US008793336B2

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

(10) **Patent No.: US 8,793,336 B2**
(45) **Date of Patent: *Jul. 29, 2014**

(54) **METHOD, APPARATUS AND SYSTEM FOR MANAGEMENT OF INFORMATION CONTENT FOR ENHANCED ACCESSIBILITY OVER WIRELESS COMMUNICATION NETWORKS**

(75) Inventors: **David Walker Harper**, Bay Shore, NY (US); **Jason James Sabella**, Coram, NY (US); **William Henry Munch**, Tampa, FL (US)

(73) Assignee: **Wireless Ink Corporation**, East Islip, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 421 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **13/364,950**

(22) Filed: **Feb. 2, 2012**

(65) **Prior Publication Data**

US 2014/0149874 A1 May 29, 2014

Related U.S. Application Data

(63) Continuation of application No. 13/027,519, filed on Feb. 15, 2011, now Pat. No. 8,135,801, which is a continuation of application No. 12/548,928, filed on Aug. 27, 2009, now Pat. No. 7,908,342, which is a continuation of application No. 10/464,526, filed on Jun. 18, 2003, now Pat. No. 7,599,983.

(60) Provisional application No. 60/389,430, filed on Jun. 18, 2002.

(51) **Int. Cl.**
G06F 15/16 (2006.01)

(52) **U.S. Cl.**
USPC **709/217**; 709/223; 709/232; 709/200; 709/248; 715/204; 715/205; 715/234; 370/400; 370/410; 370/413

(58) **Field of Classification Search**
USPC 709/217, 204, 223, 231
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,727,156 A 3/1998 Herr-Hoyman et al.
5,870,552 A 2/1999 Dozier et al.

(Continued)

FOREIGN PATENT DOCUMENTS

EP 1132847 A2 9/2001
EP 1 213 883 A1 6/2002

(Continued)

OTHER PUBLICATIONS

A. Neibauer, "How to Do Everything with Yahoo!," 2000, pp. cover page, copyright page, 3-20, 21-54, 467-491, Osborne McGraw Hill, Berkely, California.

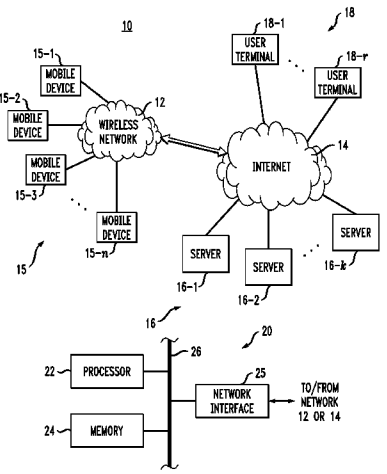
(Continued)

Primary Examiner — Jude Jean Gilles
(74) *Attorney, Agent, or Firm* — Ryan, Mason & Lewis, LLP

(57) **ABSTRACT**

Information content is managed in a network-based communication system by providing a first web-based interface accessible to a first user, the first web-based interface being configured to permit the first user to designate at least one data source that is external to the first web-based interface, maintaining persistent information content on behalf of the first user including content obtained from the data source designated by the first user, and generating a second web-based interface different than the first web-based interface, wherein access to at least a portion of the persistent information content is provided to each of one or more additional users via the second web-based interface in a manner controlled by the first user via the first web-based interface to thereby facilitate interaction between the first and additional users. The first and second web-based interfaces may comprise respective content management and mobile web sites.

27 Claims, 48 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

5,945,989	A	8/1999	Freishtat et al.	
5,960,074	A	9/1999	Clark	
5,983,227	A	11/1999	Nazem et al.	
6,020,884	A	2/2000	MacNaughton et al.	
6,035,119	A	3/2000	Massena et al.	
6,065,120	A	5/2000	Laursen et al.	
6,167,253	A	12/2000	Farris et al.	
6,199,077	B1	3/2001	Inala et al.	
6,199,099	B1	3/2001	Gershman et al.	
6,199,157	B1	3/2001	Dov et al.	
6,233,608	B1	5/2001	Laursen et al.	
6,263,352	B1	7/2001	Cohen	
6,268,851	B1	7/2001	Bricklin et al.	
6,304,746	B1	10/2001	Fascenda et al.	
6,311,058	B1	10/2001	Wecker et al.	
6,313,835	B1	11/2001	Gever et al.	
6,343,302	B1	1/2002	Graham	
6,356,543	B2	3/2002	Hall et al.	370/352
6,356,905	B1	3/2002	Gershman et al.	
6,363,392	B1	3/2002	Halstead et al.	
6,421,717	B1	7/2002	Kloba et al.	
6,438,575	B1	8/2002	Khan et al.	
6,445,777	B1	9/2002	Clark	
6,453,361	B1	9/2002	Morris	
6,493,758	B1	12/2002	McLain	
6,496,849	B1	12/2002	Hanson et al.	
6,546,397	B1	4/2003	Rempell	
6,553,412	B1	4/2003	Kloba et al.	
6,560,639	B1	5/2003	Dan et al.	
6,628,934	B2	9/2003	Rosenberg et al.	
6,658,464	B2	12/2003	Reisman	
6,668,353	B1	12/2003	Yurkovic	
6,670,968	B1	12/2003	Schilit et al.	
6,691,158	B1	2/2004	Douvikas et al.	
6,738,950	B1	5/2004	Barnett	
6,757,530	B2	6/2004	Rouse et al.	
6,760,046	B2	7/2004	I'Anson et al.	
6,763,388	B1	7/2004	Tsimelzon	
6,769,009	B1	7/2004	Reisman	
6,779,019	B1	8/2004	Mousseau et al.	
6,779,042	B1	8/2004	Kloba et al.	
6,807,574	B1 *	10/2004	Partovi et al.	709/224
6,834,306	B1	12/2004	Tsimelzon	
6,871,220	B1	3/2005	Rajan et al.	
6,879,965	B2 *	4/2005	Fung et al.	705/39
6,920,488	B1	7/2005	Le Pennec et al.	
6,993,575	B2	1/2006	Abkowitz et al.	
7,003,546	B1	2/2006	Cheah	
7,020,845	B1	3/2006	Gottfurcht et al.	
7,024,464	B1	4/2006	Lusher et al.	
7,051,045	B2	5/2006	Cirinna et al.	
7,058,510	B2	6/2006	Kelly et al.	
7,072,967	B1	7/2006	Saulpaugh et al.	
7,092,370	B2 *	8/2006	Jiang et al.	370/329
7,136,645	B2	11/2006	Hanson et al.	
7,158,625	B2 *	1/2007	Casaccia	379/207.02
7,203,948	B2	4/2007	Mukundan et al.	
7,263,547	B2	8/2007	Kloba et al.	
7,277,927	B2 *	10/2007	Rensin et al.	709/219
7,380,250	B2	5/2008	Schechter et al.	
7,392,308	B2	6/2008	Aufricht et al.	
7,412,518	B1	8/2008	Duigou et al.	
7,475,346	B1	1/2009	Bullock et al.	
7,487,204	B2	2/2009	Asthana et al.	
7,574,208	B2	8/2009	Hanson et al.	
7,574,486	B1	8/2009	Cheng et al.	
7,590,681	B1	9/2009	Chang et al.	
7,599,983	B2	10/2009	Harper et al.	709/200
7,802,207	B2	9/2010	Agboatwalla et al.	
2001/0012281	A1	8/2001	Hall et al.	
2001/0034746	A1	10/2001	Tsakiris et al.	
2001/0034765	A1	10/2001	Bimson et al.	
2001/0039571	A1	11/2001	Atkinson	
2001/0044824	A1	11/2001	Hunter et al.	
2001/0051979	A1	12/2001	Aufricht et al.	
2001/0054087	A1	12/2001	Flom et al.	
2002/0016801	A1	2/2002	Reiley et al.	
2002/0018078	A1	2/2002	Khan et al.	
2002/0021794	A1	2/2002	Kemppainen	
2002/0024536	A1	2/2002	Kahan et al.	
2002/0029252	A1	3/2002	Segan et al.	
2002/0032785	A1	3/2002	Britt, Jr.	
2002/0035609	A1	3/2002	Lessard et al.	
2002/0046353	A1	4/2002	Kishimoto	
2002/0049777	A1	4/2002	Terayama et al.	
2002/0049831	A1	4/2002	Platner et al.	
2002/0052895	A1	5/2002	Keating	
2002/0054090	A1	5/2002	Silva et al.	
2002/0057678	A1 *	5/2002	Jiang et al.	370/353
2002/0059397	A1	5/2002	Feola et al.	
2002/0062397	A1	5/2002	Chang et al.	
2002/0073149	A1	6/2002	Young	
2002/0090934	A1	7/2002	Mitchelmore	
2002/0091762	A1	7/2002	Sohn et al.	
2002/0105539	A1	8/2002	Gamzon et al.	
2002/0116534	A1	8/2002	Teeple	
2002/0120757	A1	8/2002	Sutherland et al.	
2002/0120779	A1	8/2002	Teeple et al.	
2002/0129094	A1	9/2002	Reisman	
2002/0156702	A1	10/2002	Kane	
2002/0165988	A1	11/2002	Khan et al.	
2002/0174191	A1	11/2002	Robertson et al.	
2002/0194194	A1	12/2002	Fenton et al.	
2002/0194195	A1	12/2002	Fenton et al.	
2002/0194502	A1	12/2002	Sheth et al.	
2003/0004984	A1	1/2003	Chou	
2003/0013492	A1	1/2003	Bokhari	
2003/0052912	A1	3/2003	Bowman, Jr. et al.	
2003/0105812	A1	6/2003	Flowers, Jr. et al.	
2003/0115288	A1	6/2003	Ljubicich et al.	
2003/0117436	A1	6/2003	Kautto-Koivula et al.	
2004/0015567	A1	1/2004	Ziebold et al.	
2005/0177645	A1	8/2005	Dowling et al.	
2005/0210101	A1	9/2005	Janik	
2007/0073845	A1	3/2007	Reisman	

FOREIGN PATENT DOCUMENTS

KR	10-2001-0025658	A	4/2001
KR	2001-0094912	A	11/2001
KR	2002-0006722	A	1/2002
WO	0054178	A2	9/2000
WO	0101586	A2	1/2001
WO	0116781	A1	3/2001
WO	0135658	A1	5/2001
WO	0161560	A1	8/2001
WO	0180091	A2	10/2001
WO	0182103	A1	11/2001
WO	0182139	A1	11/2001
WO	0182621	A1	11/2001
WO	0190873	A1	11/2001
WO	0206981	A1	1/2002
WO	0217136	A1	2/2002
WO	0219153	A1	3/2002
WO	0231624	A2	4/2002

OTHER PUBLICATIONS

B. Hill, Yahoo! for Dummies, 2001, pp. cover page,copyright page, 23-38, 57-78, 93-101, 243-262; 2nd edition, IDG Books Worldwide, Inc., Foster City, California.

A.M. Agboatwalla et al., U.S. Appl. No. 60/340,405, filed Dec. 13, 2001.

R. Hoeg, "Virtual Accordian Clubs from Yahoo!(Minnesota Accordion Club)," posted on the Internet through Usenet on Dec. 1, 1998, pulled from google Groups (http://groups.google.com/group/rec.music.makers.squeezebox/msg/bad62e373462c6a6).

D. Fox et al., Web Publisher's Construction Kit with HTML 3.2, pp. cover page, copyright p. 15-16, The Waite Group, Inc., Corte Madera, California.

A. Freedman, The Computer Glossary: The Complete Illustrated Dictionary, 2001, pp. cover page, copyright page, 437-438, 9th edi-

(56) **References Cited**

OTHER PUBLICATIONS

tion, AMACOM American Management Association, New York, New York.
Discovery Documents produced by Internet Archive regarding ClickMark in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of documents numbered JDC0010331-JDC0010505.
Discovery Documents produced by Internet Archive regarding ClickMark in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of documents numbered JDC0010518-JDC0010582, JDC0010587-JDC0010615, JDC0010622-JDC0010647, JDC0011882-JDC0011890, JDC0012051-JDC0012052, JDC0012057-JDC0012063, JDC0012070-JDC0012071, and JDC0012075.
Discovery Documents produced by Internet Archive regarding ClickMark in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos, 10-CV-1841 and 11-CV-1751, compilation of documents numbered UK00047, UK00122, UK00123 and UK00133.
Discovery Documents produced by Internet Archive regarding Yahoo! GeoCities in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, documents numbered JDC0010648-JDC0010657.
Discovery Documents produced by Internet Archive regarding Buzzed in *Wireless Ink Corporation* v.*Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, documents numbered JDC0013173-JDC0013174, and JDC0013184.
Discovery Documents produced by Internet Archive regarding TagTag in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, documents numbered JDC0013175-JDC0013183.
Discovery Documents produced by Internet Archive regarding SantanaBuilder in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos, 10-CV-1841 and 11-CV-1751, documents numbered JDC0013185-JDC0013187.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files containing documents numbered UKN1754-UKN1875 and UKN1877-UKN1879.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files containing documents numbered UKN3301-UKN3399.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. at al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files containing documents numbered UKN3400-UKN3475.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files titled UKNS9 containing documents numbered UKN3476-UKN3550.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc, et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files titled UKNS10 containing documents numbered UKN3551-UKN3584, UKN3592-UKN3597, UKN3600, UKN3602-UKN3609, UKN3611, UKN3613, UKN3614, UKN3616, UKN3620, UKN3622, UKN3623, UKN3625, UKN3627, UKN3629-UKN3642, UKN3644-UKN3657, UKN3659 and UKN3660.
K. Maly et al., "Personalized Portal for Wireless Devices," Old Dominion Univeristy Dept. of Computer Science Technical Report TR_2000_07, Nov. 7, 2000, 9 pages.
G. Rossi et al., "Desigining Personalized Web Applications," Proceedings of the Tenth International World Wide Web Conference (WWW10), Hong Kong, May 2001, 4 pages.
C-H.H. Rao et al., "iMobile: a Proxy-Based Platform for Mobile Services," Proceedings of the First Workshop on Wireless Mobile Internet (WMI '01), Rome, Italy, Jul. 2001, 9 pages.
G. Samaras et al., "A Flexible Personalization Architecture for Wireless Internet Based on Mobile Agents," Proceedings of the Sixth East-European Conference on Advances in Databases and Information Systems (ADBIS 2002) Bratislava. Slovakia, Sep. 2002, 14 pages.
C.R. Anderson et al., "Personalizing Web Sites for Mobile Users," Proceedings of the Tenth International World Wide Web Conference (WWW10), Hong Kong, May 2001, 11 pages.
J.P. Mysore et al., "A Reconfigurable Stream Orchestration Framework for Mobile Users," Proceedings of the Third International Conference on Mobile Data Management (MDM '02), Singapore, Aug. 2002, 8 pages.
P. Brusilovsky., "Adaptive Hypermedia," User Modeling and User-Adaptive Interaction, 2001, pp. 87-110, vol. 11, Kluwer Academic Publishers, Netherlands.
J. Freire et al., "Web Services and Information Delivery for Diverse Environments," Proceedings of the Very Large Data Bases (VLDB) Workshop on Technologies for E-Services, Cairo, Egypt, Sep. 2000, 16 pages.
J. Freire et al. "Web Views: Accessing Personalized Web Content and Services" Proceedings of the Tenth International World Wide Web Conference (WWW10), Hong Kong, May 2001, 11 pages.
R. Hull et al., "Have it Your Way: Personalization of Network-Hosted Services," Proceedings of the 19th British Conference on Databases (BNCOD 19), Sheffield, UK, Jul. 2002, 10 pages.
N.M. Sadeh et al. "MyCampus: An Agent-Based Environment for Context-Aware Mobile Services," Proceedings of the Workshop on Ubiquitous Agents on Embedded, Wearable and Mobile Devices, First International Joint Conference on Autonomous Agents & Multiagent Systems, Bologna, Italy, Jul. 2002, 3 pages.
A. Tsalgatidou et al., "Business Models and Transactions in Mobile Electronic Commerce: Requirements and Properties," Computer Networks, 2001, pp. 221-236, vol. 37, Elsevier Science B.V.
A. Schmidt et al., "WAP-Designing for Small User Interfaces," Extended Abstracts, Conference on Human Factors in Computing Systems (CHI 2000), Hague, Netherlands, Apr. 2000, pp. 187-188.
N. Daswani et al., "Secure Wireless Aggregation," RSA Conference 2001, San Francisco, CA, Apr. 2001, 10 pages.
W. Shi et al., "CONCA: An Architecture for Consistent Nomadic Content Access" Proceedings of the Workshop on Caching, Coherence, and Consistency (WC3 '01), Sorrento, Italy, Jun. 2001, 10 pages.
R. Han et al. "WebSplitter: A Unified XML Framework for Multi-Device Collaborative Web Browsing," Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW) 2000, Philadelphia, Pennsylvania, Dec. 2000, 10 pages.
U. Farooq et al., "M-Education: Bridging the Gap of Mobile and Desktop Computing," Proceedings of the IEEE International Workshop on Wireless and Mobile Technologies in Education (WMTE '02), Sweden, Aug. 2002, 4 pages.
U. Farooq et al., "MOOsburg++: Moving Towards a Wireless Virtual Community," Proceedings of the 2002 International Conference on Wireless Networks (ICWN 2002), Las Vegas, Nevada, Jun. 2002, 4 pages.
J. Freire, "Using Wrappers for Device Independent Web Access: Opportunities Challenges and Limitations," Extended Abstract Presented at Portland State University, Portland Oregon, Feb. 2003, 12 pages.
C. Hillebrand et al, "Mobile Communities—Extending Online Communities into the Real World," Proceeding of Mobile and Collaborative Business 2002, Germany, 2002, 12 pages.
T. Huynh, "Developing WAP Services with Allaire's ColdFusion, " Master's Thesis in Computer Science Final Report, The Royal Institute of Technology, Stockholm, Jul. 2000, 59 pages.
S-T. Cheng et al., "A New Framework for Mobile Web Services," Proceedings of of the 2002 Symposium on Applications and the Internet (SAINT '02w), Japan, Jan. 2002, 5 pages.
Z. Lei et al., "Context-Based Media Adaptations in Pervasive Computing," Canadian Conference on Electrical and Computer Engineering, Toronto, Ontario, Canada, May 2001, 7 pages.
V. Anupam et al., "Personalizing the Web Using Site Descriptions," Proceedings of the Tenth International Workshop on Database and Expert Systems Applications, Florence, Italy, 1999, 7 pages.

(56) **References Cited**

OTHER PUBLICATIONS

R. Barta et al., "Syndication with JML," Proceedings of the 2000 ACM Symposium on Applied Computing (SAC '00), Mar. 2000, pp. 962-970 vol. 2, Como ,Italy.
P. Bellavista et al., "A Mobile Agent Infrastructure for Terminal, User and Resource Mobility," 2000 IEEE/IFIP Network Operations and Management Symposium (NOMS), Honolulu, Hawaii, Apr. 2000, 14 pages.
Transcript of Claim Construction Hearing, *Wireless Ink Corporation* v. *Facebook Inc.*, Case No. 11-CV-1751 (PCK), S.D.N.Y., Nov. 9, 2011, 50 pages.
M. Wagner et al., "A Roadmap to Advanced Personalization of Mobile Services," Proceedings of the 10th International Conference on Cooperative Information Systems (CoopIS 2002), Irvine, California, 2002, 5 pages.
D.E. Bernholdt et al., "Tools for Handheld Supercomputing: An Assessment of the Wireless Application Protocol (WAP)," ERDC PET project Technical Report, May 30, 2000, 32 pages.
S. Hochstetler et al., "Introducing Tivoli Personalized Services Manager 1.1," IBM Redbooks, Jun. 2001, 340 pages.
I. Vos et al., "The Essential Guide to Mobile Business," 2002, pp. 215-218, Prentice Hall PTR, Upper Saddle River, New Jersey.
N. Whitfield, "The Official AOL UK Handbook Version 6.0," 2001, pp. 241-416 and 484-571, Capstone Publishing Limited, Oxford, United Kingdom.
Phone.com, "Enabling the Wireless Internet: Why You Should Develop Applications Using the Phone.com WAP Solution," Jan. 2000, 12 pages.
Phone.com, "Understanding Security on the Wireless Internet: How WAP Security is Enabling Wireless E-commerce Applications for Today and Tomorrow," Jan. 2000, 12 pages.
GURUbooks.com, "Join the Wireless Web Revolution with . . . Yahoo!," Mobile Guru Series, 2001, 10 pages.
A. Neibauer, "How to Do Everything with Yahoo!," 2000, pp. 115-180, Osborne/McGraw-Hill, Berkeley California.
K. Binder, "The Complete Idiot's Guide to Mac OS X," 2002, pp. 97-104 and 141-183, Alpha Books, United States of America.
T. Stauffer, "How to Do Everything with Your iMAC Third Edition," 2001, pp. 355-369 and 371-380, Osborne/ McGraw-Hill, Berkeley California.
D. Pogue, "Mac OS 9: The Missing Manual," 2000, pp. 243-256, Pogue Press/O'Reilly & Associates, Inc, United States of America.
D. Pogue, "Mac OS X: The Missing Manual," 2002, pp. 181-204 and 433-452, Pogue Press/O'Reilly & Associates, Inc, United States of America.
T. Stauffer, "Mastering Mac OS X," 2001, pp. 335-341, Sybex, United States of America.
G. Steinberg, "Mac OS X Little Black Book," 2001, pp. 395-417, The Coriolis Group, Scottsdale, Arizona.
D. Rittner, "The iMac Book Second Edition," pp. 341-373, The Coriolis Group, Scottsdale, Arizona.
N. Daswani, "Secure Wireless Aggregation," Yodlee, 36 pages.
Upoc.com, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0000177, JDC0000542, JDC0000901, JDC0001546, JDC0001589, JDC0001590 JDC0001593, JDC0001804 through JDC0001819, JDC0001865 through JDC0001867, JDC0004470, JDC0005255, JDC0005697, JDC0005701, JDC0005861 through JDC0005866, JDC0005965, JDC0005963, JDC0005984 through JDC0006002, and JDC0006007 through JDC0006033.
Mobile.yahoo.com, "Overview," archived at http://web.archive.org/web/200101427014927/http://mobile.yahoo.com/phone/tour?.pv=overview&pg=1&.ph=tp, 3 pages.
Aol.com, "Now You Can get AOL Anywhere—Even on Your Cell Phone!," archived at http://web.archive.org/ web/200101240409/http://www.aol.com/anywhere/mobile/main.html, 8 pages.
M. Cagan, "Product Strategy," Silicon Valley Product Group, Oct. 4, 2000, at http://svpg.com/product-strategy/, 8 pages.
"AOL on Pocketnet-alt.cellular," Google Groups, at http://groups.google.com/group/alt.cellular/browse_thread/7ee068aee823a48c/411, 2 pages.
"Cellmania—Leading Provider of M-commerce Solutions Products/Services," Mar. 30, 2001, archived at http://web.archive.org/web/20010330224449/http://corp.cellmainia.com/products_services/mfinder.html, 2 pages.
Aol.com, "AOL Mobile," Feb. 23, 2001, archived at http://web.archive.org/web/20010223223036/http://www.aol.com/anywhere/mobile/mobile_demo.html/, 16 pages.
"Yahoo! Gets Even More Mobile—comp.dcom.telecom," Google Groups, at http://groups.google.com/group/comp.dcom.telecom/browse_thread/thread/9b0d195a707 . . . , 1 page.
Yodlee.com, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0001554 and JDC0001555, 5 pages.
"First Personalized Portal for WAP and Internet Phones Launched by SmartRay Network," Google Groups, at http://groups.google.com/group/alt.cellular.sprintpcs/browse_thread/a3bd0275f122 . . . , 6 pages.
J. Freire et al., "WebViews: Accessing Personalized Web Content and Services," Database Systems Research, Bell Labs, WWW10 Hong Kong, May 2001, 25 pages.
WAPmatic.de, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0005649, JDC0005652 through JDC0005684, JDC0005693 through JDC0005696, JDC0005700, JDC0005703 through JDC0005736, JDC0005741 through JDC0005745, JDC0005754, JDC0005756, and JDC0005811 through JDC0005857.
Wapjag.de, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0005651, JDC0005688, JDC0005689, and JDC0005968.
Wappy.to, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0005746 through JDC0005753.
M. Kuszpa, "room33 With My WAP Page," Maciej Kuszpa on Mobile Social Networks and Mobile Learning, 5 pages.
"room33.com Product Information," Ciao! from bing, 2 pages.
Mbasics.com, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0005859, JDC0005964, JDC0005967, JDC0005971 through JDC0005977, JDC0006005 and JDC0006069.
Hoiley.com, "Homepage," May 11, 2000, archived at http://web.archive.org/web/20000511091935/http://www.hoiley.com/, 1 page.
TagTag.com, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0006036, JDC0006041 through JDC0006045, JDC0006047, JDC0006051 through JDC0006057, and JDC0006071.
myWAP.Genie.de, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0006037 through JDC0006040, JDC0006048, JDC0006072 through JDC0006080, JDC0006084, and JDC0006087 through JDC0006093.
WAPdrive.com, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0006058 through JDC0006067.
Mpresence.com, Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0006070, and JDC0006082 through JDC0006083.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Documents numbered JDC0000140, JDC0005755, JDC0005776, JDC0005808, JDC0005810, JDC0006094 through JDC0006110, JDC0006173, JDC0006827 through JDC0006999, and JDC0007342.

