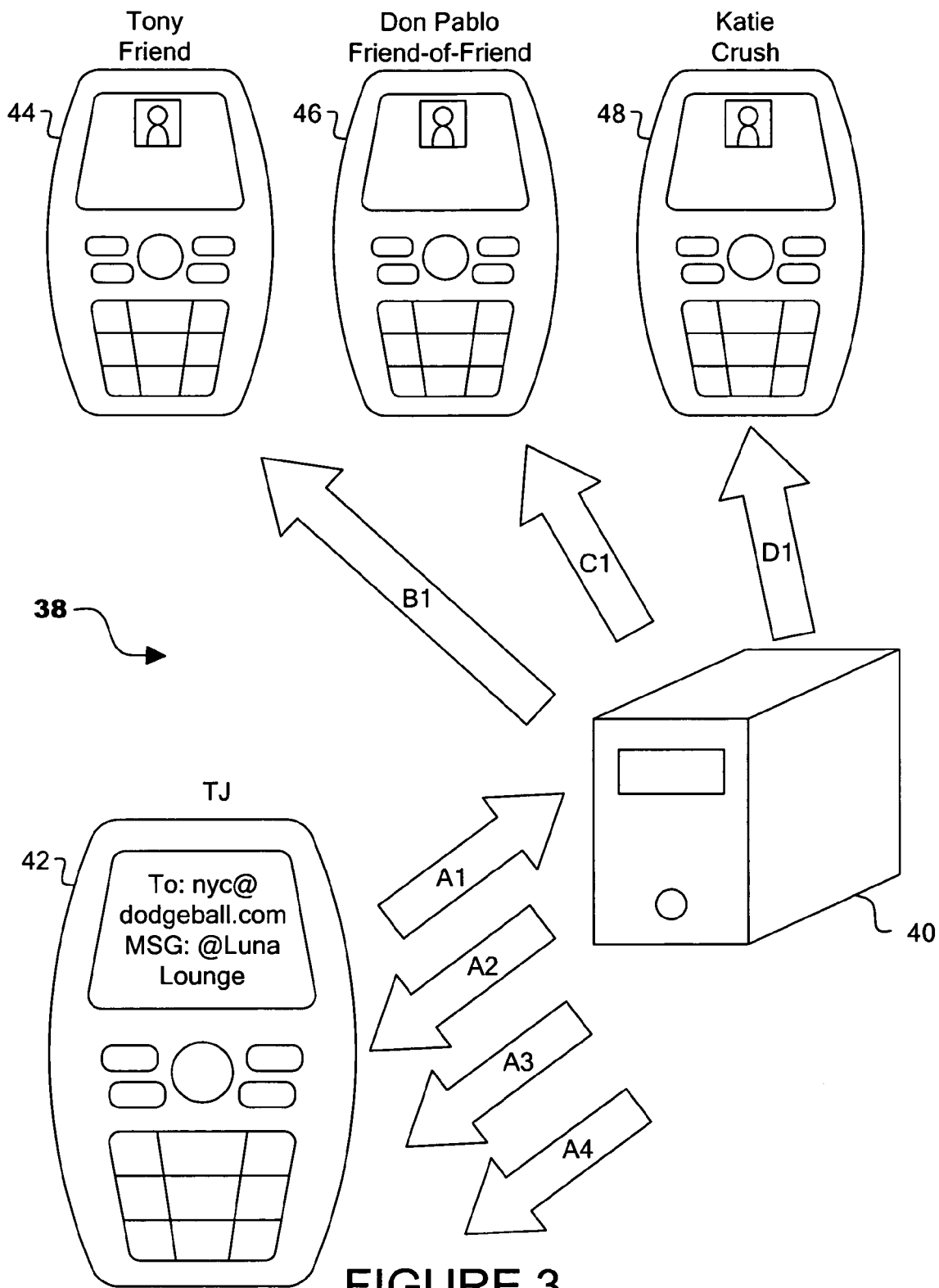


FIGURE 2



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.