(56) **References Cited**

OTHER PUBLICATIONS

J. Dempsey, "UseNet Contains E-History," The Post-Standard, Dec. 26, 2001, Syracuse, NY.
B. Hill, "Yahoo! for Dummies," http://catalog.dummies.com/product.asp?isbn=0764507621, Internet Archive, Apr. 6, 2001.
Copyright Recordation, "Yahoo! for Dummies," http://cocatalog.loc.gov/, United States Copyright Office.
Memorandum and Order in *Wireless Ink Corporation* v. *Facebook Inc., et al.*, Case Nos. 10 Civ. 1841 and 11 Civ. 1751, Dec. 17, 2013.
Opening Brief for Plaintiff-Appellant Wireless Ink Corporation in *Wireless Ink Corporation* v. *Google, Inc. et al.*, filed in the United States Court of Appeals for the Federal Circuit, Appeal No. 2013-1689, Dec. 10, 2013.
I. Steiner, "Serving Up the Wireless Web: Content to Go," ONLINE Magazine, Sep. 2001, at http://www.onlinemag.net/oI2001/steiner9_01.html, 10 pages.
R. Raskin, "All AOL, All the Time," USA Today, Jul. 17, 2001, at http://ww.usatoday.com/life/cyber/ccarch/2001-07-07-raskin.htm, 3 pages.
Business Wire, "America Online and AT&T Wireless Announce Innovative Mobile Services and Marketing Alliance," Jun. 27, 2001, at http://www.thefreelibrary.com/America+Online+and+AT%26T+Wireless+Announce+Innovative+Mobile+Services . . . -a075947481, 3 pages.
Business Wire, "America Online Delivers 'AOL Mobile' Services to AT&T Wireless Internet Ready Phones," Sep. 5, 2000, at http://www.thefreelibrary.com/America+Online+Delivers+'AOL+Mobile'+Services+to+AT%26T+Wireless . . . -a064994434, 3 pages.
Business Wire, "America Online to Offer Content and Features Through AT&T Wireless Services' Internet-Ready Phones," Jul. 17, 2000, at http://www.thefreelibrary.com/America+Online+to+Offer+Content+and+Features+Through+AT%26T+Wireless . . . -a066877339, 3 pages.
BestStuff.com, "America Online Launches New AOL Anywhere Web Site," Oct. 25, 2000, at http://www.beststuff.com/fromthewire/america-online-launches-new-aol-anywhere-web-s . . . , 2 pages.
Business Wire, "Yahoo! and AT&T Wireless Services Team to Bring Yahoo! Everywhere to AT&T Customers," May 18, 2000, at http://www.thefreelibrary.com/Yahool+and+AT%26T+Wireless+Services+Team+to+Bri . . . , 2 pages.
M. Ginty, "Yahoo! Gets Even More Mobile," Aug. 11, 1999, at http://www.internetnews.com/bus-news/article.php/180411/Yahoo-Gets-Even-More-Mob . . . , 2 pages.
D. Needle, "A Portal for Portables: SmartRay Lets You Transfer E-mail and Other Info Across Mobile Devices," PCWorld, Nov. 9, 1999, at http://www.pcworld.com/article/13699/a_portal_for_portables.html, 3 pages.
J. Newman, "The Next Yahoo?" Wireless Developer Network, accessed Oct. 19, 2011 at http://www.wirelessdevnet.com/channels/wireless/features/nextyahoo.html, 2 pages.
PR Newswire, "First Personalized Portal for WAP and Internet Phones Launched by SmartRay Network," Nov. 3, 1999, at http://www.thefreelibrary.com/First+Personalized+Portal+for+WAP+and+Internet+Phon . . . , 4 pages.
FindArticles.com, "Smartray.com Offers Free Stock Quotes for Wireless Devices," Feb. 2000, at http://findarticles.com/p/articles/mi_hb6452/is_2_11/ai_n28760296/, 3 pages.
PR Newswire, "smartRay.com Unveils Next Generation of Service," Aug. 16, 2000, at http://www.thefreelibrary.com/smartRay.com+Unveils+Next+Generation+of+Service.-a064256981. 3 pages.
Federal Ministry of Education and Research (Germany) "Example of Start-Up: With Fiery Keenness: Peperoni," EXIST: University-based Start-Ups Status and Prospects, Sep. 2001, p. 24.
PR Newswire Europe, "room33 Introduces Advanced Suite of Mobile Internet Applications for GSM, GPRS and UMTS," http://www.prnewswire.co.uk/cgi/news/release?id=62656, 2 pages.
H. Denker, "WAP Under Construction," Connect, Aug. 2, 2001, 10 pages (including translation and Certification Statement).
"Smart.ray.com Signs with 7 Carriers," Business and Industry RCR Radio Communications Report, Jul. 10, 2000, 1 page, vol. 19 No. 28.
Business Wire, "AvantGo Teams with Yahoo! To Deliver Content and Services to Mobile Devices," Jun. 1, 2000, 2 pages.
Dow Jones Business News, "AOL Offers Mobile Services to Sprint PCS Wireless-Web Users," Jun. 15, 2000, 2 pages.
PR Newswire, "SmartRay.com and RestaurantMarket.com Strike Deal to Provide Wireless Bidding Alerts for Resturant Industry; Buyers and Sellers will Receive Instant Notifications on Their Mobile Phones, Pagers and PDAs," May 23, 2000, 2 pages.
Business Wire, "Yahoo! Mobile Goes Live; New Yahoo! Service Enables Users to Get Their Yahoo! Everywhere," Aug. 11, 1999, 2 pages.
Business Wire, "Yahoo! Launches Yahoo! Local Info for Web-enabled Phones; Yahoo! Everywhere Provides Wireless Location-Based Directory to Consumers Across the United States," Feb. 20, 2001, 2 pages.
Dow Jones Business News, "Daily Update—Vivendi Says Decision on Seagram Takeover May Be Imminent," Jun. 15, 2000, 3 pages.
PR Newswire, "Smartray.com Unveils Next Generation of Service; Version 2.0 Combines Easy-to-Use Features Improved Look and Enhanced Accessibility through Desktops and Mobile Devices," Aug. 16, 2000, 2 pages.
PR Newswire, "smartRay.com Delivers Stock Quotes and Financial Information to Wireless Devices for Free!; SmartRay Network Inc. Will Use Advanced Technology to Send Personalized Financial information and News to Your Celluar Phone, Pager, or PDA," Dec. 15, 1999. 2 pages.
D.F. Gray, "America Online Upgrades PC Client Software, Offers Customizable Web Site," Enterprise Networking, Nov. 13, 2000, 2 pages.
PR Newswire, "What's the Difference Between a Press Release and Lying in the Sun? When You Lie in the Sun, You Actually Get Red; Smart RAY.com Launches Wireless Entertainment Channel With 6 Unique Content Partners," Jul. 27, 2000, 2 pages.
Business Wire, "America Online Launches New AOL Anywhere Web Site; One-Stop, Customizable Site Offers Members Access to Popular AOL Features Anytime, Any Place," Oct. 25, 2000. 2 pages.
J. Angwin, "E-Commerce (A Special Report): Business Plan You've Got . . . M-Commerce: How AOL is Positioning itself for the Wireless World," The Wall Street Journal, Dec. 11, 2000, 3 pages.
C. Piller, "The Cutting Edge: Focus on Technology; Connecting to Customers on the Move; Wireless: A Yahoo Executive Talks about How to Attract the Growing Number in U.S. Who Use Portable Devices to Access the Web," Jun. 19, 2000, 3 pages.
Business Wire, "GoAmerica Announces Agreement with America Online to Offer AOL Mobile Services Via Go. Web," Aug. 15, 2001, 2 pages.
PR Newswire, "smartRay.com Signs Significant Wireless Partnerships with Nextel and Six Other Carriers; smartRay to Provide Nextel Online(SM) Wireless Internet Customers with On-Demand News and Information," Jul. 5, 2000, 2 pages.
Lisa Moskowitz, "GeoCities Becomes a Portal," PCWorld, Jul. 13, 1998, http://www.pcworld.com/article/7404/geocities_becomes_a_portal.html?tk=rel_news, 2 pages.
Business Wire, Inc., "Ground-Breaking Website & Portal Builder for Novices Unveiled—HotHomepages Poised for a Viral Take-Over of Free Web Market With Unmatched Features and Revenue Generators!", Jan. 17, 2001, 2 pages.
Internet Wire, Inc., "HotHomepages Launches 2.0 Release With Additional Features and New Robust Elements to the Company's Self-Service Web Site Builder," Nov. 2, 2001, 2 pages.
Ed Lowe, "Untethered," Long Island Press, Jan. 13, 2005, http://www.longislandpress.com/2005/01/13/untethered/, 2 pages.
Market Wire, Inc., "Wireless Ink Enables Worldwide Mobile Publishing and Distribution for the Masses; Patent-Pending Technology Allows the Masses to Create and Build a Mobile Site in Minutes Which Is Distributed Globally Across Carrier Networks," Dec. 21, 2004, 2 pages.
Ken Schachter, "Webslingers," Long Island Business News, Jul. 4, 2003, http://www.mlg.com/news_events/newspaper/Webslingers.html, 2 pages.

(56) **References Cited**

OTHER PUBLICATIONS

Primezone Media Network, Inc., "Maxplanet Enters Into Letter of Intent to Acquire Wireless Ink; New Maxplanet to Become Unique Value-Added Service Provider to Wireless Carriers, Entertainment Companies, and Brands," Apr. 29, 2004, 2 pages.
Bruce Brown, "Create Your Own Internet With Clickmarks," PC Magazine, Nov. 20, 2000, http://www.pcmag.com/article2/0,2817,34336,00.asp, 3 pages.
Ellen Jensen, "Clickmarks personal 'habitats' make any Web content wireless," Wireless Networks Online, Sep. 15, 2000, http://www.wirelessnetworksonoine.com/article.mvc/Clickmarks-personal-habitats-make-any-Web-con-0001, 3 pages.
Umair A. Khan et al., U.S. Appl. No. 60/209,873, filed Jun. 7, 2000, 37 pages.
Umair A. Khan et al., U.S. Appl. No. 60/210,160, filed Jun. 7, 2000, 62 pages.
Umair Khan et al., U.S. Appl. No. 60/283,775, filed Apr. 12, 2001, 51 pages.
Clickmarks Platform Architecture: White Paper, 6 pages.
PBI Media, LLC, "Clickmarks Looks for Growth Impetus," Communications Today, vol. 7, No. 221, Nov. 28, 2001, 1 page.
Christy Mulligan, "Dialing for content: Content providers are learning how to cram value onto a four inch-square screen," Computer User, vol. 19, No. 4, Apr. 1, 2001, 4 pages.
PR Newswire Association Inc., "Clickmarks Brings Personalization & Mobilization Services to Chaitime.com, An Online Community Serving South Asians Worldwide; Service Will Increase Loyalty, Be Available From Wired & Wireless Devices," Oct. 10, 2000, 2 pages.
PR Newswire Association Inc., "Clickmarks Selected 'Best of Show' for its Software Platform At Internet World; 'Wireless-Enabled Personal Habitat' Delivers Any Web Content to Any Device as Never Before," Nov. 6, 2000, 2 pages.
PR Newswire Association Inc., "Clickmarks' Personal 'Habitats' Make Any Web Content Wireless; ASP's Web Personalization Service Automatically Feeds Web Content to PDAs and Web-Enabled Cell Phones, Whether or Not It Is Wireless-Ready," Jun. 13, 2000, 2 pages.
Michael Singer, "New Vizzavi Portal on WAP Phones," InternetNews.com, Apr. 23, 2001, http://www.internetnews.coln/bus-news/article.php/749411/New-Vizzavi-Portal-On-WAP-Phones.htm, 1 page.
Heather Forsgren Weaver, "Clickmarks marries personalization with mobilization," Radio Comm. Report, Dec. 4, 2000, 2 pages.
Umair Khan et al., U.S. Appl. No. 60/283,804, filed Apr. 12, 2001, 68 pages.
Ben Sawyer and Dave Greeley, "Creating Geocities Websites," Muska & Lipman Publishing, 1999, 357 pages.
Bud Smith and Arthur Bebak, "Creating Web Pages for Dummies, 4th Ed.", IDG Books Worldwide, Inc., 1999, pp. 73-126.
Adnan M. Agboatwalla et al., U.S. Appl. No. 60/340,405, filed Dec. 13, 2001, 121 pages.
Umair A. Khan et al., U.S. Appl. No. 60/212,485, filed Jun. 16, 2000, 32 pages.
Umair Khan et al., U.S. Appl. No. 60/283,781, filed Apr. 12, 2001, 44 pages.
Umair Khan et al., U.S. Appl. No. 60/283,873, filed Apr. 12, 2001, 53 pages.
Quinton Y. Zondervan et al., U.S. Appl. No. 60/341,340, filed Dec. 14, 2001, 74 pages.
Umair A. Khan et al., U.S. Appl. No. 60/341,344, filed Dec. 14, 2001, 79 pages.
Alex Tsakiris et al., U.S Appl. No. 60/185,350, filed Feb. 26, 2000, 20 pages.
Reuven Gamzon, U.S. Appl. No. 60/233,136, filed Sep. 18, 2000, 6 pages.
Bruce Brown, "Create Your Own Internet With Clickmarks," PC Magazine, Nov. 21, 2000, p. 64.
Memorandum and Order in *Wireless Ink Corporation* v. *Facebook Inc., et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Aug. 29, 2013.
Judgment in *Wireless Ink Corporation* v. *Facebook Inc., et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, Aug. 30, 2013.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files containing documents numbered UKN458-UKN464, UKN477-UKN479, UKN481-UKN483, UKN485-UKN492, UKN495, UKN496, UKN498, UKN501-UKN548, UKN559-UKN565, UKN567- UKN572, UKN574-UKN600, UKN602-UKN609, UKN611-UKN648, UKN650-UKN718, UKN720-UKN890, UKN892- UKN896, UKN898, UKN900-1009, UKN1011-1051 and UKN1053-UKN1097.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files containing documents numbered UKN1099-UKN1196, UKN1198, UKN1200-UKN1306, UKN1308-UKN1311, UKN1314, UKN1316-UKN1339, UKN1341-UKN1344, UKN1347, UKN1349-UKN1359, UKN1380-UKN1383, UKN1385-UKN1388, UKN1391 and UKN1393-UKN1420.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of source code files containing documents numbered UKN1422-UKN1425, UKN1429-UKN1444, UKN1447-UKN1708, UKN1710-UKN1714, UKN1716, UKN1718-UKN1741, UKN1743-UKN1745 and UKN1748-UKN1753.
Discovery Documents produced in *Wireless Ink Corporation* v. *Facebook Inc. et al.*, Case Nos. 10-CV-1841 and 11-CV-1751, compilation of training documents titled UKNT1 containing documents numbered UKN3662, UKN3663, UKN3665, UKN3667-UKN3672, UKN3674, UKN3675, UKN3677, UKN3679 and UKN3680.
G.Q. Huang et al., "Agent-based workflow management in collaborative product development on the Internet," Computer-Aided Design, 2000, pp. 133-144, vol. 32, Elsevier Science Ltd.
A. Bhattacherjee, "Management of emerging technologies: Experiences and lessons learned at US West," Information & Management, 1998, pp. 263-272, vol. 33, Elsevier Science B.V.
N. Swartz, "Talkin' About Generation Y," Connected Planet, Oct. 15, 2000, at http://connectedplanetonline.com/wireless/mag/wireless_talkin_generation/ on Apr. 21, 2010, 3 pages.
Bolt.com, "Info," archived at http://web.archive.org/web/20011203081451/www.bolt.com/info/default.asp.
Peperonity.com, "Peperonity," archived at http://web.archive.org/web/20030330223112/http://peperonity.com/.
1. UCP Morgen Products, "Mobileblog! TM—Blogging from Every Mobile Phone," http://www.ucpmorgen.com/products_mobileblog_en.html, pp. 1-3, 2003.
UCP Morgen News, "Mobileblog! TM—Taking Mobile Messaging to a Whole New Level," http://www.ucpmorgen.com/news_press-release-2003031701_en.html,pp. 1-2, 2003.
NewBay Software "FoneBlog V1—A Website for Every Mobile Phone!," http://www.newbay.com/products_general.html, pp. 1-3, 2003.
NewBay Software "NewBay Software Announces World's First Blogging System for Mobile Network Operators," htp://www.newbay.com/pr030101. html pp. 1-3, 2003.
3TL—Mobile Internet, "Mobile Communities," http://www.3t1.com/MobileOperators/Communities.asp?CID=, 1 page, 2003.
"Yahoo! Mobile," http://mobile.yahoo.com/, 2 pages, 2003.
Peperoni Mobile & Internet Software GmbH, "Mobile Community Services with Mobile Homepage Toolkit," http://en.peperoni.de/pep/produkte/inhalt_mobile.php3, pp. 1-2, 2003.
LittleWASP®, "What can LittleWASP do?," http:// www.littlewasp.com/features.html, 1 page; 2003.
Blogger™, "The Revolution will be Bloggerized," http:// www.blogger.com/about.pyra, pp. 1-3; 2003.
Mopilot.com, "Welcome to my.mopilot.com," http://my.mopilot.com/index.htm, 1 page, 2001.
Mbasics—Platform for Mobile Site Building, "Content Management," http:// www.mbasics.com/content_management.html, pp. 1-2, 2003.
"Blah!—Tzhe Company," http:// www.blah.com/corporate/company/index.htm, 1 page, 2003.

(56) **References Cited**

OTHER PUBLICATIONS

"About Upoc," http:// www.upoc.com/about.jsp, 1 page, 2002.
"Homestead—Your Complete Web Site Building & Hosting Solution," http:// www.homesteatd,com, 2 pages, 2003.
Transcript of Claim Construction Hearing, *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 10-CV-1841 (PKC), S.D.N.Y., Oct. 21, 2010, 75 pages.
Memorandum and Order, *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 10-CV-1841 (PKC), S.D.N.Y., May 26, 2011, 29 pages.
Excerpt of Facebook's Response to Wireless Ink's Interrogatory No. 9, *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 10-CV-1841 (PKC), S.D.N.Y., Jun. 22, 2011, pp. 29-36.
Exhibit A of Facebook's Response to Wireless Ink's Interrogatory No. 9, *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 10-CV-1841 (PKC), S.D.N.Y., Jun. 22, 2011, 6 pages.
Excerpt of Google's Response to Wireless Ink's Interrogatory No. 9, *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 10-CV-1841 (PKC), S.D.N.Y., Jun. 22, 2011, pp. 20-32.
Exhibit A of Google's Response to Wireless Ink's Interrogatory No. 9, *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 10-CV-1841 (PKC), S.D.N.Y., Jun. 22, 2011, 131 pages.
Amended Answer of Defendant MySpace, Inc., *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 11-CV-1751 (PKC), Document No. 42-1, S.D.N.Y., Jun. 8, 2011, pp. 1-9.
K. Maly et al., "Personalized Portal for Wireless Devices," included as Exhibit B of Amended Answer of Defendant MySpace, Inc., *Wireless Ink Corporation* v. *Facebook, Inc.*, Case No. 11-CV-1751 (PKC), Document No. 42-3, S.D.N.Y., Jun. 8, 2011, 3 pages.
M. Gibbs, "All the news that's fit to RSS," NetworkWorld, Feb. 25, 2002, p. 36.
J. Kolari et al., "Net in Pocket? Personal mobile access to web services," VTT Publications 464, Finland, Apr. 2002, 145 pages.
PR Newswire, "Bolt Launches Robust WAP-Based Clubs & Search Tools; Bolt Expands Wireless Offerings—Teens and Marketers Benefit," Apr. 16, 2001, 3 pages.
J. Udell, "Hyperlinks matter," InfoWorld, May 20, 2002, pp. 15-16.
R. Vogles, "Ihre mobile Homepage," PC Pr@xis, Aug. 2001, 6 pages (including translation).

* cited by examiner

FIG. 1A

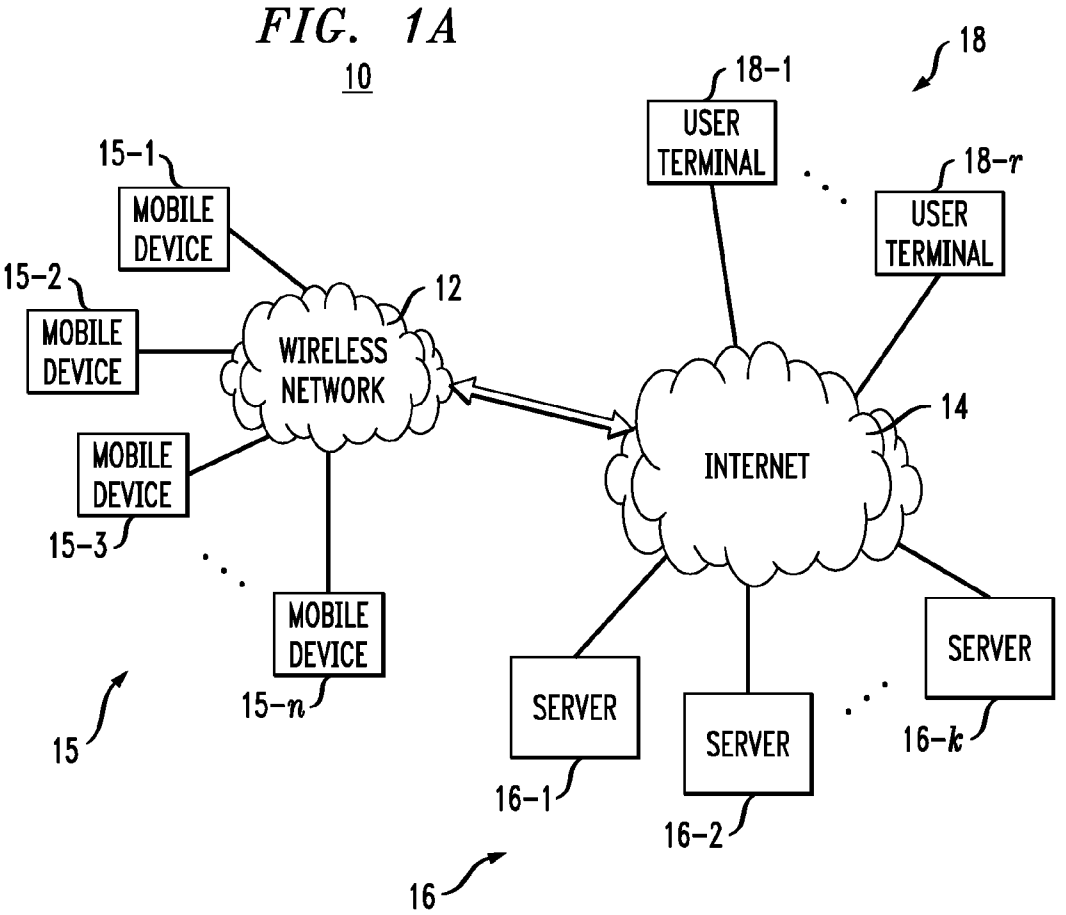
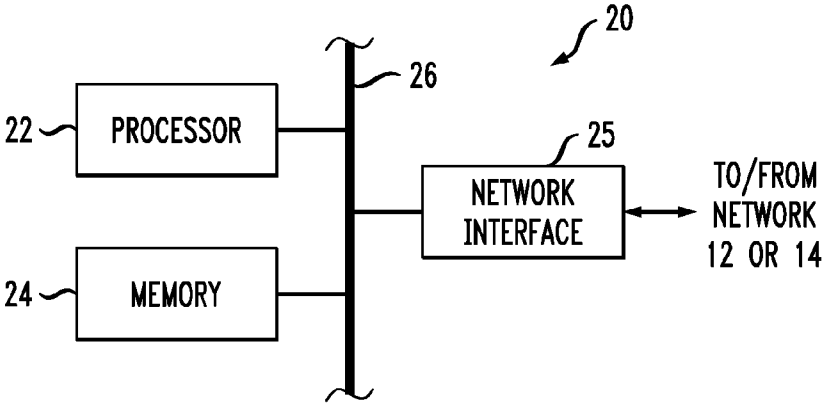

10
18
18-1
USER TERMINAL
18-r
USER TERMINAL
15-1
MOBILE DEVICE
15-2
MOBILE DEVICE
12
WIRELESS NETWORK
14
INTERNET
MOBILE DEVICE
15-3
MOBILE DEVICE
15-n
15
SERVER
16-1
SERVER
16-2
SERVER
16-k
16

FIG. 1B


20
26
22
PROCESSOR
25
NETWORK INTERFACE
TO/FROM NETWORK 12 OR 14
24
MEMORY

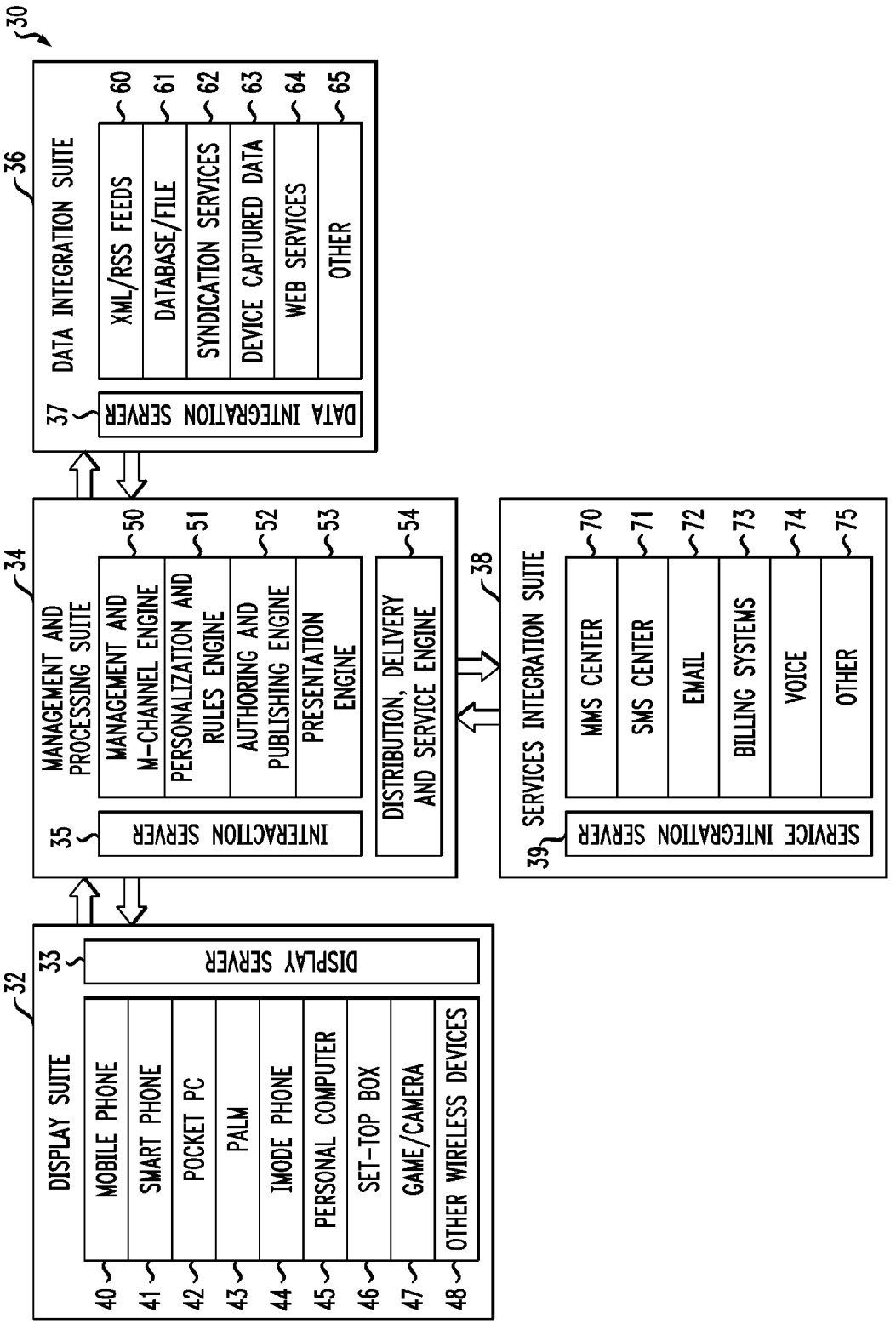

30
36
DATA INTEGRATION SUITE
37
DATA INTEGRATION SERVER
60
XML/RSS FEEDS
61
DATABASE/FILE
62
SYNDICATION SERVICES
63
DEVICE CAPTURED DATA
64
WEB SERVICES
65
OTHER
34
MANAGEMENT AND PROCESSING SUITE
35
INTERACTION SERVER
50
MANAGEMENT AND M-CHANNEL ENGINE
51
PERSONALIZATION AND RULES ENGINE
52
AUTHORING AND PUBLISHING ENGINE
53
PRESENTATION ENGINE
54
DISTRIBUTION, DELIVERY AND SERVICE ENGINE
38
SERVICES INTEGRATION SUITE
39
SERVICE INTEGRATION SERVER
70
MMS CENTER
71
SMS CENTER
72
EMAIL
73
BILLING SYSTEMS
74
VOICE
75
OTHER
32
DISPLAY SUITE
33
DISPLAY SERVER
40
MOBILE PHONE
41
SMART PHONE
42
POCKET PC
43
PALM
44
IMODE PHONE
45
PERSONAL COMPUTER
46
SET-TOP BOX
47
GAME/CAMERA
48
OTHER WIRELESS DEVICES

FIG. 1C

FIG. 1D

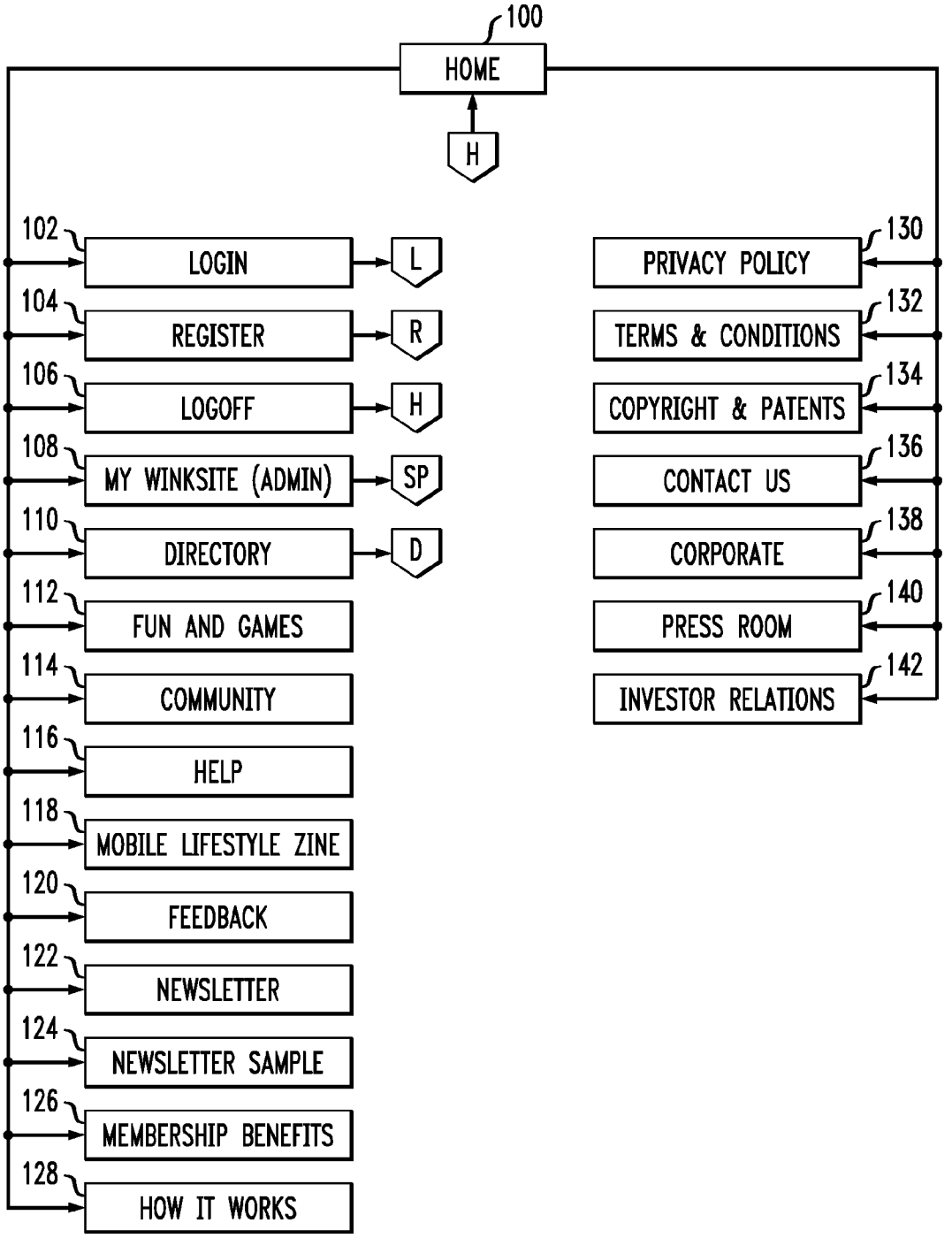

100
HOME
H
102
LOGIN
L
104
REGISTER
R
106
LOGOFF
H
108
MY WINKSITE (ADMIN)
SP
110
DIRECTORY
D
112
FUN AND GAMES
114
COMMUNITY
116
HELP
118
MOBILE LIFESTYLE ZINE
120
FEEDBACK
122
NEWSLETTER
124
NEWSLETTER SAMPLE
126
MEMBERSHIP BENEFITS
128
HOW IT WORKS
130
PRIVACY POLICY
132
TERMS & CONDITIONS
134
COPYRIGHT & PATENTS
136
CONTACT US
138
CORPORATE
140
PRESS ROOM
142
INVESTOR RELATIONS

FIG. 2

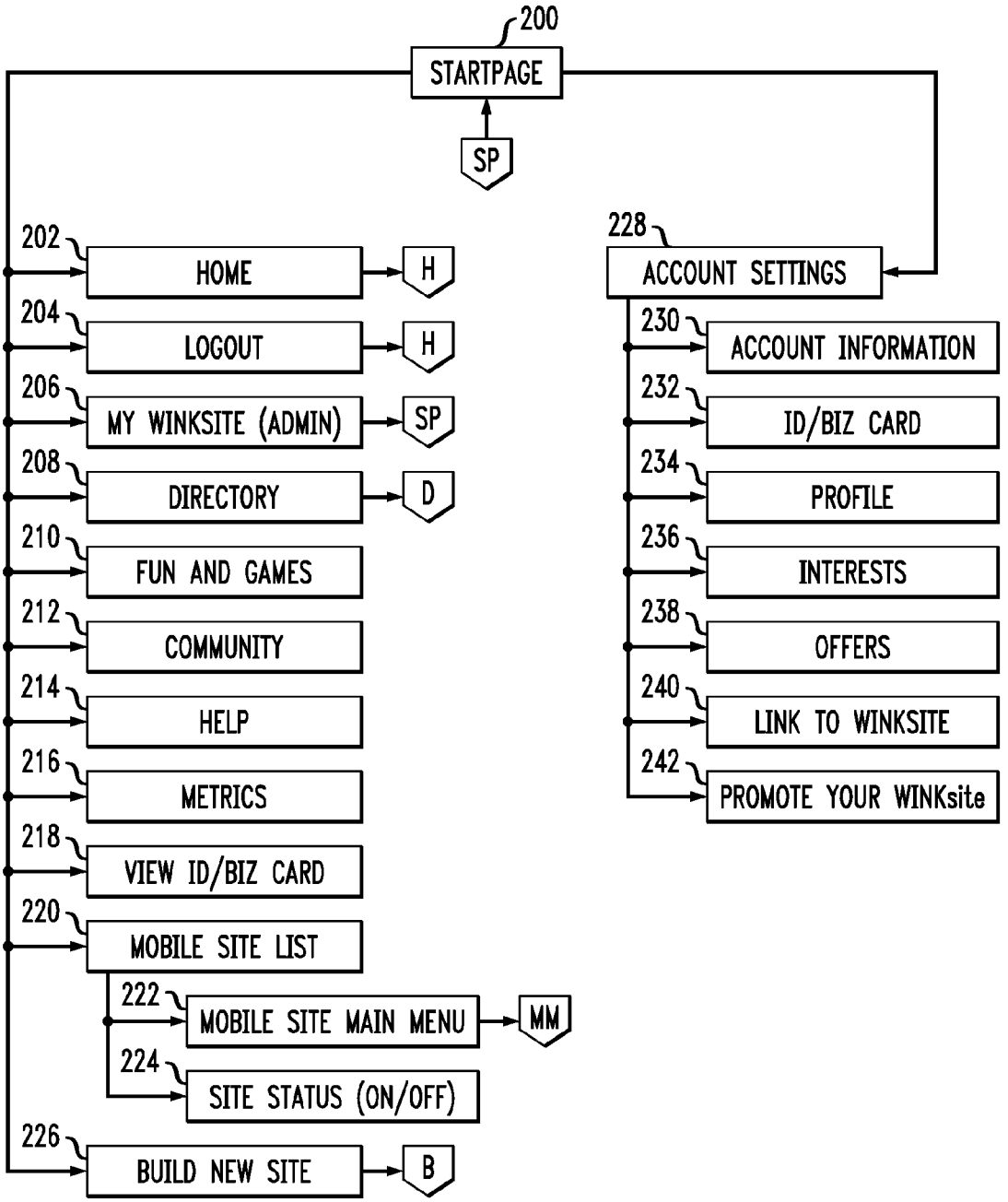

200
STARTPAGE
SP
202
HOME
H
204
LOGOUT
H
206
MY WINKSITE (ADMIN)
SP
208
DIRECTORY
D
210
FUN AND GAMES
212
COMMUNITY
214
HELP
216
METRICS
218
VIEW ID/BIZ CARD
220
MOBILE SITE LIST
222
MOBILE SITE MAIN MENU
MM
224
SITE STATUS (ON/OFF)
226
BUILD NEW SITE
B
228
ACCOUNT SETTINGS
230
ACCOUNT INFORMATION
232
ID/BIZ CARD
234
PROFILE
236
INTERESTS
238
OFFERS
240
LINK TO WINKSITE
242
PROMOTE YOUR WINKsite

FIG. 3

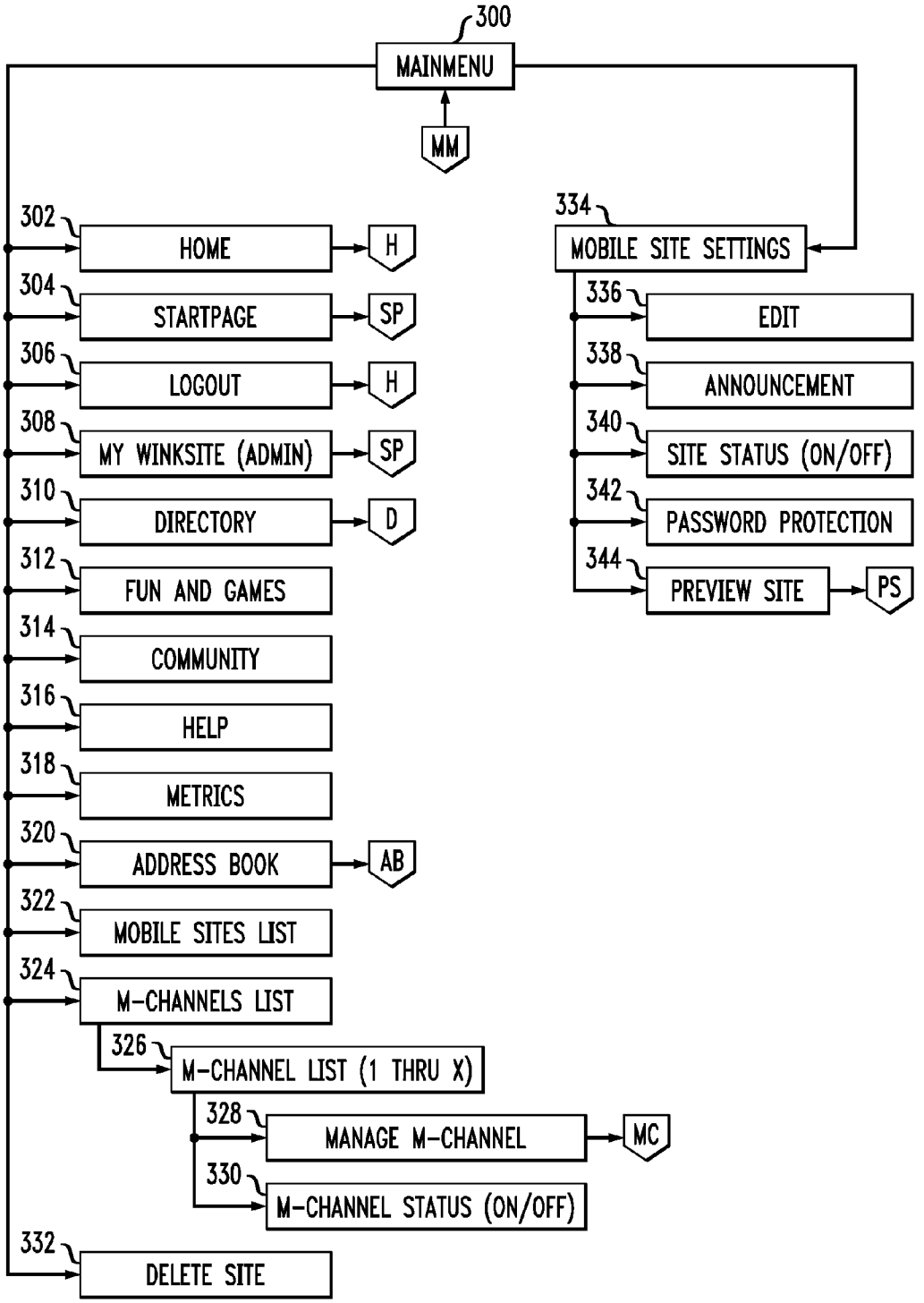

300
MAINMENU
MM
302
HOME
H
304
STARTPAGE
SP
306
LOGOUT
H
308
MY WINKSITE (ADMIN)
SP
310
DIRECTORY
D
312
FUN AND GAMES
314
COMMUNITY
316
HELP
318
METRICS
320
ADDRESS BOOK
AB
322
MOBILE SITES LIST
324
M-CHANNELS LIST
326
M-CHANNEL LIST (1 THRU X)
328
MANAGE M-CHANNEL
MC
330
M-CHANNEL STATUS (ON/OFF)
332
DELETE SITE
334
MOBILE SITE SETTINGS
336
EDIT
338
ANNOUNCEMENT
340
SITE STATUS (ON/OFF)
342
PASSWORD PROTECTION
344
PREVIEW SITE
PS

FIG. 4

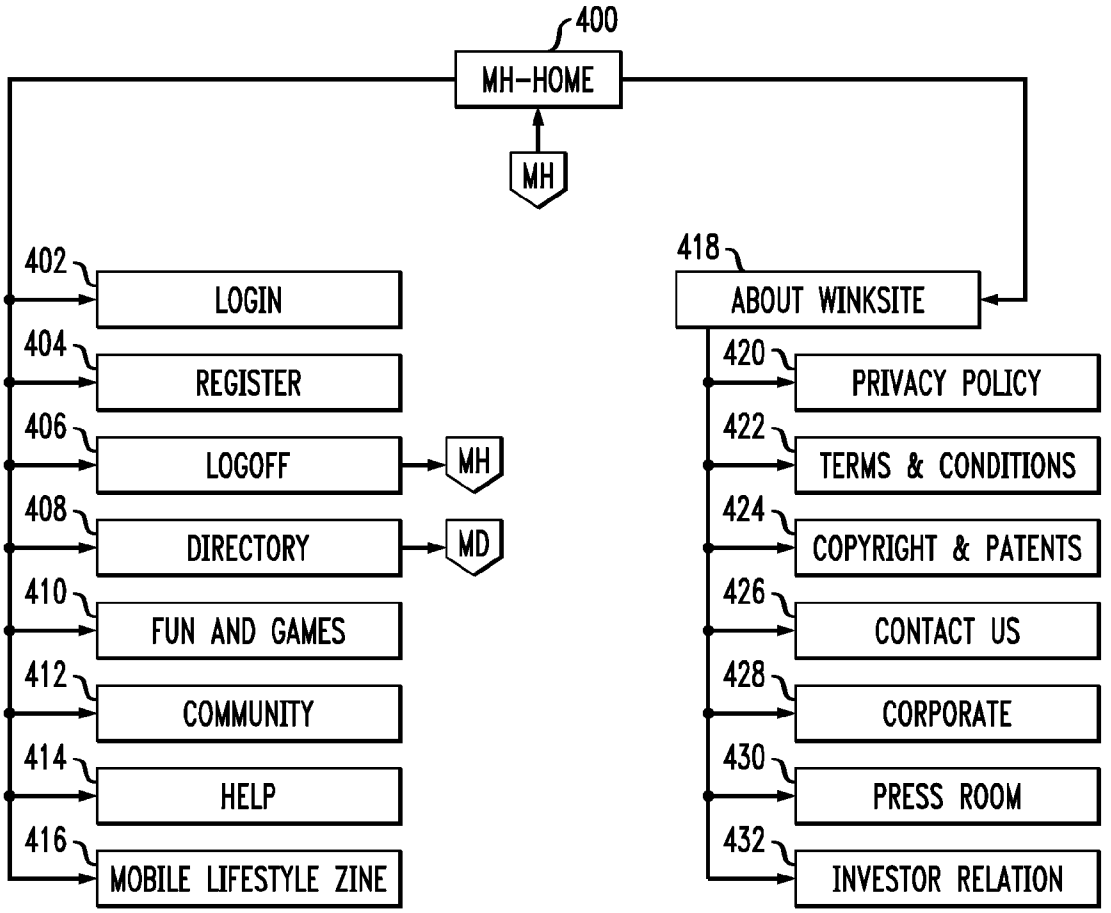
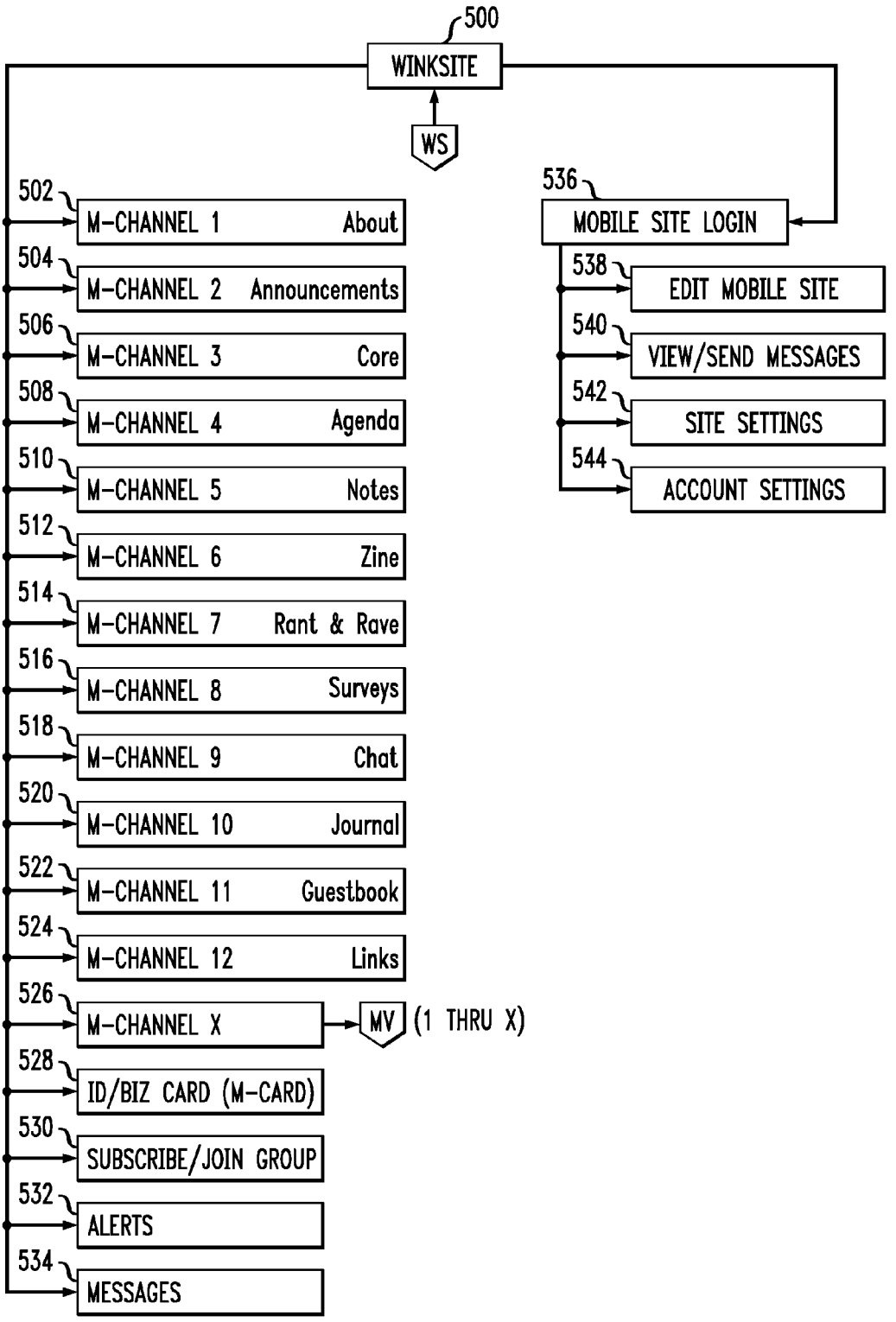

400
MH-HOME
MH
402
LOGIN
404
REGISTER
406
LOGOFF
MH
408
DIRECTORY
MD
410
FUN AND GAMES
412
COMMUNITY
414
HELP
416
MOBILE LIFESTYLE ZINE
418
ABOUT WINKSITE
420
PRIVACY POLICY
422
TERMS & CONDITIONS
424
COPYRIGHT & PATENTS
426
CONTACT US
428
CORPORATE
430
PRESS ROOM
432
INVESTOR RELATION

FIG. 5


500
WINKSITE
WS
502
M-CHANNEL 1 About
504
M-CHANNEL 2 Announcements
506
M-CHANNEL 3 Core
508
M-CHANNEL 4 Agenda
510
M-CHANNEL 5 Notes
512
M-CHANNEL 6 Zine
514
M-CHANNEL 7 Rant & Rave
516
M-CHANNEL 8 Surveys
518
M-CHANNEL 9 Chat
520
M-CHANNEL 10 Journal
522
M-CHANNEL 11 Guestbook
524
M-CHANNEL 12 Links
526
M-CHANNEL X
MV
(1 THRU X)
528
ID/BIZ CARD (M-CARD)
530
SUBSCRIBE/JOIN GROUP
532
ALERTS
534
MESSAGES
536
MOBILE SITE LOGIN
538
EDIT MOBILE SITE
540
VIEW/SEND MESSAGES
542
SITE SETTINGS
544
ACCOUNT SETTINGS

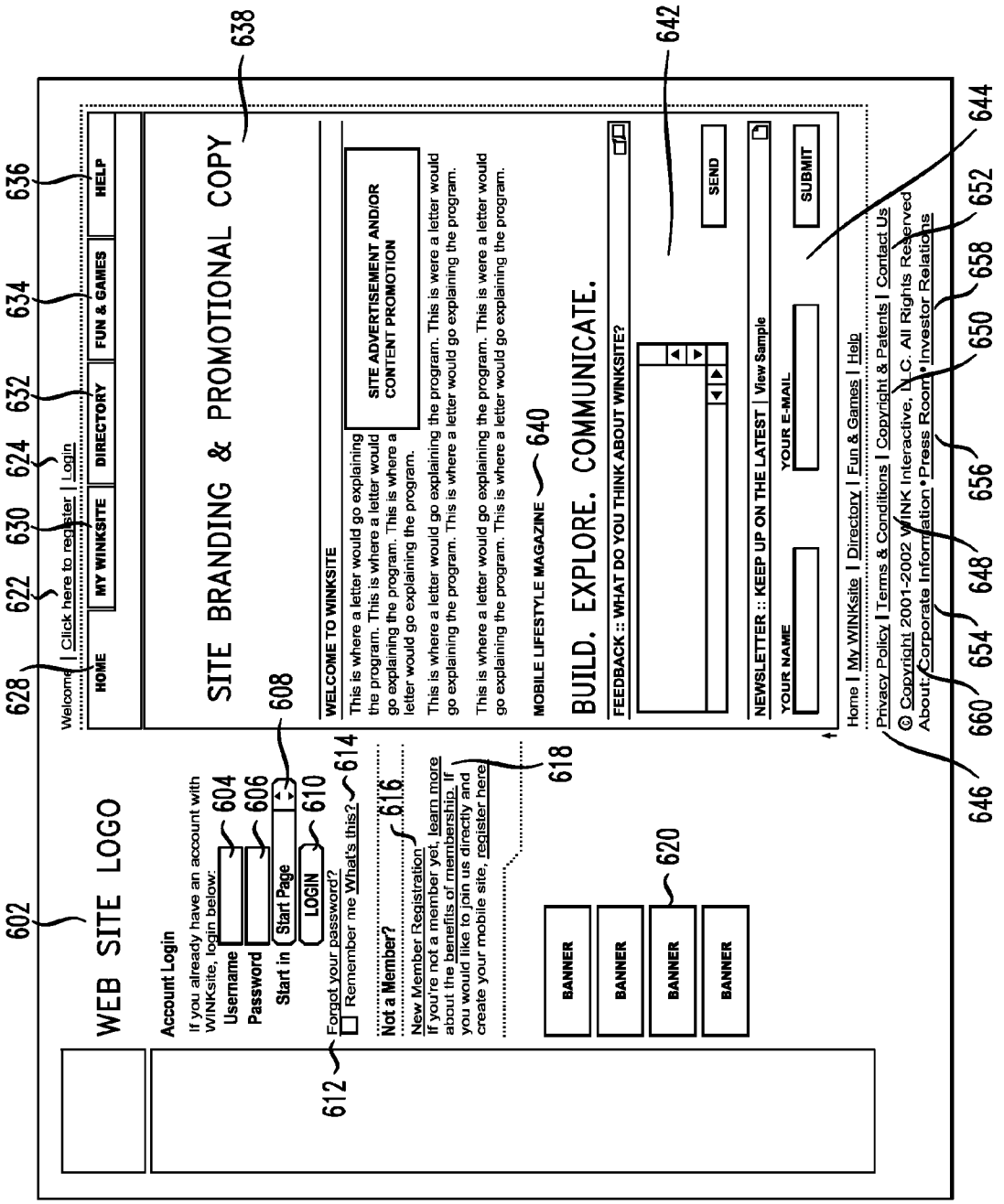

602
WEB SITE LOGO
Account Login
If you already have an account with WINKsite, login below:
Username
Password
Start in
Start Page
LOGIN
Forgot your password?
Remember me What's this?
Not a Member?
New Member Registration
If you're not a member yet, learn more about the benefits of membership. If you would like to join us directly and create your mobile site, register here
BANNER
BANNER
BANNER
BANNER
Welcome | Click here to register | Login
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
SITE BRANDING & PROMOTIONAL COPY
WELCOME TO WINKSITE
This is where a letter would go explaining the program. This is where a letter would go explaining the program. This is where a letter would go explaining the program.
SITE ADVERTISEMENT AND/OR CONTENT PROMOTION
This is where a letter would go explaining the program. This is where a letter would go explaining the program. This is where a letter would go explaining the program.
This is where a letter would go explaining the program. This is where a letter would go explaining the program. This is where a letter would go explaining the program.
MOBILE LIFESTYLE MAGAZINE
BUILD. EXPLORE. COMMUNICATE.
FEEDBACK :: WHAT DO YOU THINK ABOUT WINKSITE?
SEND
NEWSLETTER :: KEEP UP ON THE LATEST | View Sample
YOUR NAME
YOUR E-MAIL
SUBMIT
Home | My WINKsite | Directory | Fun & Games | Help
Privacy Policy | Terms & Conditions | Copyright & Patents | Contact Us
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved
About Corporate Information • Press Room • Investor Relations
608
610
612
614
616
618
620
628
630
622
624
632
634
636
638
640
642
644
646
648
650
652
654
656
658
660

FIG. 6

FIG. 7

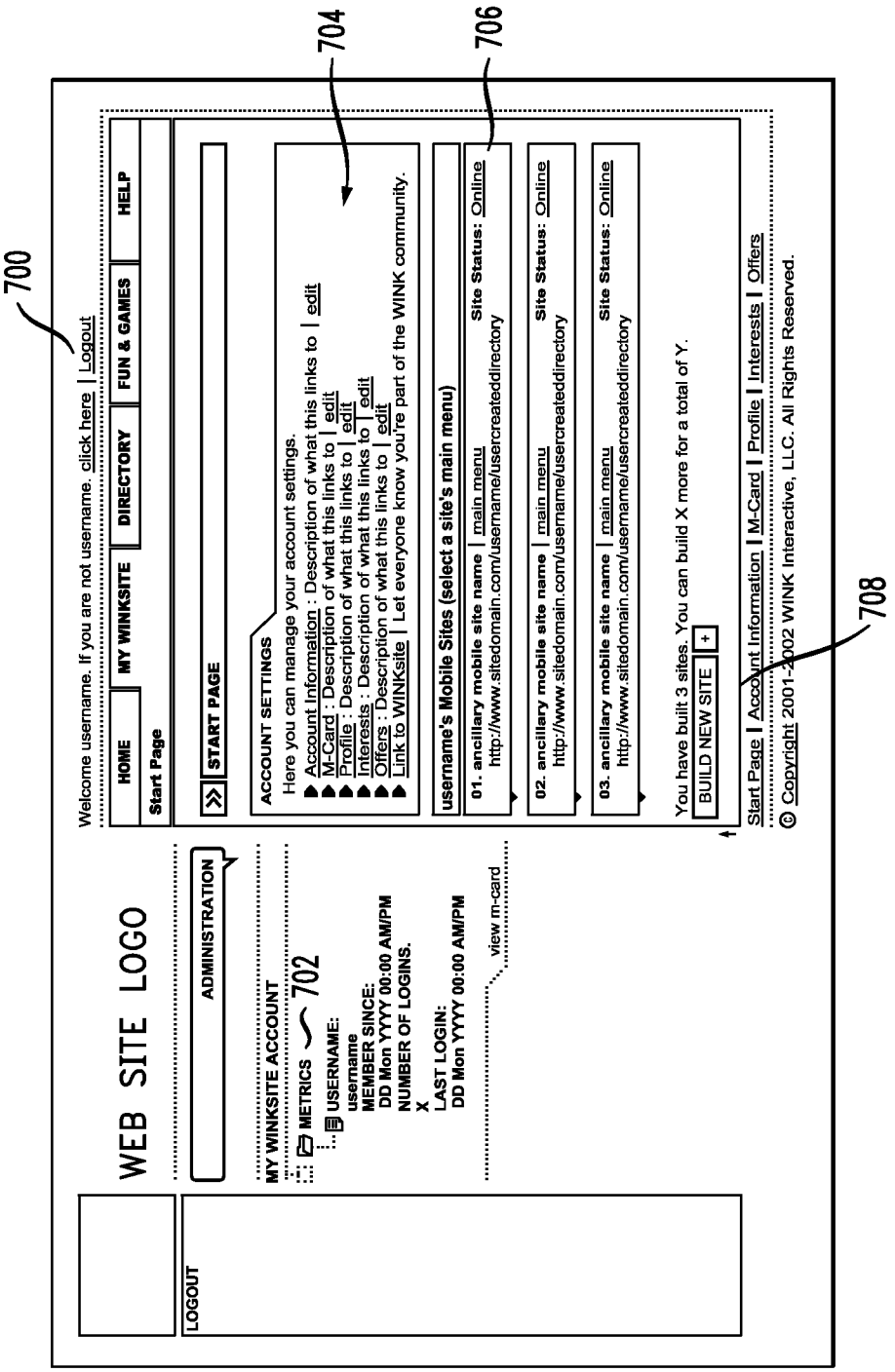

700
704
706
708
702
Welcome username. If you are not username, click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Start Page
START PAGE
ACCOUNT SETTINGS
Here you can manage your account settings.
Account Information : Description of what this links to | edit
M-Card : Description of what this links to | edit
Profile : Description of what this links to | edit
Interests : Description of what this links to | edit
Offers : Description of what this links to | edit
Link to WINKsite | Let everyone know you're part of the WINK community.
username's Mobile Sites (select a site's main menu)
01. ancillary mobile site name | main menu
Site Status: Online
http://www.sitedomain.com/username/usercreateddirectory
02. ancillary mobile site name | main menu
Site Status: Online
http://www.sitedomain.com/username/usercreateddirectory
03. ancillary mobile site name | main menu
Site Status: Online
http://www.sitedomain.com/username/usercreateddirectory
You have built 3 sites. You can build X more for a total of Y.
BUILD NEW SITE
+
Start Page | Account Information | M-Card | Profile | Interests | Offers
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.
WEB SITE LOGO
ADMINISTRATION
LOGOUT
MY WINKSITE ACCOUNT
METRICS
USERNAME:
username
MEMBER SINCE:
DD Mon YYYY 00:00 AM/PM
NUMBER OF LOGINS.
X
LAST LOGIN:
DD Mon YYYY 00:00 AM/PM
view m-card

FIG. 8

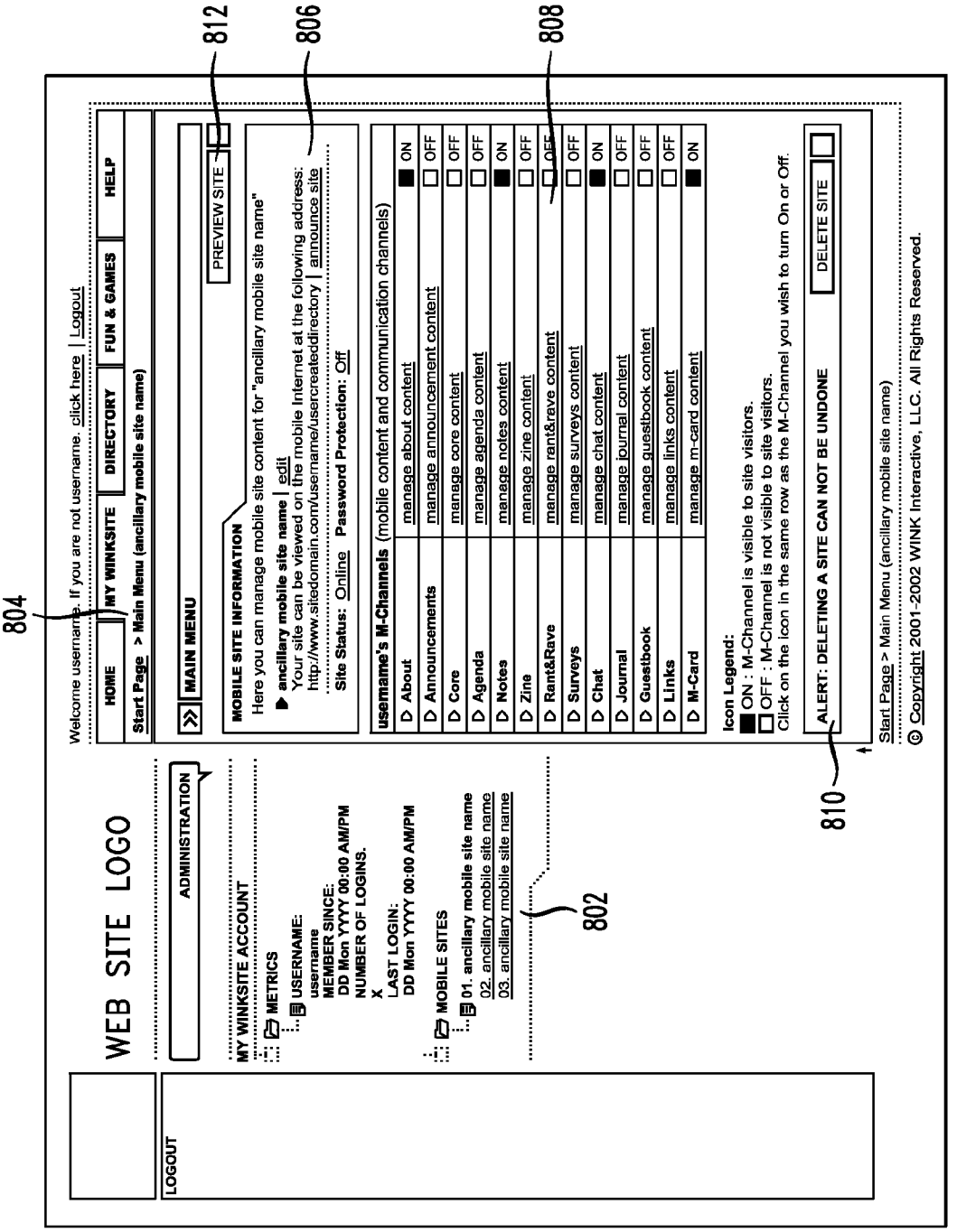

804
812
806
808
802
810
WEB SITE LOGO
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Start Page > Main Menu (ancillary mobile site name)
LOGOUT
ADMINISTRATION
MY WINKSITE ACCOUNT
METRICS
USERNAME:
username
MEMBER SINCE:
DD Mon YYYY 00:00 AM/PM
NUMBER OF LOGINS.
X
LAST LOGIN:
DD Mon YYYY 00:00 AM/PM
MOBILE SITES
01. ancillary mobile site name
02. ancillary mobile site name
03. ancillary mobile site name
MAIN MENU
PREVIEW SITE
MOBILE SITE INFORMATION
Here you can manage mobile site content for "ancillary mobile site name"
ancillary mobile site name | edit
Your site can be viewed on the mobile Internet at the following address:
http://www.sitedomain.com/username/usercreateddirectory | announce site
Site Status: Online Password Protection: Off
username's M-Channels (mobile content and communication channels)
About manage about content ON
Announcements manage announcement content OFF
Core manage core content OFF
Agenda manage agenda content OFF
Notes manage notes content ON
Zine manage zine content OFF
Rant&Rave manage rant&rave content OFF
Surveys manage surveys content OFF
Chat manage chat content ON
Journal manage journal content OFF
Guestbook manage guestbook content OFF
Links manage links content OFF
M-Card manage m-card content ON
Icon Legend:
ON : M-Channel is visible to site visitors.
OFF : M-Channel is not visible to site visitors.
Click on the icon in the same row as the M-Channel you wish to turn On or Off.
ALERT: DELETING A SITE CAN NOT BE UNDONE
DELETE SITE
Start Page > Main Menu (ancillary mobile site name)
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

FIG. 9a

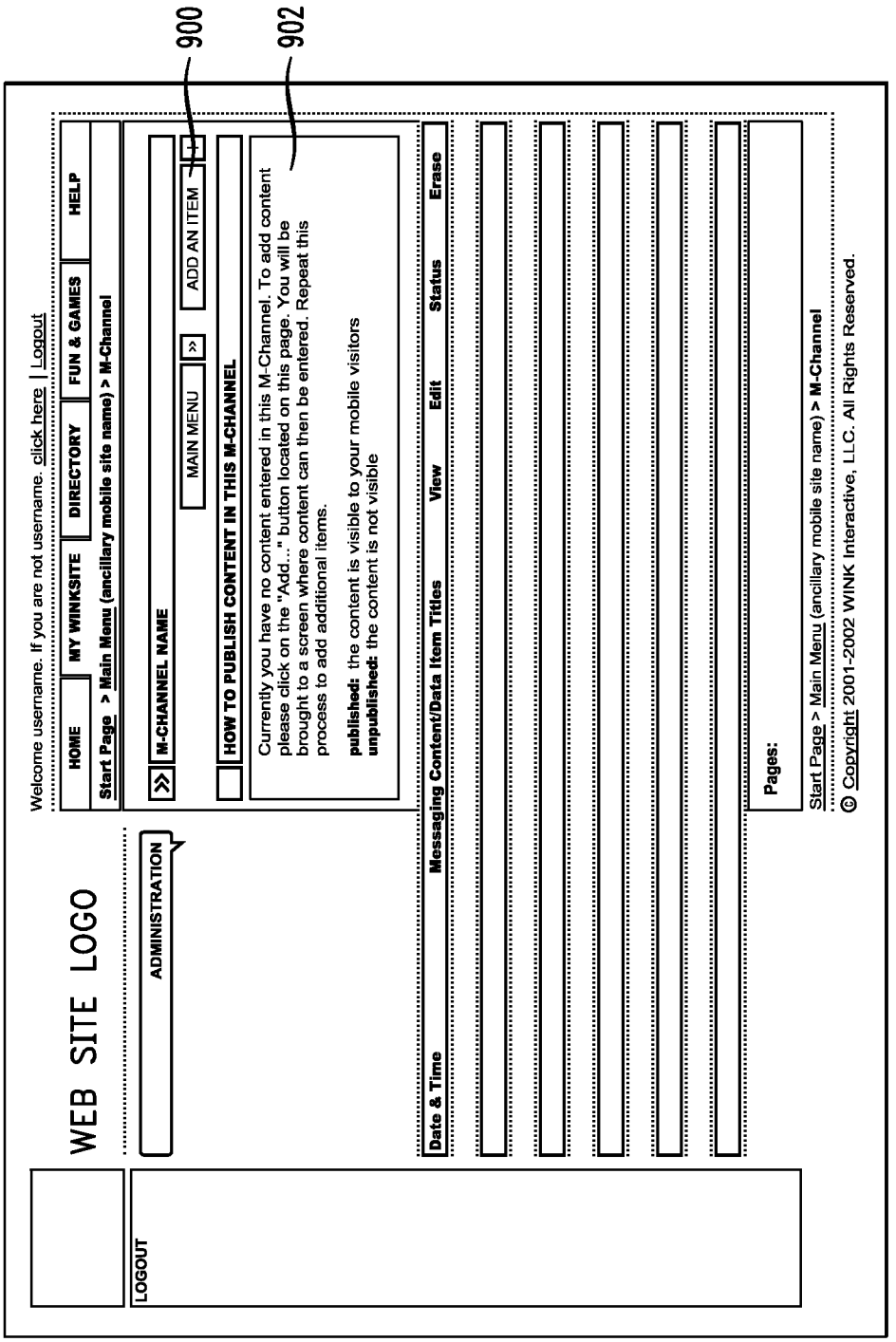
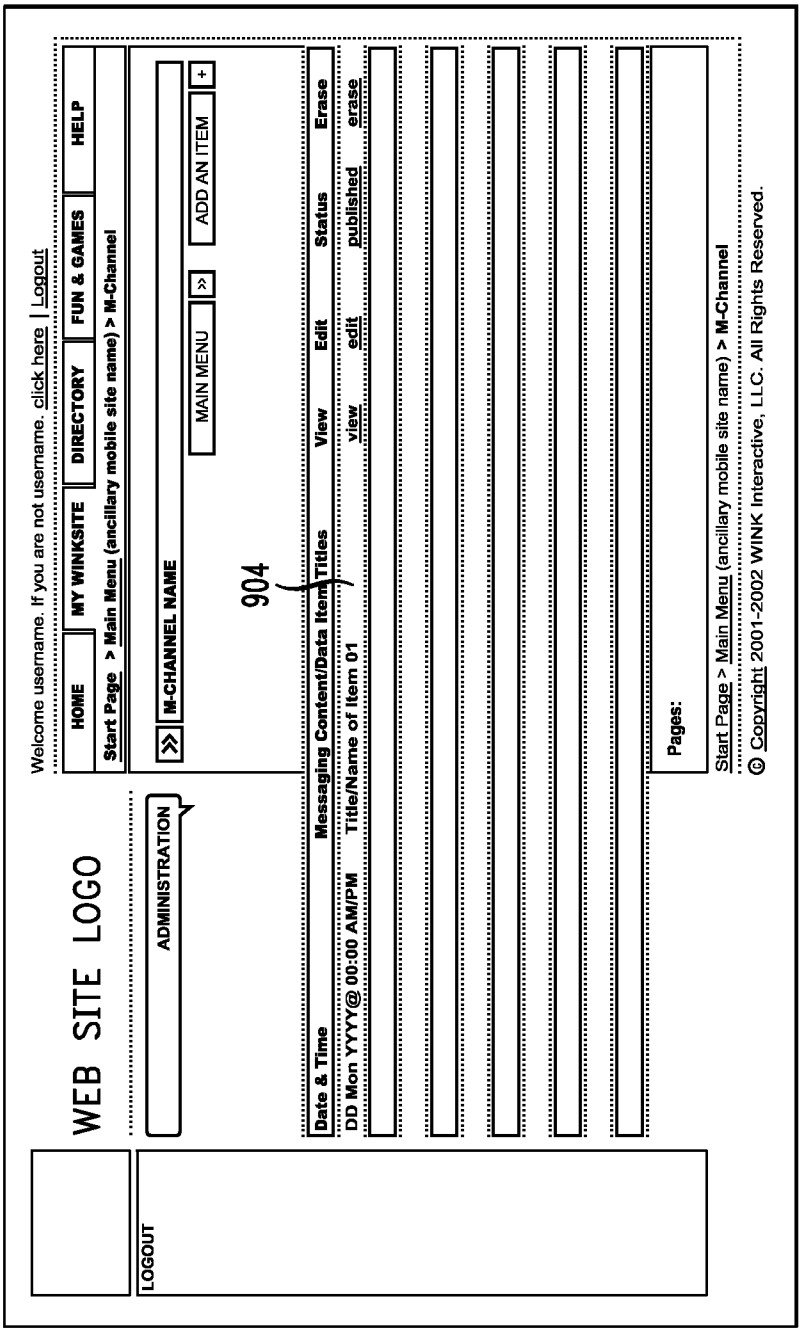

900
902
WEB SITE LOGO
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Start Page > Main Menu (ancillary mobile site name) > M-Channel
ADMINISTRATION
LOGOUT
M-CHANNEL NAME
MAIN MENU
ADD AN ITEM
HOW TO PUBLISH CONTENT IN THIS M-CHANNEL
Currently you have no content entered in this M-Channel. To add content please click on the "Add..." button located on this page. You will be brought to a screen where content can then be entered. Repeat this process to add additional items.
published: the content is visible to your mobile visitors
unpublished: the content is not visible
Date & Time
Messaging Content/Data Item Titles
View
Edit
Status
Erase
Pages:
Start Page > Main Menu (ancillary mobile site name) > M-Channel
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

FIG. 9b


LOGOUT
WEB SITE LOGO
ADMINISTRATION
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Start Page > Main Menu (ancillary mobile site name) > M-Channel
M-CHANNEL NAME
MAIN MENU
ADD AN ITEM
904
Date & Time
Messaging Content/Data Item
Titles
View
Edit
Status
Erase
DD Mon YYYY@ 00:00 AM/PM
Title/Name of Item 01
view
edit
published
erase
Pages:
Start Page > Main Menu (ancillary mobile site name) > M-Channel
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

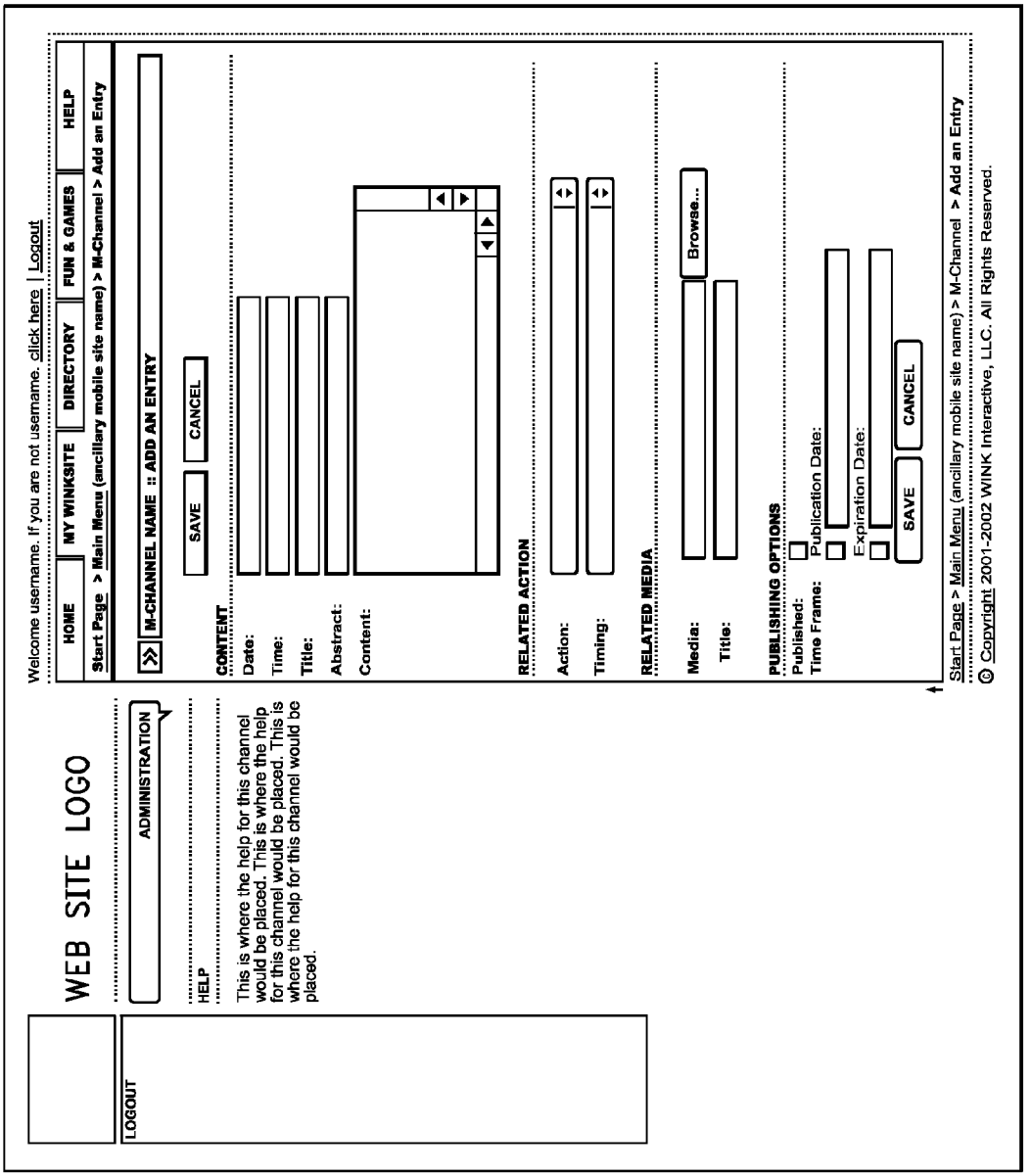
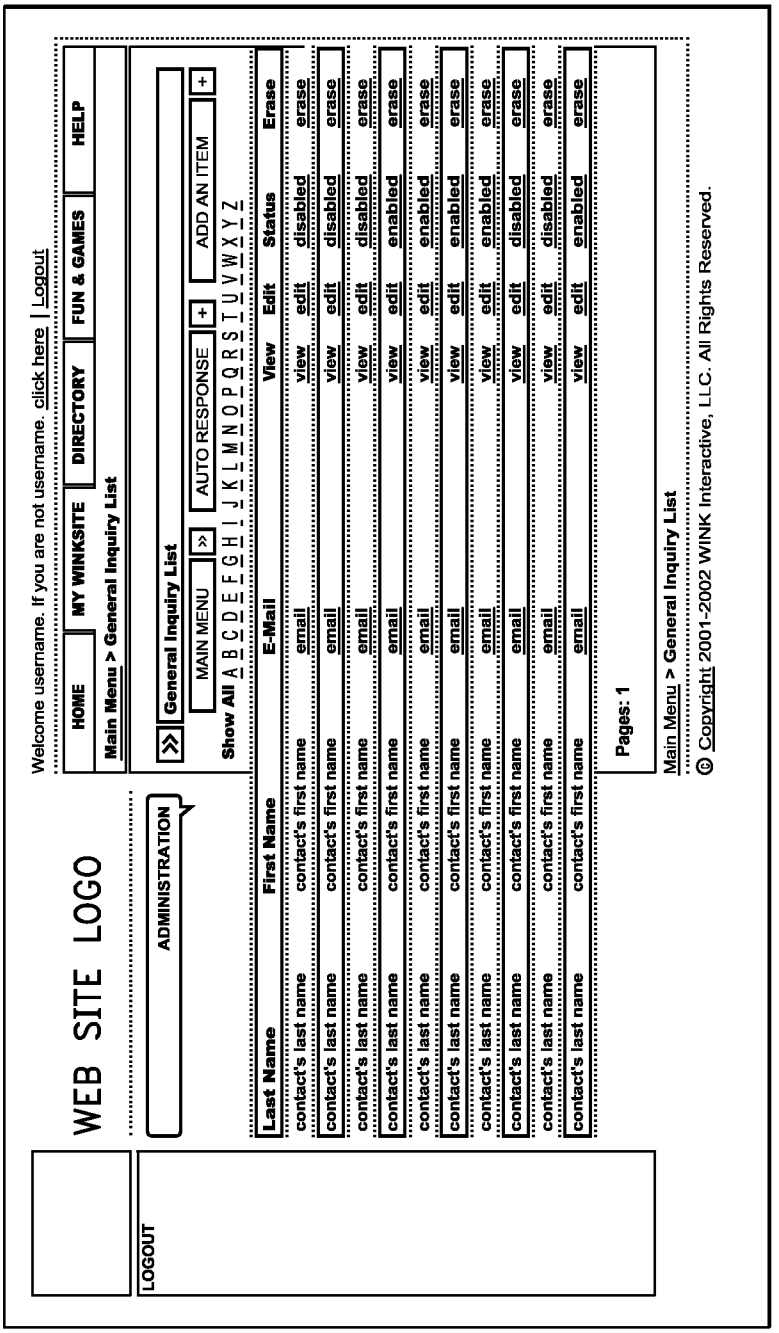

Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Start Page > Main Menu (ancillary mobile site name) > M-Channel > Add an Entry
WEB SITE LOGO
LOGOUT
ADMINISTRATION
HELP
This is where the help for this channel would be placed. This is where the help for this channel would be placed. This is where the help for this channel would be placed.
M-CHANNEL NAME :: ADD AN ENTRY
SAVE
CANCEL
CONTENT
Date:
Time:
Title:
Abstract:
Content:
RELATED ACTION
Action:
Timing:
RELATED MEDIA
Media:
Browse...
Title:
PUBLISHING OPTIONS
Published:
Time Frame:
Publication Date:
Expiration Date:
SAVE
CANCEL
Start Page > Main Menu (ancillary mobile site name) > M-Channel > Add an Entry
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

FIG. 10

FIG. 11


WEB SITE LOGO
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Main Menu > General Inquiry List
LOGOUT
ADMINISTRATION
General Inquiry List
MAIN MENU
AUTO RESPONSE
ADD AN ITEM
Show All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
Last Name First Name E-Mail View Edit Status Erase
contact's last name contact's first name email view edit disabled erase
contact's last name contact's first name email view edit disabled erase
contact's last name contact's first name email view edit disabled erase
contact's last name contact's first name email view edit enabled erase
contact's last name contact's first name email view edit enabled erase
contact's last name contact's first name email view edit enabled erase
contact's last name contact's first name email view edit enabled erase
contact's last name contact's first name email view edit disabled erase
contact's last name contact's first name email view edit disabled erase
contact's last name contact's first name email view edit disabled erase
contact's last name contact's first name email view edit enabled erase
Pages: 1
Main Menu > General Inquiry List
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

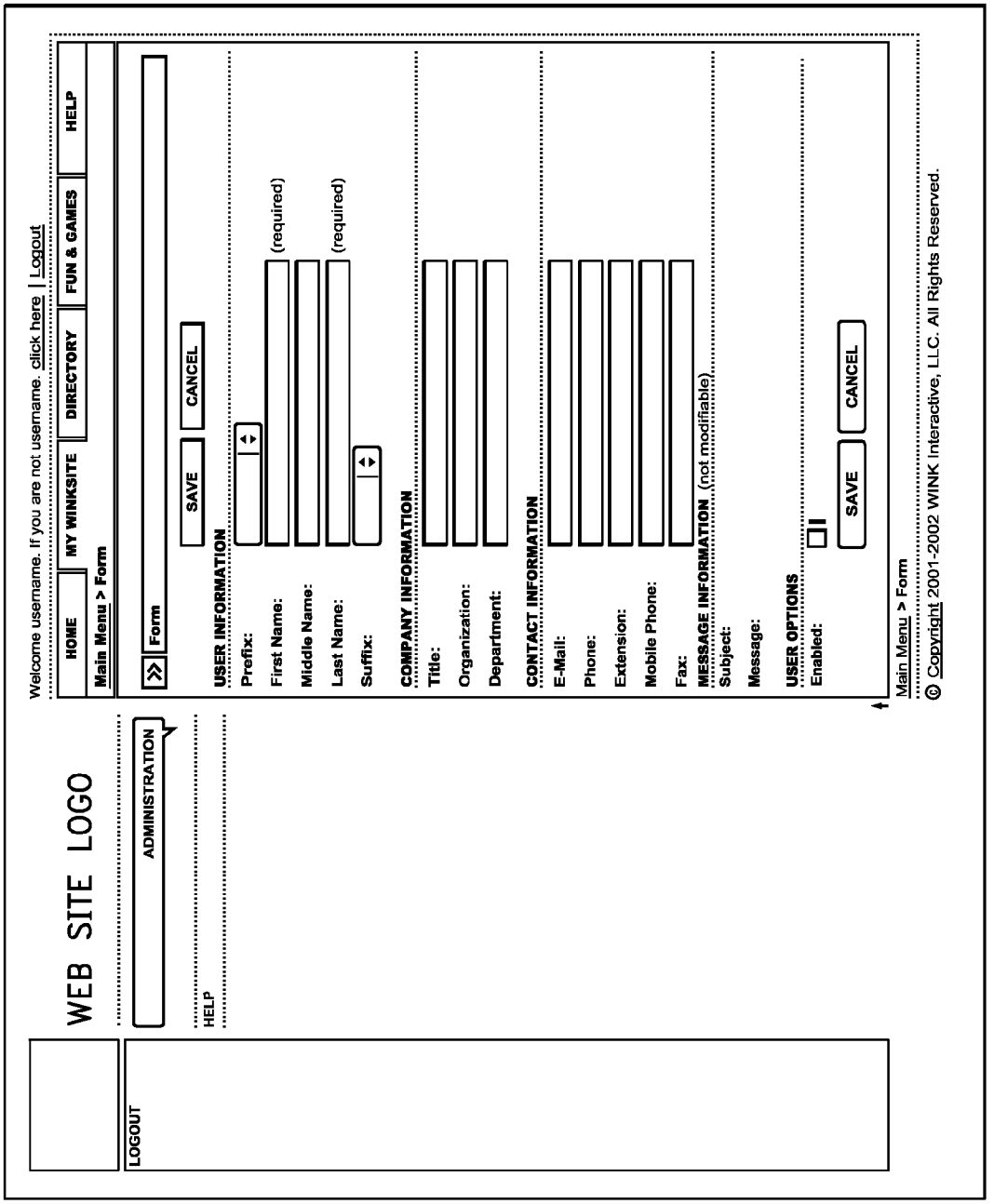

WEB SITE LOGO
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Main Menu > Form
LOGOUT
ADMINISTRATION
HELP
Form
SAVE
CANCEL
USER INFORMATION
Prefix:
First Name:
(required)
Middle Name:
Last Name:
(required)
Suffix:
COMPANY INFORMATION
Title:
Organization:
Department:
CONTACT INFORMATION
E-Mail:
Phone:
Extension:
Mobile Phone:
Fax:
MESSAGE INFORMATION (not modifiable)
Subject:
Message:
USER OPTIONS
Enabled:
SAVE
CANCEL
Main Menu > Form
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

FIG. 12

FIG. 13

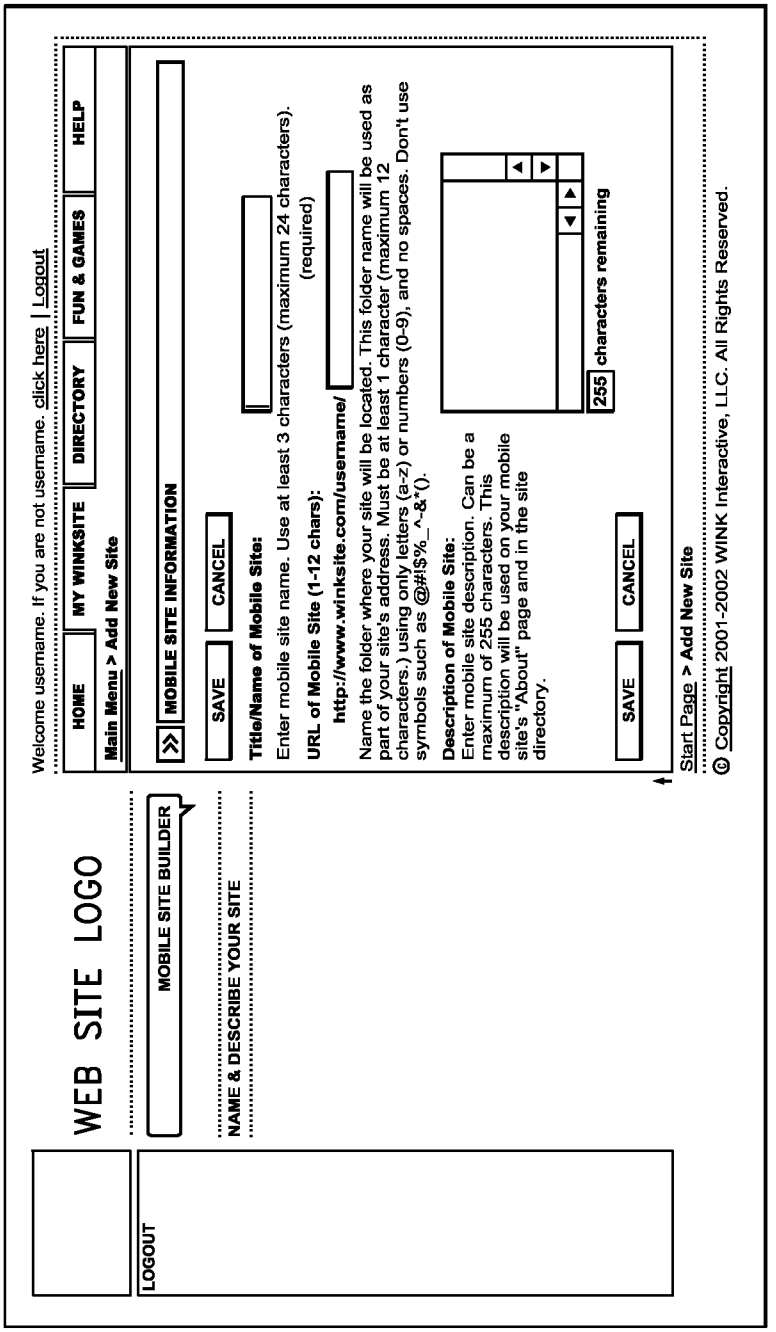

WEB SITE LOGO
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Main Menu > Add New Site
LOGOUT
MOBILE SITE BUILDER
MOBILE SITE INFORMATION
NAME & DESCRIBE YOUR SITE
SAVE
CANCEL
Title/Name of Mobile Site:
Enter mobile site name. Use at least 3 characters (maximum 24 characters).
(required)
URL of Mobile Site (1-12 chars):
http://www.winksite.com/username/
Name the folder where your site will be located. This folder name will be used as part of your site's address. Must be at least 1 character (maximum 12 characters.) using only letters (a-z) or numbers (0-9), and no spaces. Don't use symbols such as @#!$%_^&*().
Description of Mobile Site:
Enter mobile site description. Can be a maximum of 255 characters. This description will be used on your mobile site's "About" page and in the site directory.
255 characters remaining
SAVE
CANCEL
Start Page > Add New Site
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

FIG. 14

WEB SITE LOGO

Welcome username. If you are not username. click here | Logout

HOME | MY WINKSITE | DIRECTORY | FUN & GAMES | HELP

Start Page > Account Information

LOGOUT

ACCOUNT INFORMATION

MY WINKSITE ACCOUNT

METRICS

USERNAME:
username
MEMBER SINCE:
DD Mon YYYY 00:00 AM/PM
NUMBER OF LOGINS.
X
LAST LOGIN:
DD Mon YYYY 00:00 AM/PM

view m-card

ACCOUNT INFORMATION

SAVE CANCEL

MEMBER INFORMATION

First Name: (required)
Last Name: (required)
Birth Date: Year: (required)
Gender: Male Female (required)

CONTACT & LOCATION INFORMATION

E-Mail Address: (required)
Website URL:

Country Code: Select for country code
Mobile Phone: + country code area code phone number

Selecting a country from the "Country Code" drop down fills in the country code portion of your mobile phone number. Persons outside of the United States use the area code box for your region or carrier code.

AOL IM Screen Name:
ICQ Numbers:
MSN Messenger Name:
Yahoo! Messenger ID:

Address Line 1:
Address Line 2:
City:
State/Province: U.S. Residents: Please select your state below:
New York
All Others: Please type in your state/province
Zip/Postal Code:
Country: United States

PASSWORD INFORMATION

Password (6-12 chars): (required)
Re-enter Password: (required)

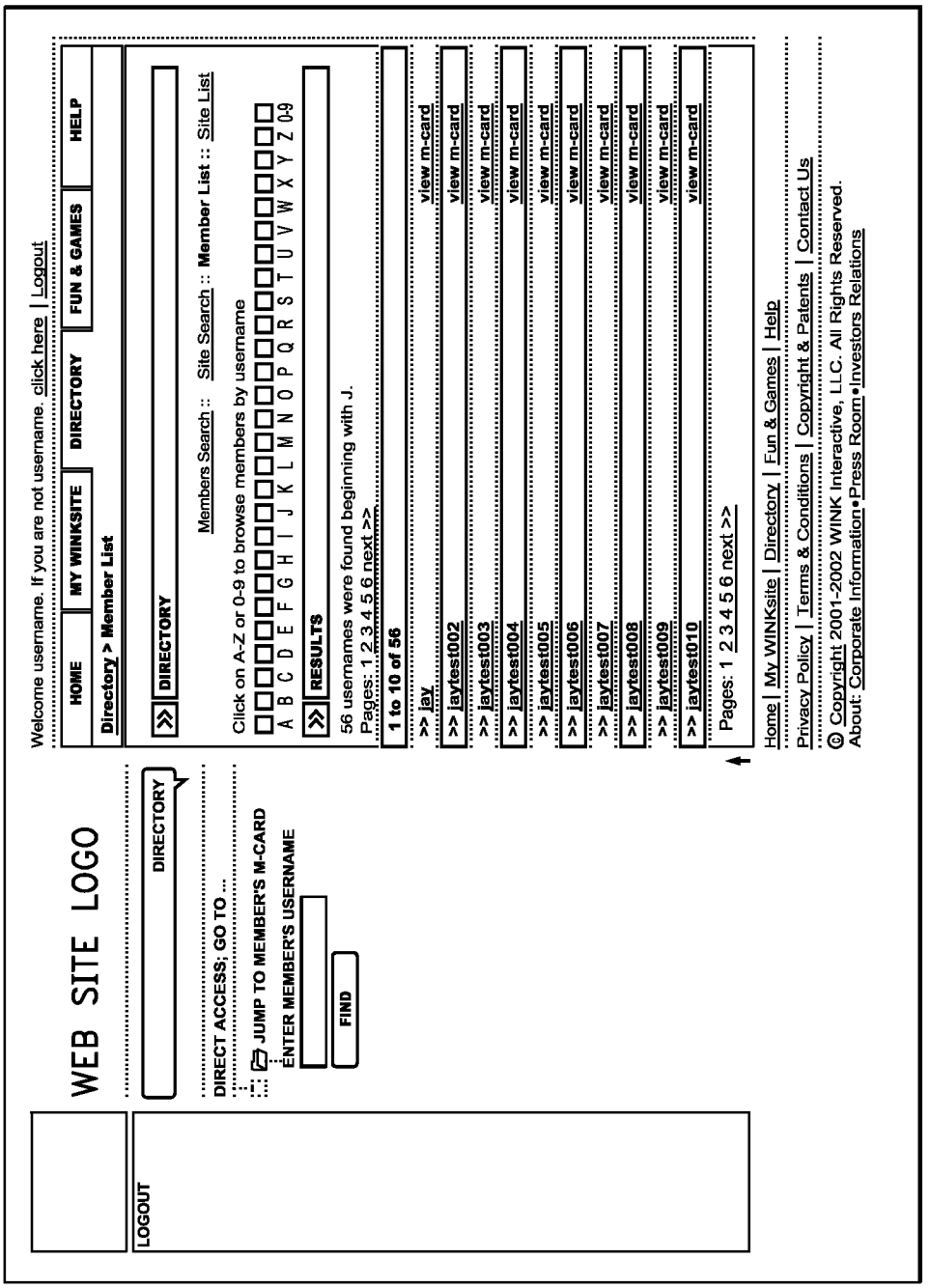
Must be at least 6 characters long, maximum 12 characters, may contain only letters (a-z) or numbers (0-9), **and no spaces.** Don't use symbols such as @#!$%_^-&*(). You will need your password to access WINK services.

SAVE CANCEL

Start Page > Account Information

© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

FIG. 15


WEB SITE LOGO
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
LOGOUT
DIRECTORY
Directory > Member List
DIRECTORY
Members Search :: Site Search :: Member List :: Site List
DIRECT ACCESS; GO TO ...
JUMP TO MEMBER'S M-CARD
ENTER MEMBER'S USERNAME
FIND
Click on A-Z or 0-9 to browse members by username
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0-9
RESULTS
56 usernames were found beginning with J.
Pages: 1 2 3 4 5 6 next >>
1 to 10 of 56
>> jay
>> jaytest002
>> jaytest003
>> jaytest004
>> jaytest005
>> jaytest006
>> jaytest007
>> jaytest008
>> jaytest009
>> jaytest010
view m-card
Pages: 1 2 3 4 5 6 next >>
Home | My WINKsite | Directory | Fun & Games | Help
Privacy Policy | Terms & Conditions | Copyright & Patents | Contact Us
© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.
About: Corporate Information • Press Room • Investors Relations

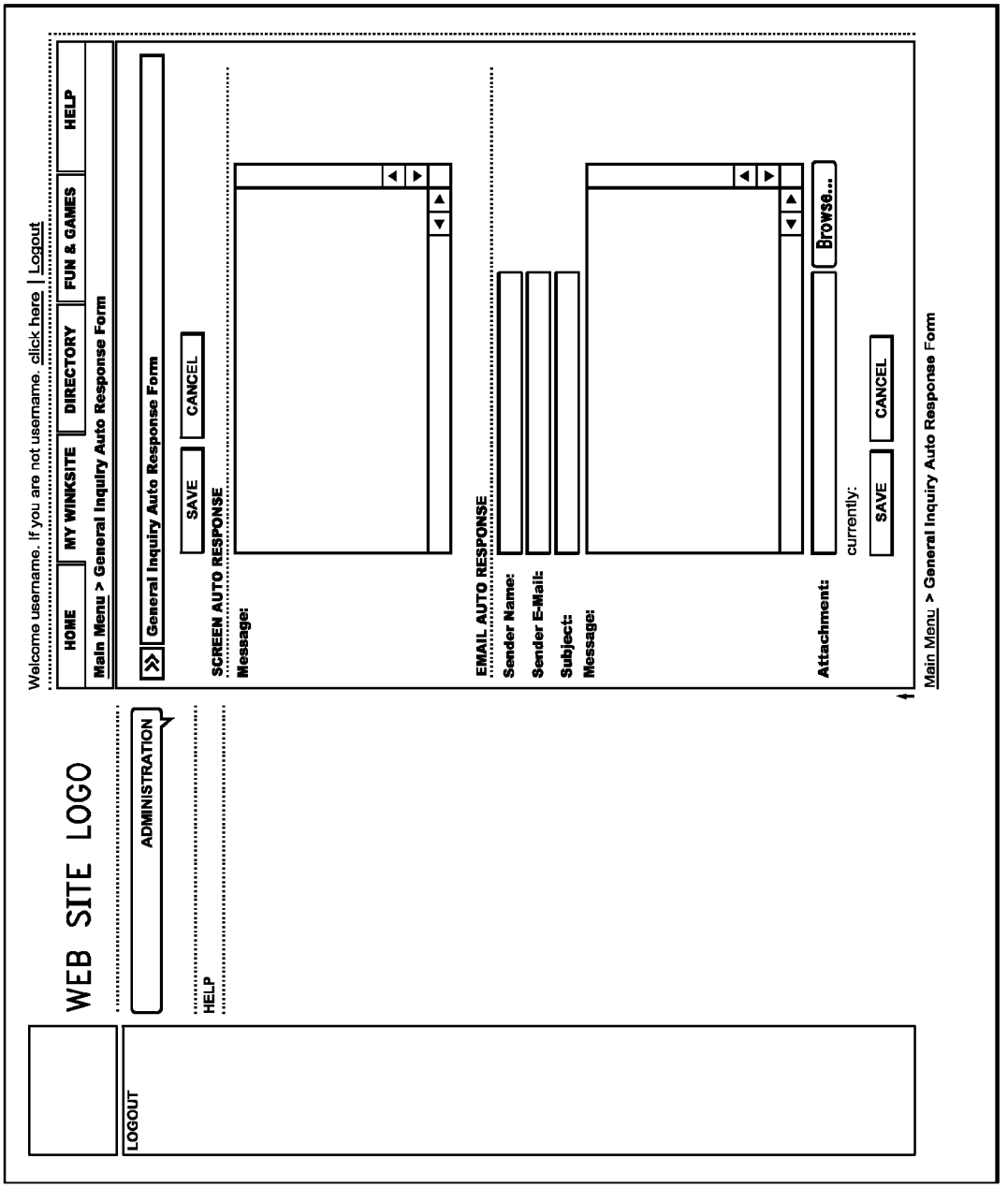

WEB SITE LOGO
Welcome username. If you are not username. click here | Logout
HOME
MY WINKSITE
DIRECTORY
FUN & GAMES
HELP
Main Menu > General Inquiry Auto Response Form
LOGOUT
ADMINISTRATION
HELP
General Inquiry Auto Response Form
SAVE
CANCEL
SCREEN AUTO RESPONSE
Message:
EMAIL AUTO RESPONSE
Sender Name:
Sender E-Mail:
Subject:
Message:
Attachment:
Browse...
currently:
SAVE
CANCEL
Main Menu > General Inquiry Auto Response Form

FIG. 16

FIG. 17a

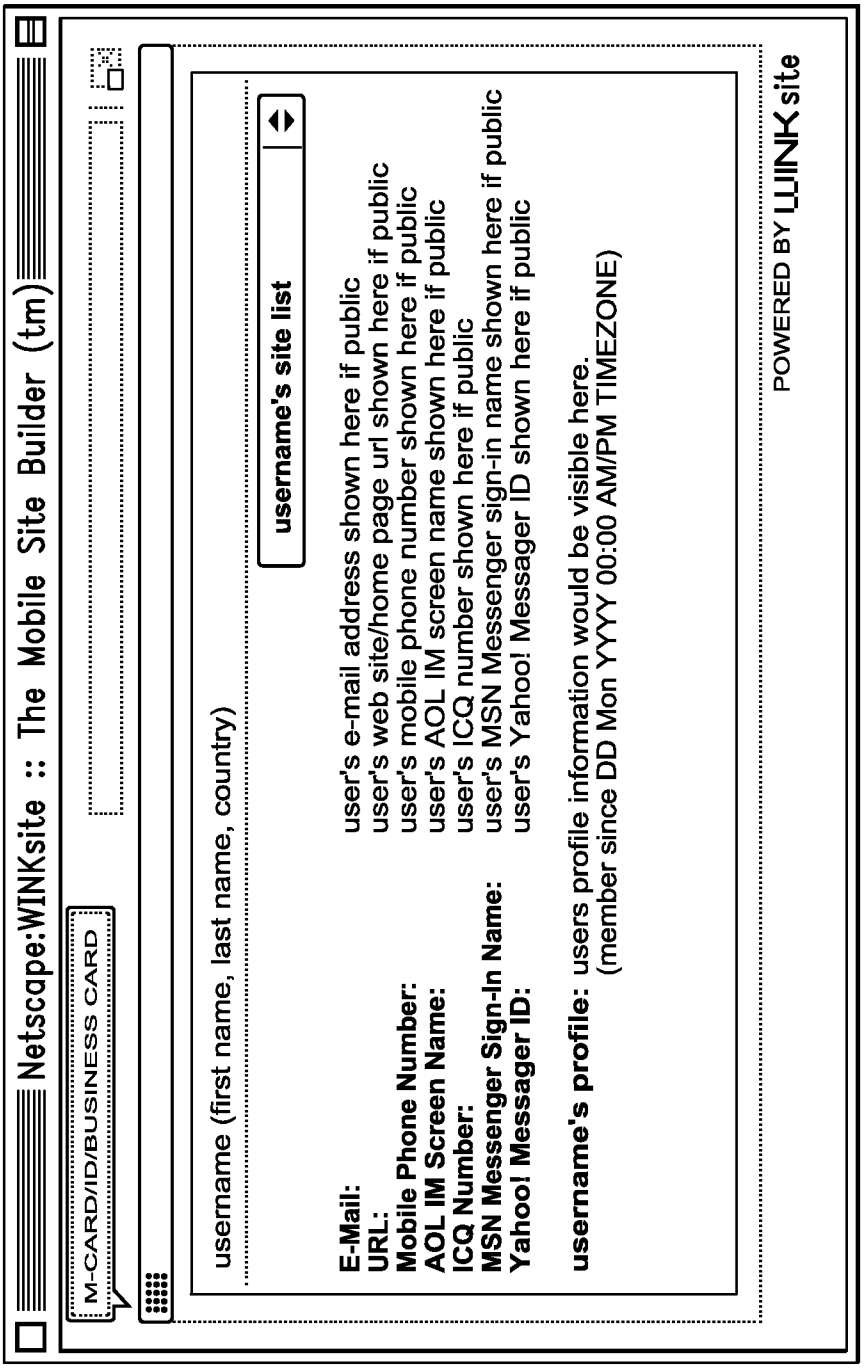

Netscape:WINKsite :: The Mobile Site Builder (tm)
M-CARD/ID/BUSINESS CARD
username (first name, last name, country)
username's site list
E-Mail: user's e-mail address shown here if public
URL: user's web site/home page url shown here if public
Mobile Phone Number: user's mobile phone number shown here if public
AOL IM Screen Name: user's AOL IM screen name shown here if public
ICQ Number: user's ICQ number shown here if public
MSN Messenger Sign-In Name: user's MSN Messenger sign-in name shown here if public
Yahoo! Messager ID: user's Yahoo! Messager ID shown here if public
username's profile: users profile information would be visible here.
(member since DD Mon YYYY 00:00 AM/PM TIMEZONE)
POWERED BY WINKsite

FIG. 17b

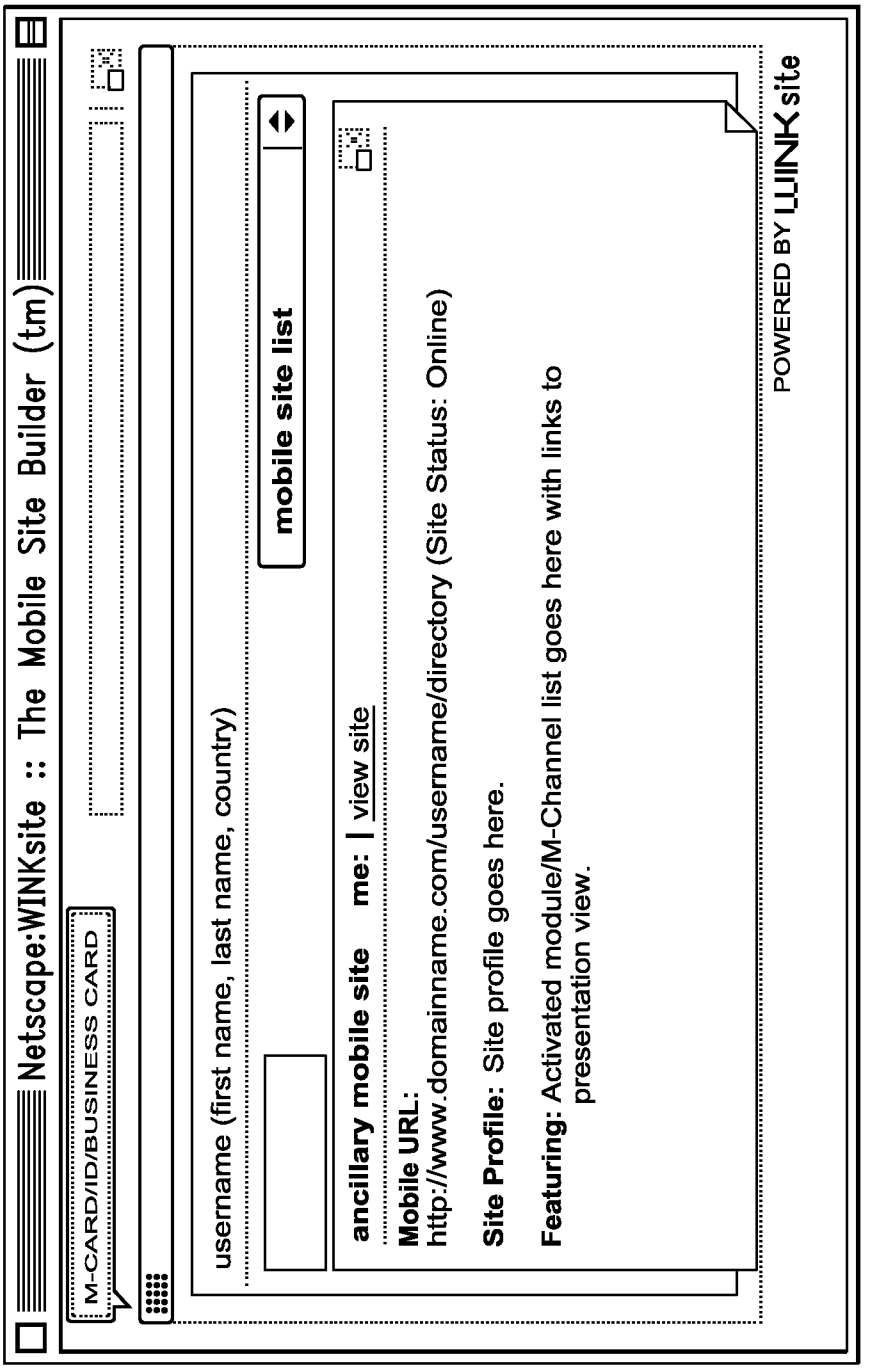

Netscape:WINKsite :: The Mobile Site Builder (tm)
M-CARD/ID/BUSINESS CARD
username (first name, last name, country)
mobile site list
ancillary mobile site me: | view site
Mobile URL:
http://www.domainname.com/username/directory (Site Status: Online)
Site Profile: Site profile goes here.
Featuring: Activated module/M-Channel list goes here with links to presentation view.
POWERED BY LUINK site

FIG. 18

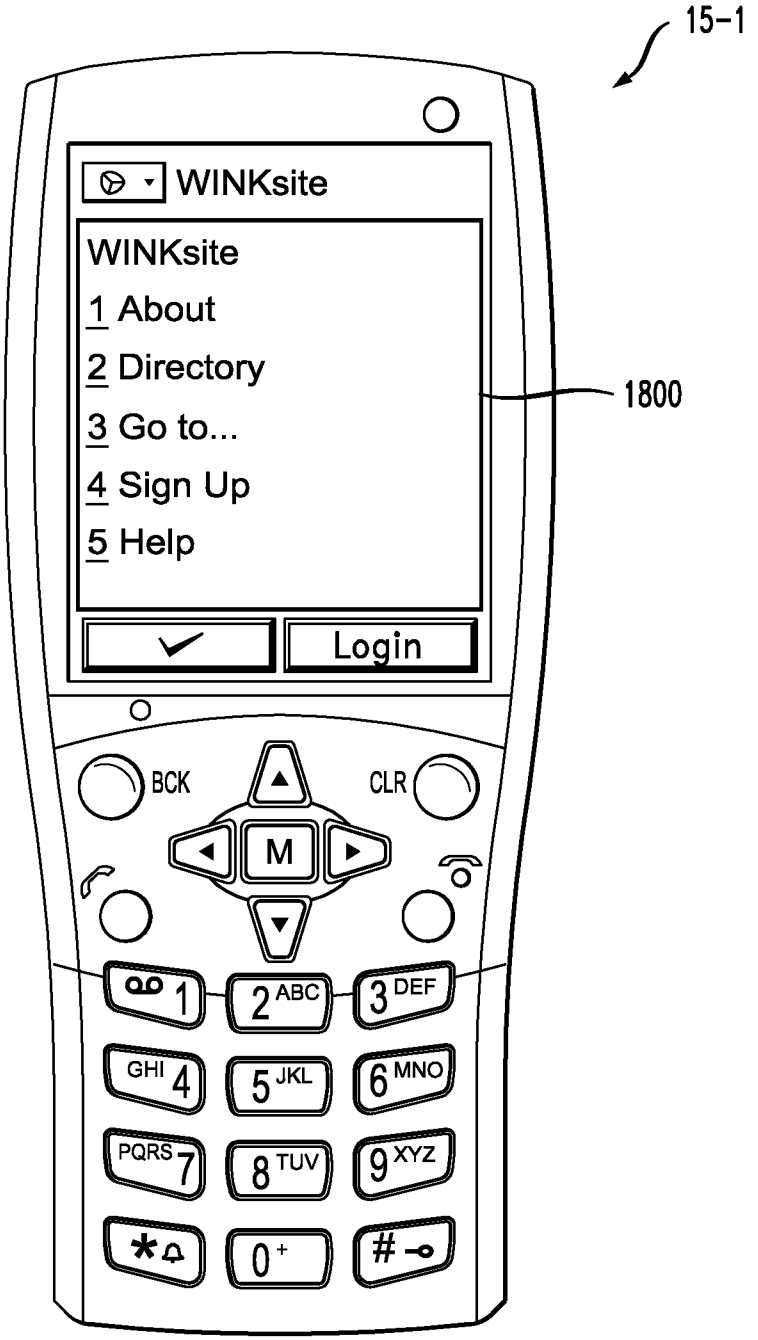

15-1
WINKsite
WINKsite
1 About
2 Directory
3 Go to...
4 Sign Up
5 Help
Login
1800
BCK
CLR
M
1
2 ABC
3 DEF
GHI 4
5 JKL
6 MNO
PQRS 7
8 TUV
9 XYZ
*
0 +
#

FIG. 19

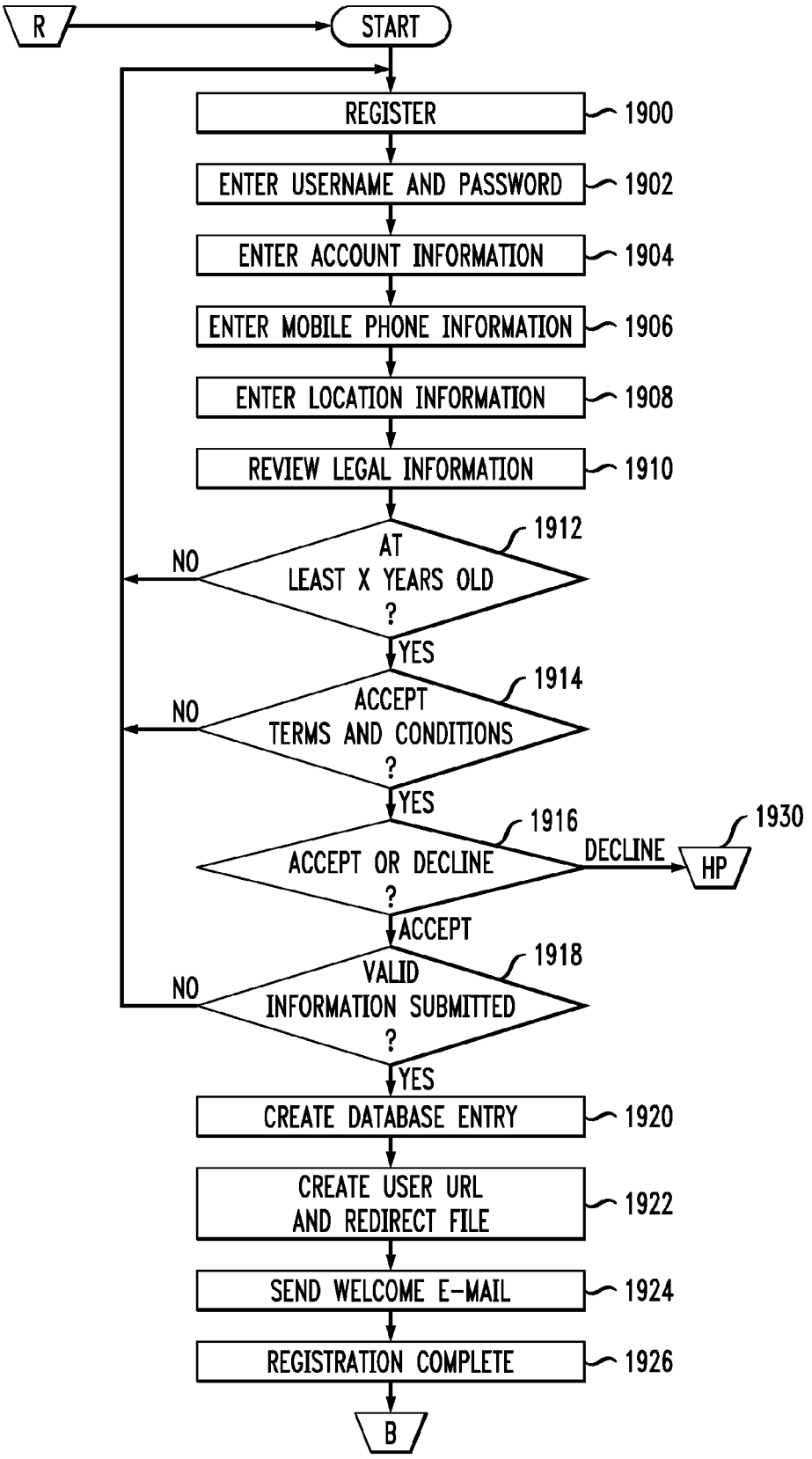

R
START
REGISTER
1900
ENTER USERNAME AND PASSWORD
1902
ENTER ACCOUNT INFORMATION
1904
ENTER MOBILE PHONE INFORMATION
1906
ENTER LOCATION INFORMATION
1908
REVIEW LEGAL INFORMATION
1910
AT LEAST X YEARS OLD ?
1912
NO
YES
ACCEPT TERMS AND CONDITIONS ?
1914
NO
YES
ACCEPT OR DECLINE ?
1916
DECLINE
HP
1930
ACCEPT
VALID INFORMATION SUBMITTED ?
1918
NO
YES
CREATE DATABASE ENTRY
1920
CREATE USER URL AND REDIRECT FILE
1922
SEND WELCOME E-MAIL
1924
REGISTRATION COMPLETE
1926
B

FIG. 20

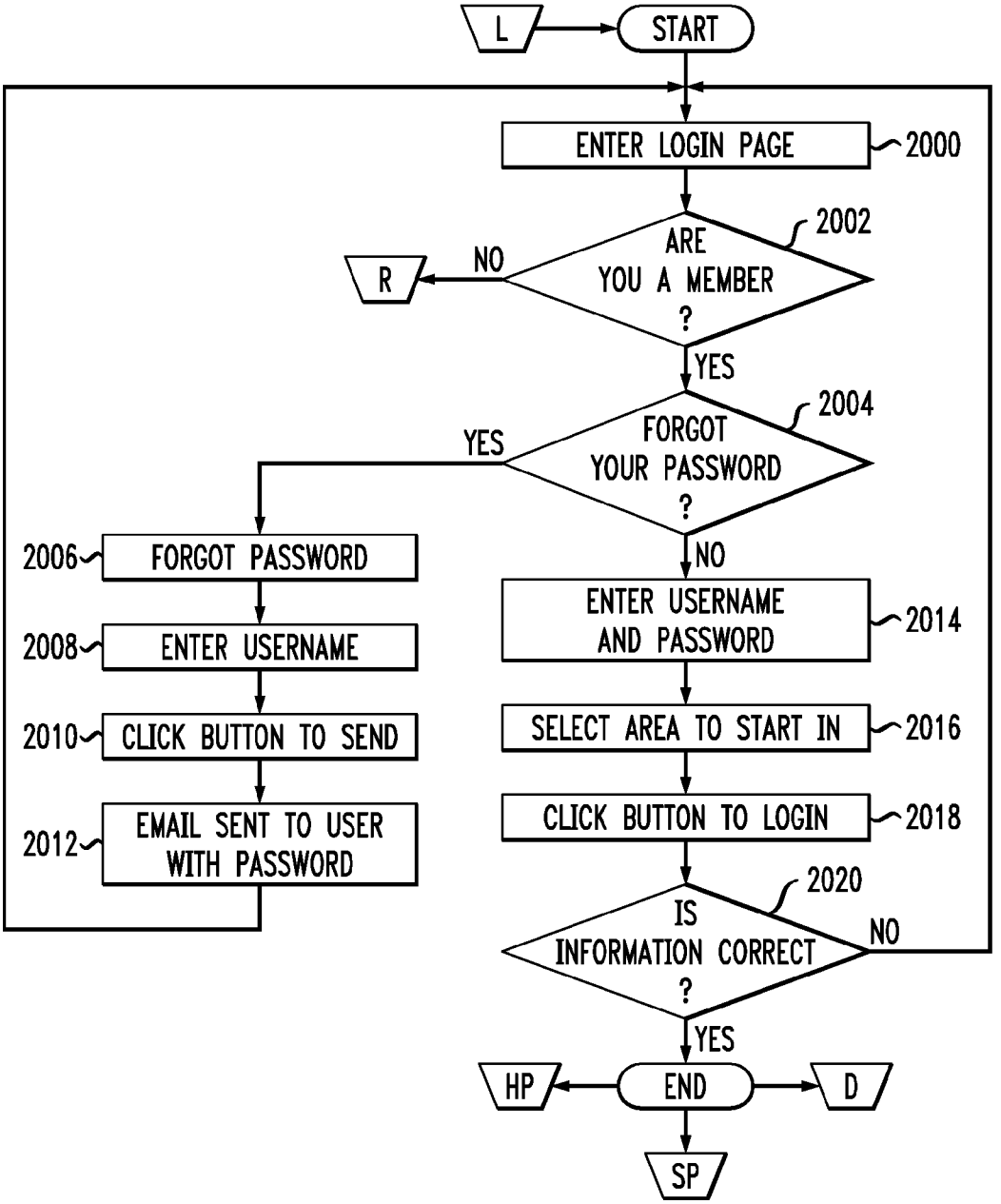

L
START
ENTER LOGIN PAGE
2000
ARE YOU A MEMBER ?
2002
NO
R
YES
FORGOT YOUR PASSWORD ?
2004
YES
NO
2006
FORGOT PASSWORD
2008
ENTER USERNAME
2010
CLICK BUTTON TO SEND
2012
EMAIL SENT TO USER WITH PASSWORD
ENTER USERNAME AND PASSWORD
2014
SELECT AREA TO START IN
2016
CLICK BUTTON TO LOGIN
2018
IS INFORMATION CORRECT ?
2020
NO
YES
HP
END
D
SP

FIG. 21

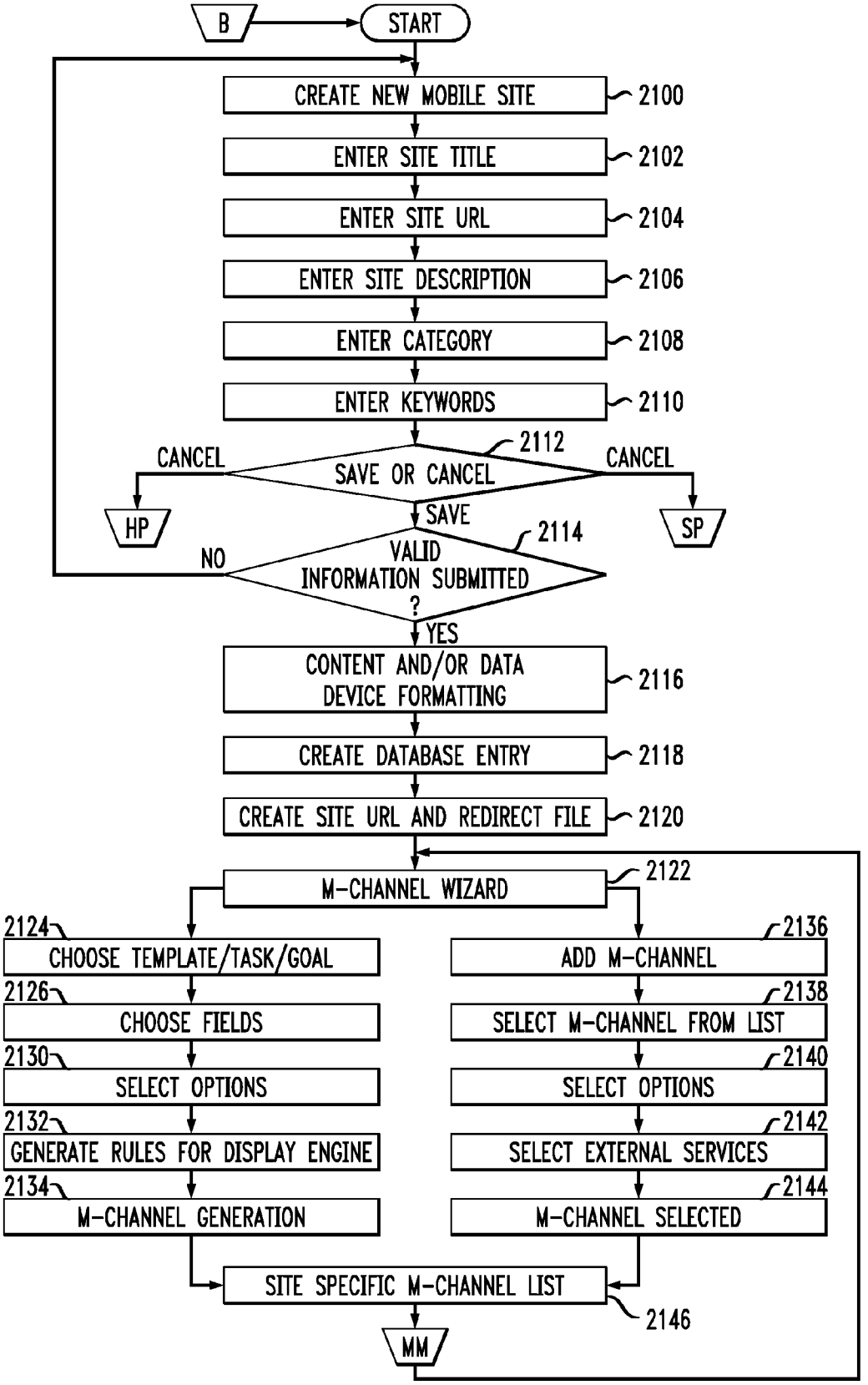

B
START
CREATE NEW MOBILE SITE
2100
ENTER SITE TITLE
2102
ENTER SITE URL
2104
ENTER SITE DESCRIPTION
2106
ENTER CATEGORY
2108
ENTER KEYWORDS
2110
2112
CANCEL
SAVE OR CANCEL
CANCEL
HP
SAVE
SP
2114
NO
VALID INFORMATION SUBMITTED ?
YES
CONTENT AND/OR DATA DEVICE FORMATTING
2116
CREATE DATABASE ENTRY
2118
CREATE SITE URL AND REDIRECT FILE
2120
M-CHANNEL WIZARD
2122
2124
CHOOSE TEMPLATE/TASK/GOAL
2126
CHOOSE FIELDS
2130
SELECT OPTIONS
2132
GENERATE RULES FOR DISPLAY ENGINE
2134
M-CHANNEL GENERATION
2136
ADD M-CHANNEL
2138
SELECT M-CHANNEL FROM LIST
2140
SELECT OPTIONS
2142
SELECT EXTERNAL SERVICES
2144
M-CHANNEL SELECTED
SITE SPECIFIC M-CHANNEL LIST
2146
MM

FIG. 22

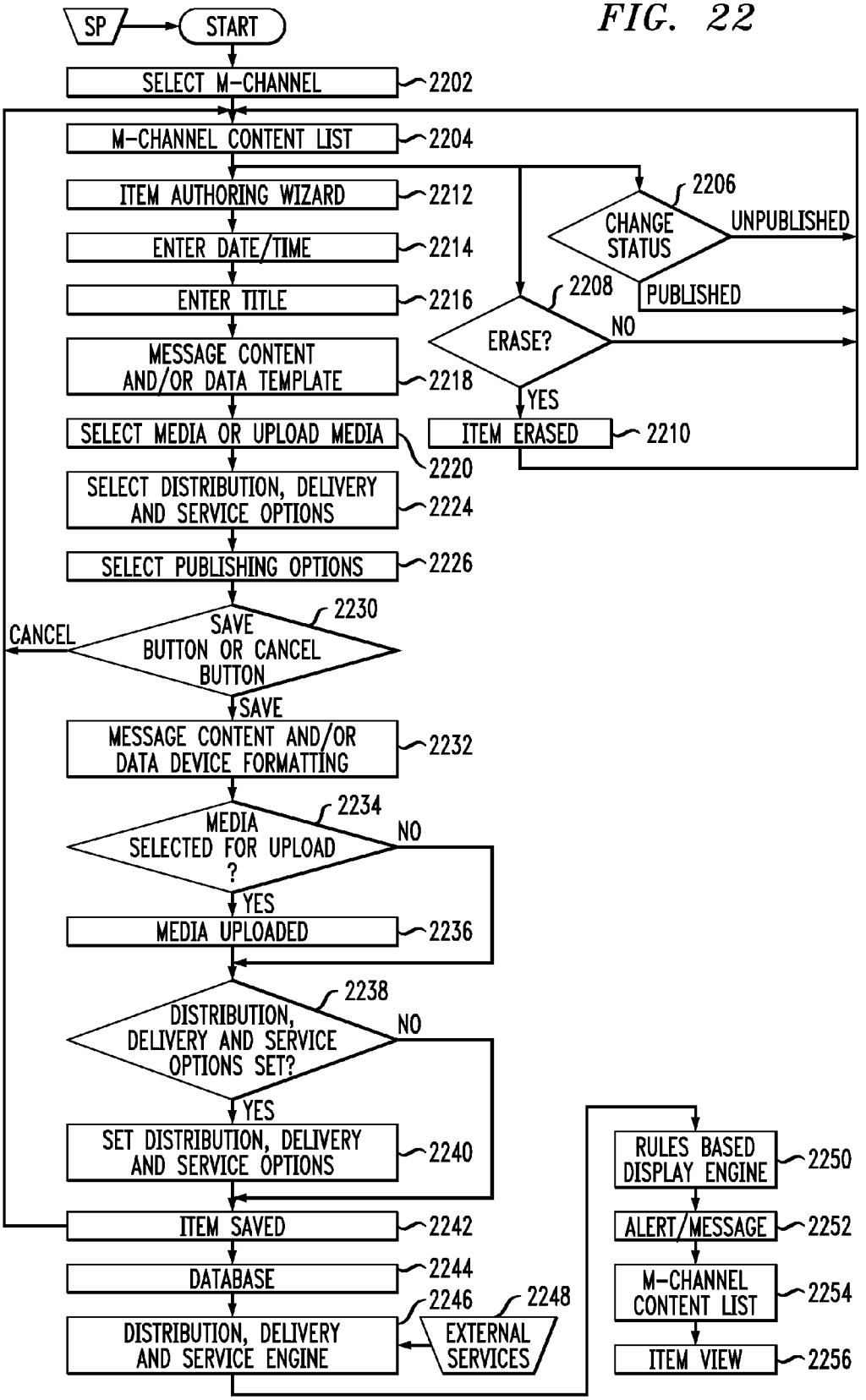

SP
START
SELECT M-CHANNEL
2202
M-CHANNEL CONTENT LIST
2204
ITEM AUTHORING WIZARD
2212
ENTER DATE/TIME
2214
ENTER TITLE
2216
MESSAGE CONTENT AND/OR DATA TEMPLATE
2218
SELECT MEDIA OR UPLOAD MEDIA
2220
SELECT DISTRIBUTION, DELIVERY AND SERVICE OPTIONS
2224
SELECT PUBLISHING OPTIONS
2226
SAVE BUTTON OR CANCEL BUTTON
2230
CANCEL
SAVE
MESSAGE CONTENT AND/OR DATA DEVICE FORMATTING
2232
MEDIA SELECTED FOR UPLOAD ?
2234
NO
YES
MEDIA UPLOADED
2236
DISTRIBUTION, DELIVERY AND SERVICE OPTIONS SET?
2238
NO
YES
SET DISTRIBUTION, DELIVERY AND SERVICE OPTIONS
2240
ITEM SAVED
2242
DATABASE
2244
DISTRIBUTION, DELIVERY AND SERVICE ENGINE
2246
EXTERNAL SERVICES
2248
CHANGE STATUS
2206
UNPUBLISHED
PUBLISHED
ERASE?
2208
NO
YES
ITEM ERASED
2210
RULES BASED DISPLAY ENGINE
2250
ALERT/MESSAGE
2252
M-CHANNEL CONTENT LIST
2254
ITEM VIEW
2256

FIG. 23

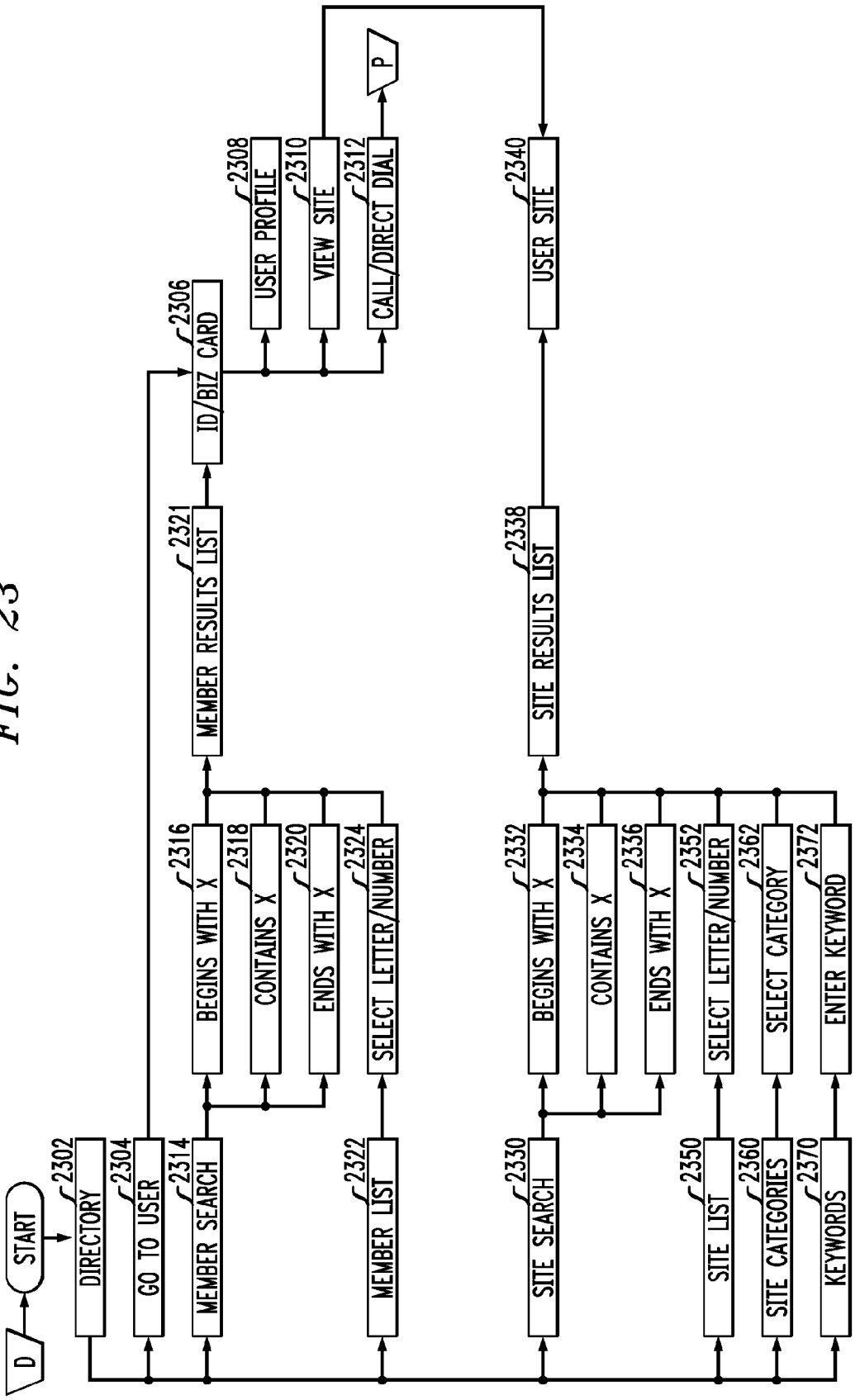
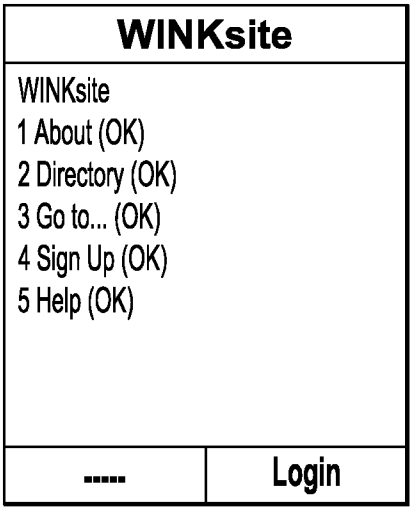
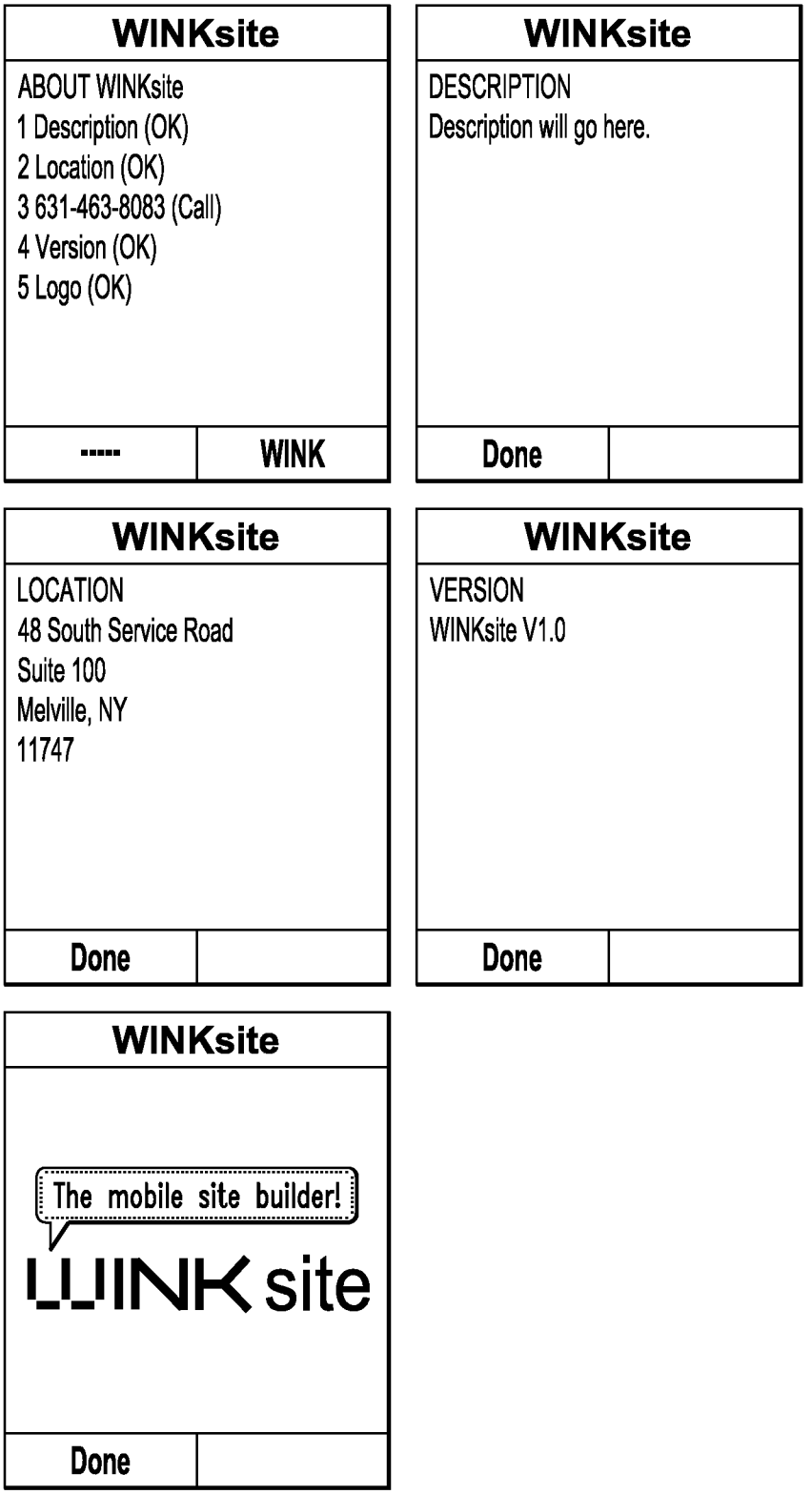

D
START
2302
DIRECTORY
2304
GO TO USER
2314
MEMBER SEARCH
2316
BEGINS WITH X
2318
CONTAINS X
2320
ENDS WITH X
2324
SELECT LETTER/NUMBER
2322
MEMBER LIST
2321
MEMBER RESULTS LIST
2306
ID/BIZ CARD
2308
USER PROFILE
2310
VIEW SITE
2312
CALL/DIRECT DIAL
P
2330
SITE SEARCH
2332
BEGINS WITH X
2334
CONTAINS X
2336
ENDS WITH X
2352
SELECT LETTER/NUMBER
2350
SITE LIST
2338
SITE RESULTS LIST
2340
USER SITE
2360
SITE CATEGORIES
2362
SELECT CATEGORY
2370
KEYWORDS
2372
ENTER KEYWORD

FIG. 24a


WINKsite
WINKsite
1 About (OK)
2 Directory (OK)
3 Go to... (OK)
4 Sign Up (OK)
5 Help (OK)

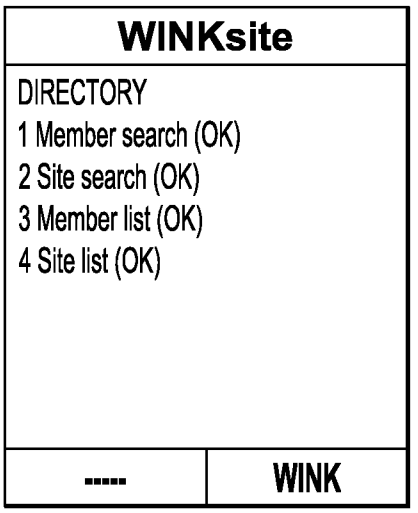
Login

FIG. 24b


WINKsite
ABOUT WINKsite
1 Description (OK)
2 Location (OK)
3 631-463-8083 (Call)
4 Version (OK)
5 Logo (OK)

WINK
WINKsite
DESCRIPTION
Description will go here.
Done
WINKsite
LOCATION
48 South Service Road
Suite 100
Melville, NY
11747
Done
WINKsite
VERSION
WINKsite V1.0
Done
WINKsite
The mobile site builder!
WINK site
Done

FIG. 24c


WINKsite
DIRECTORY
1 Member search (OK)
2 Site search (OK)
3 Member list (OK)
4 Site list (OK)

WINK

FIG. 24d

WINKsite

MEMBER SEARCH
1 Begins with (OK)
2 Contains (OK)
3 Ends with (OK)

----- | DONE

WINKsite

MEMBER SEARCH
Begins with:/Contains:/Ends with:
_____

Find

WINKsite

MEMBERS
B/C/E smith
1-9 of 134
1 Blacksmith (OK)
2 Smithsonian (OK)
...
8 Smith's World (OK)
9 Will Smith (OK)
More... (More)

----- | Done

WINKsite

MEMBER LIST
1 0-9 (OK)
2 ABC (OK)
3 DEF (OK)
4 GHI (OK)
5 JKL (OK)
6 MNO (OK)
7 PQRS (OK)
8 TUV (OK)
9 WXYZ (OK)

----- | Done

WINKsite

MEMBER LIST
1 A (OK)
2 B (OK)
3 C (OK)

----- | Done

WINKsite

MEMBERS: A
1-9 of 26
1 Abe (OK)
2 Ace (OK)
...
8 Arvan (OK)
9 Astro (OK)
More... (More)

----- | Done

FIG. 24e

WINKsite

SITE SEARCH
1 Begins with (OK)
2 Contains (OK)
3 Ends with (OK)

----- | DONE

WINKsite

SITE SEARCH
Begins with:/Contains:/Ends with:
_____

Find

WINKsite

SITES
B/C/E world
1-9 of 145
1 Bill's World (Go)
2 Dave's World (Go)
...
8 Jay's World (Go)
9 Pat's World (Go)
More... (More)

----- | Done

WINKsite

SITE LIST
1 0-9 (OK)
2 ABC (OK)
3 DEF (OK)
4 GHI (OK)
5 JKL (OK)
6 MNO (OK)
7 PQRS (OK)
8 TUV (OK)
9 WXYZ (OK)

----- | Done

WINKsite

SITE LIST
1 A (OK)
2 B (OK)
3 C (OK)

----- | Done

WINKsite

SITES: A
1-9 of 39
1 Abe's Home (abe) (Go)
2 Ace World (john42)(Go)
...
8 Arvan Industries (artie)(Go)
9 Astro's World (fred185) (Go)
More... (More)

----- | Done

FIG. 24f

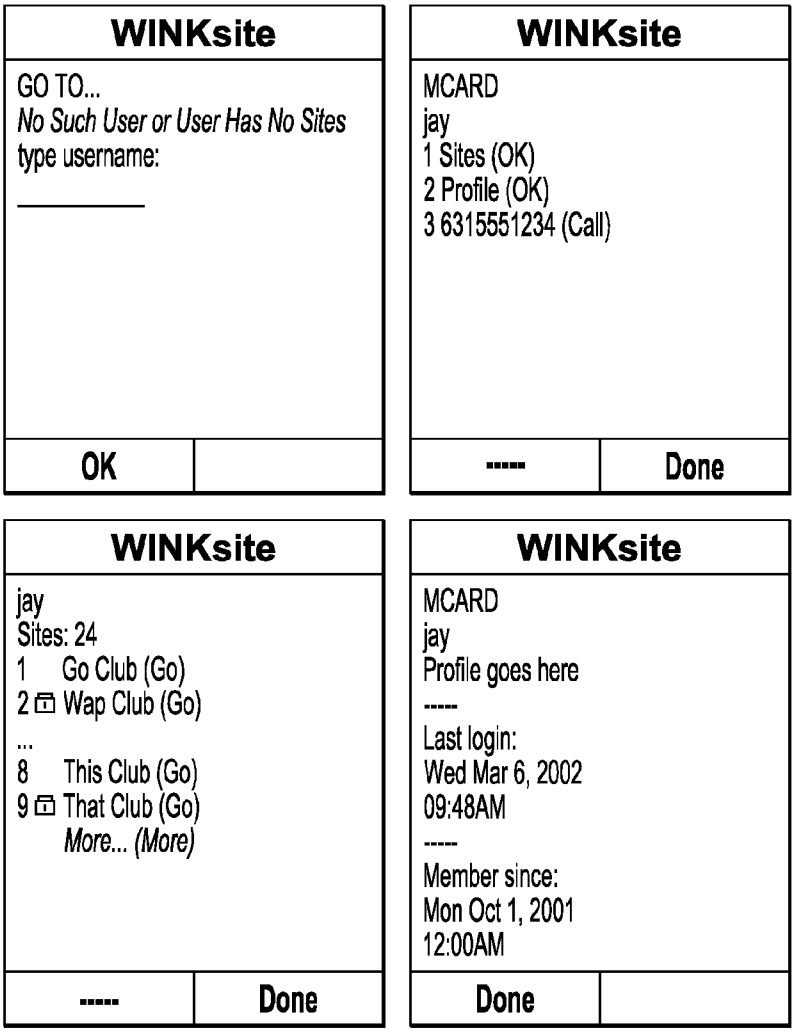


FIG. 24g

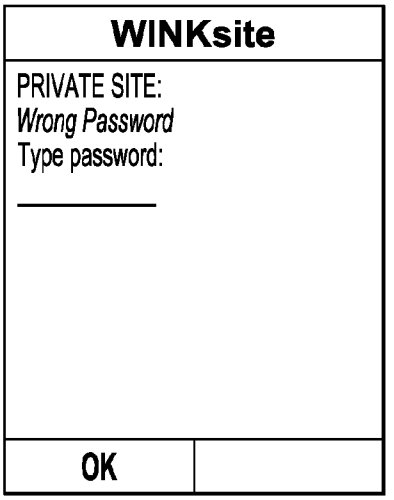


FIG. 25a

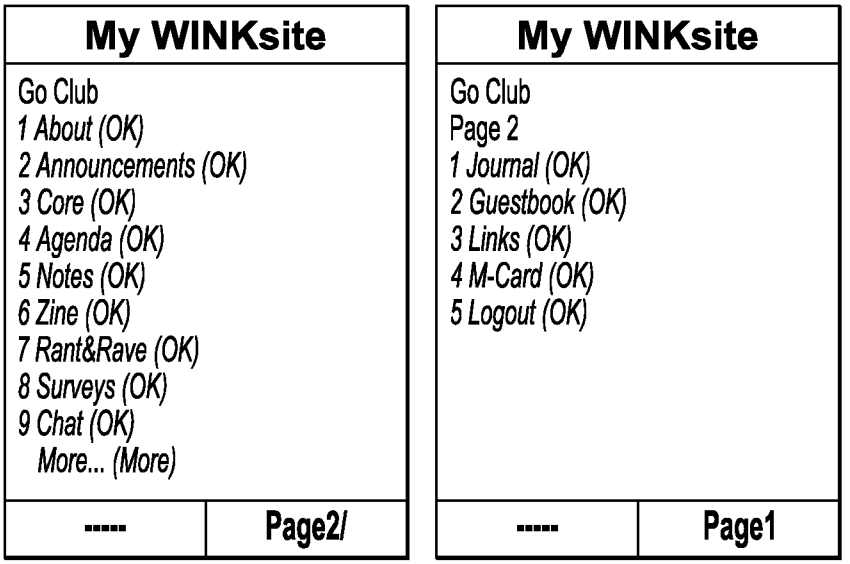


FIG. 25b

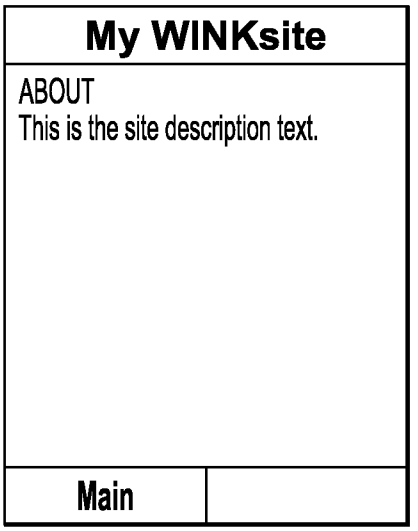


FIG. 25c

My WINKsite

ANNOUNCEMENTS
1-9 of 126
1 Jan11@12:34PM (View)
2 Jan09@09:34AM (View)
...
8 Dec25@07:57PM (View)
9 Dec23@01:09AM (View)
More... (More)

----- | **Main**

My WINKsite

ANNOUCEMENTS
Tue.8 Jan 2002
01:44PM
This is an example announcement.

Done

FIG. 25d

My WINKsite

CORE
1-9 of 74
1 *Services* (OK)
2 *Products* (OK)
...
8 *Rebates* (OK)
9 *Coupons* (OK)
More... (More)

----- | **Main**

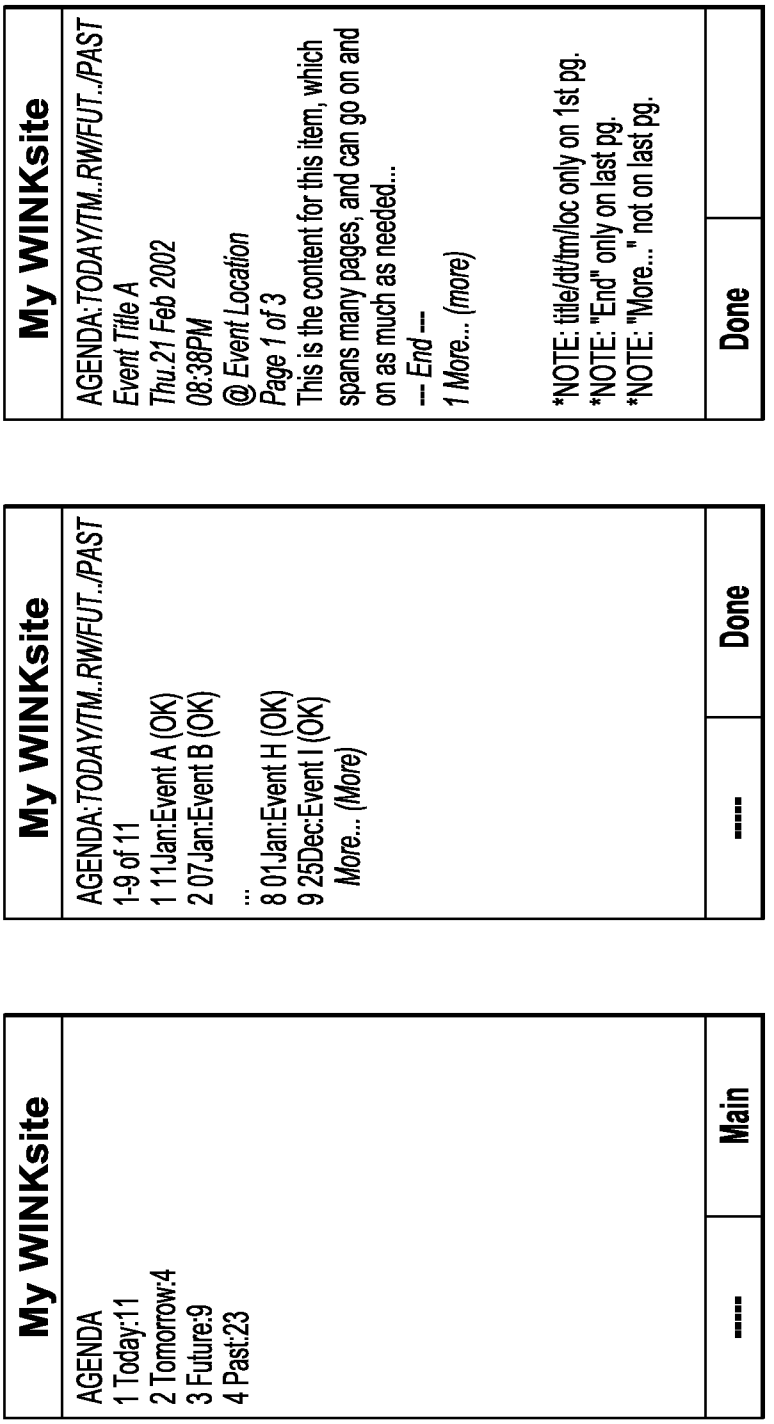
My WINKsite

CORE
Services
Page 1 of 5
This is the content for this item, which spans many pages, and can go on and on as much as needed...
Last Updated:
Mon.11 Feb 2002
09:45AM
---End---
1 More... (More)

*NOTE: date/time on last page only
*NOTE: "End" only on last pg.
*NOTE: "More..." not on last pg.

Done

FIG. 25e


My WINKsite
AGENDA
1 Today:11
2 Tomorrow:4
3 Future:9
4 Past:23

Main
My WINKsite
AGENDA:TODAY/TM..RW/FUT../PAST
1-9 of 11
1 11Jan:Event A (OK)
2 07Jan:Event B (OK)
...
8 01Jan:Event H (OK)
9 25Dec:Event I (OK)
More... (More)

Done
My WINKsite
AGENDA:TODAY/TM..RW/FUT../PAST
Event Title A
Thu.21 Feb 2002
08:38PM
@ Event Location
Page 1 of 3
This is the content for this item, which spans many pages, and can go on and on as much as needed...
--- End ---
1 More... (more)
*NOTE: title/dt/tm/loc only on 1st pg.
*NOTE: "End" only on last pg.
*NOTE: "More... " not on last pg.
Done

FIG. 25f

My WINKsite

ZINE
1-9 of 126
1 11Jan:My Issue Name A (OK)
2 09Jan:My Issue Name B (OK)
...
8 03Jan:My Issue Name H (OK)
9 30Dec:My Issue Name I (OK)
More... (More)

---- | **Main**

My WINKsite

ZINE
Mon.11 Jan,2002
My Issue Name A
10-18 of 23
1 My Article Title A (View)
2 My Article Title B (View)
...
8 My Article Title H (View)
9 My Article Title I (View)
More... (More)

---- | **Done**

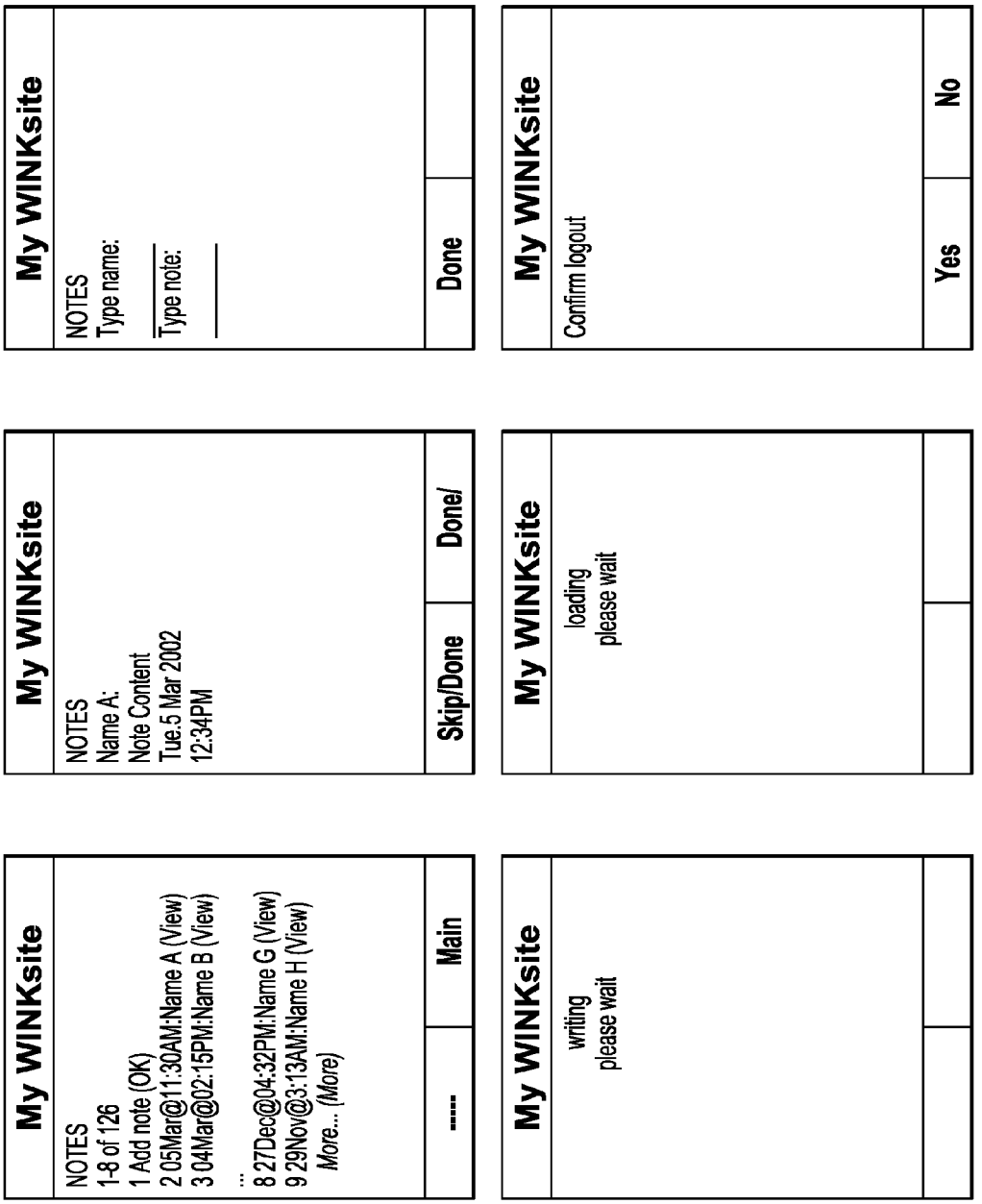
My WINKsite

ZINE ARTICLE
My Article Title A
by Author
Page 1 of 3
This is the content for this item, which spans many pages, and can go on and on as much as needed...
--End--
1 More... (More)

*Note: title/author only on 1st pg.
*Note: "End" only on last pg.
*Note: "More..." not on last pg.

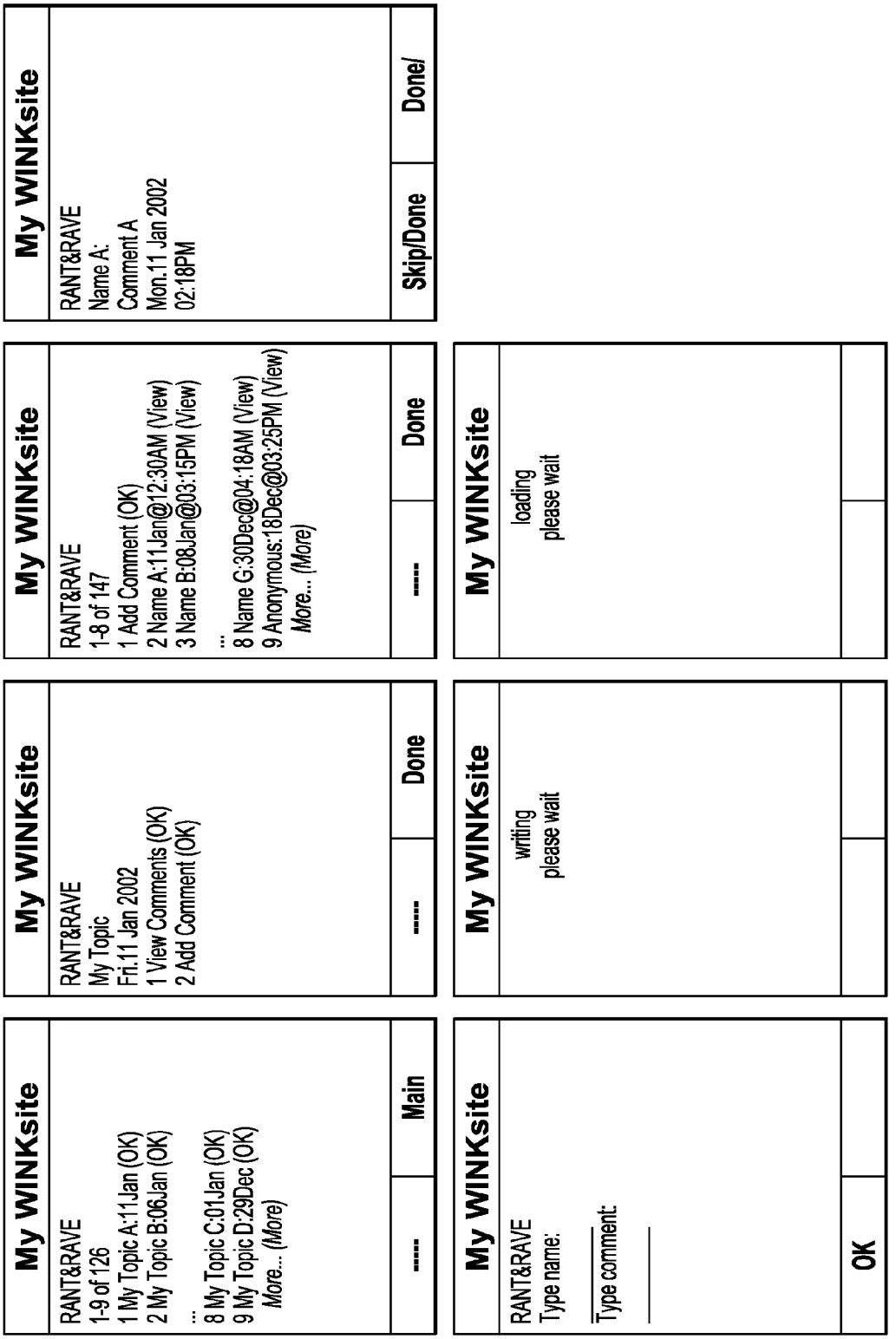
Done

FIG. 25g


My WINKsite
NOTES
1-8 of 126
1 Add note (OK)
2 05Mar@11:30AM:Name A (View)
3 04Mar@02:15PM:Name B (View)
...
8 27Dec@04:32PM:Name G (View)
9 29Nov@3:13AM:Name H (View)
More... (More)

Main
My WINKsite
NOTES
Name A:
Note Content
Tue.5 Mar 2002
12:34PM
Skip/Done
Done/
My WINKsite
NOTES
Type name:
Type note:
Done
My WINKsite
writing
please wait
My WINKsite
loading
please wait
My WINKsite
Confirm logout
Yes
No

FIG. 25h


My WINKsite
RANT&RAVE
1-9 of 126
1 My Topic A:11Jan (OK)
2 My Topic B:06Jan (OK)
...
8 My Topic C:01Jan (OK)
9 My Topic D:29Dec (OK)
More... (More)

Main
My WINKsite
RANT&RAVE
My Topic
Fri.11 Jan 2002
1 View Comments (OK)
2 Add Comment (OK)

Done
My WINKsite
RANT&RAVE
1-8 of 147
1 Add Comment (OK)
2 Name A:11Jan@12:30AM (View)
3 Name B:08Jan@03:15PM (View)
...
8 Name G:30Dec@04:18AM (View)
9 Anonymous:18Dec@03:25PM (View)
More... (More)

Done
My WINKsite
RANT&RAVE
Name A:
Comment A
Mon.11 Jan 2002
02:18PM
Skip/Done
Done/
My WINKsite
RANT&RAVE
Type name:
Type comment:
OK
My WINKsite
writing
please wait
My WINKsite
loading
please wait

FIG. 25i

My WINKsite
SURVEYS
1 Open:13
2 Closed:21
----- | Main

My WINKsite
SURVERYS:*OPEN/CLOSED*
1-9 of 13
1 Survey Question A?:13Jan (OK)
2 Survey Question B?:11Jan (OK)
...
8 Survey Question H?:03Jan (OK)
9 Survey Question I?:30Dec (OK)
More... (More)
----- | Done

My WINKsite
SURVEYS
Survey Question A that will take up as many lines as it needs?
1 Take survey (OK)
2 View comments (OK)
3 View results (OK)
----- | Done

My WINKsite
SURVEYS
Survey Question A with nowrap?
1 Choice 1 (Vote)
2 Choice 2 (Vote)
...
8 Choice 8 (Vote)
9 Choice 9 (Vote)
----- | Cancl

My WINKsite
SURVEYS
Survey Question A with nowrap?
11% Choice 1
09% Choice 2
...
00% Choice 8
10% Choice 9
Votes:250
Done

My WINKsite
SURVEYS
1-8 of 147
1 Add Comment (OK)
2 Name A:11Jan@12:30AM (View)
3 Name B:08Jan@03:15PM (View)
...
8 Name G:30Dec@04:18AM (View)
9 Anonymous:18Dec@03:25PM (View)
More... (More)
----- | Done

FIG. 25i cont.

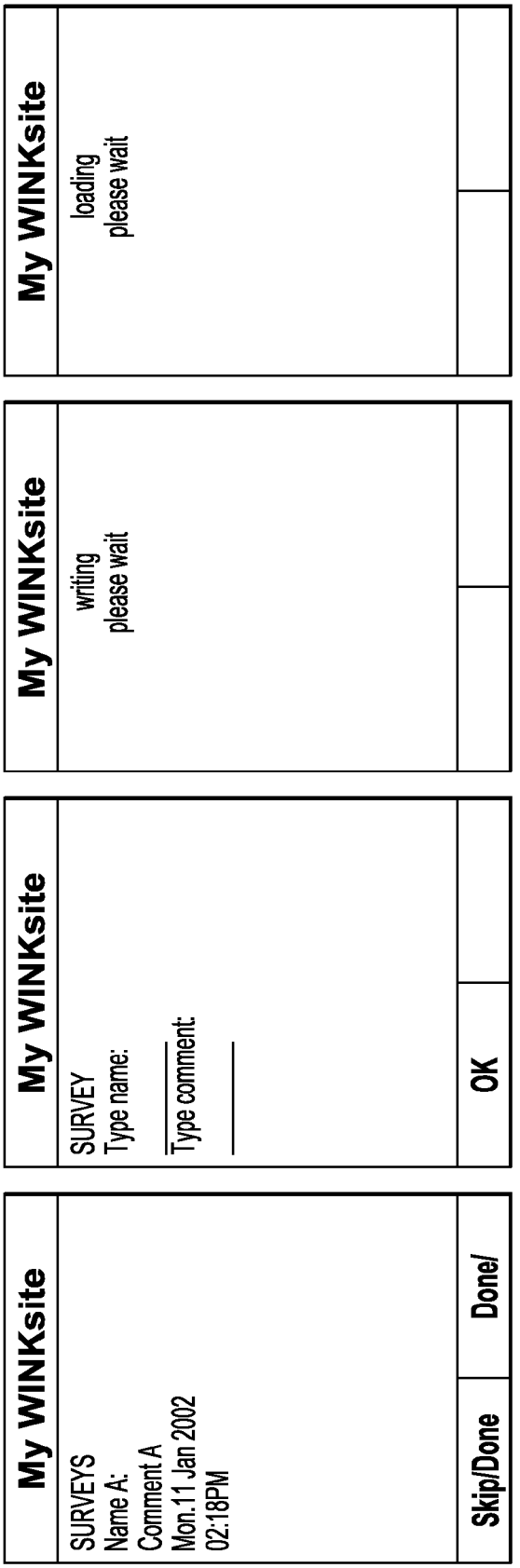
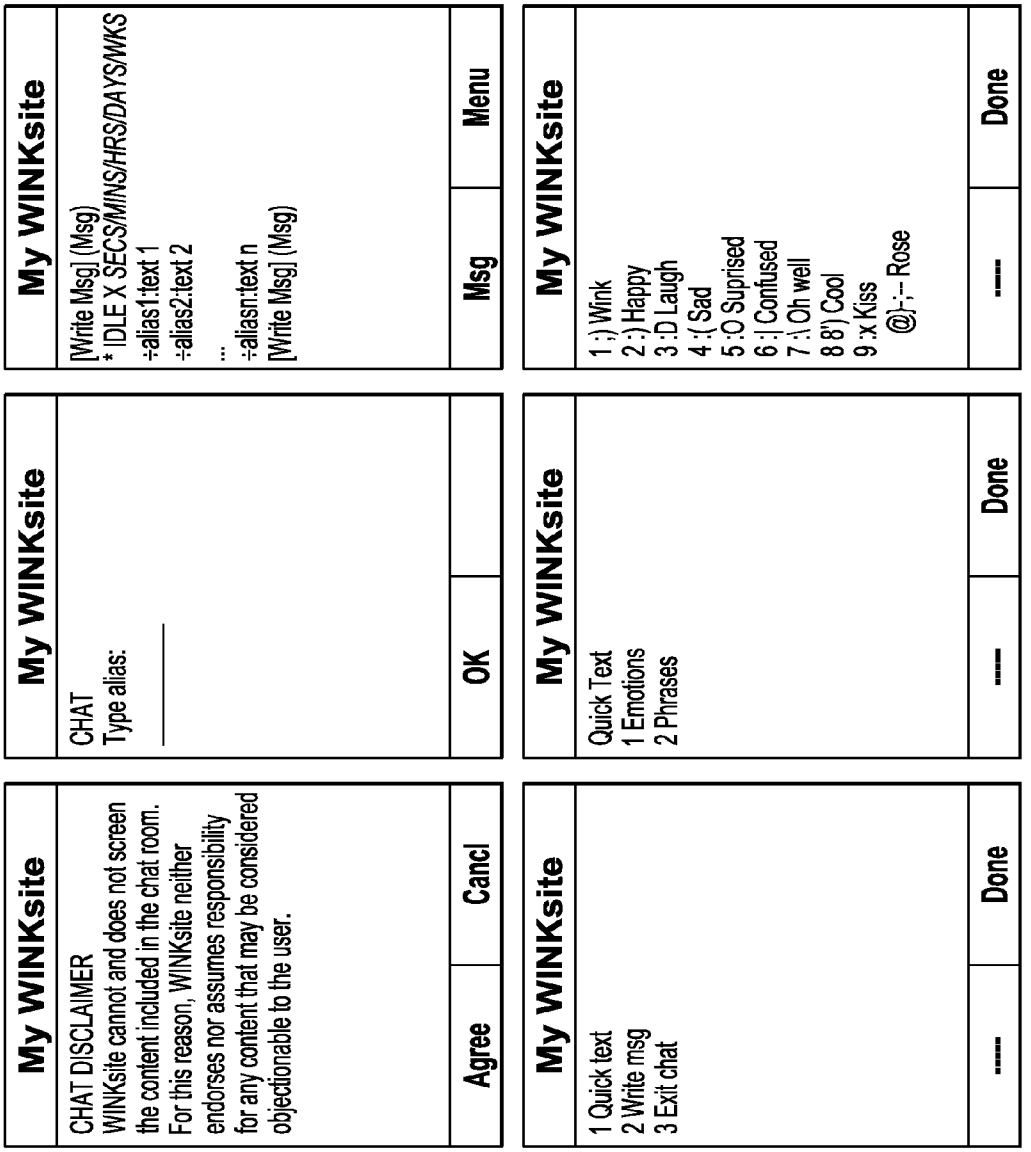

My WINKsite
SURVEYS
Name A:
Comment A
Mon.11 Jan 2002
02:18PM
Skip/Done
Done/
My WINKsite
SURVEY
Type name:
Type comment:
OK
My WINKsite
writing
please wait
My WINKsite
loading
please wait

FIG. 25j

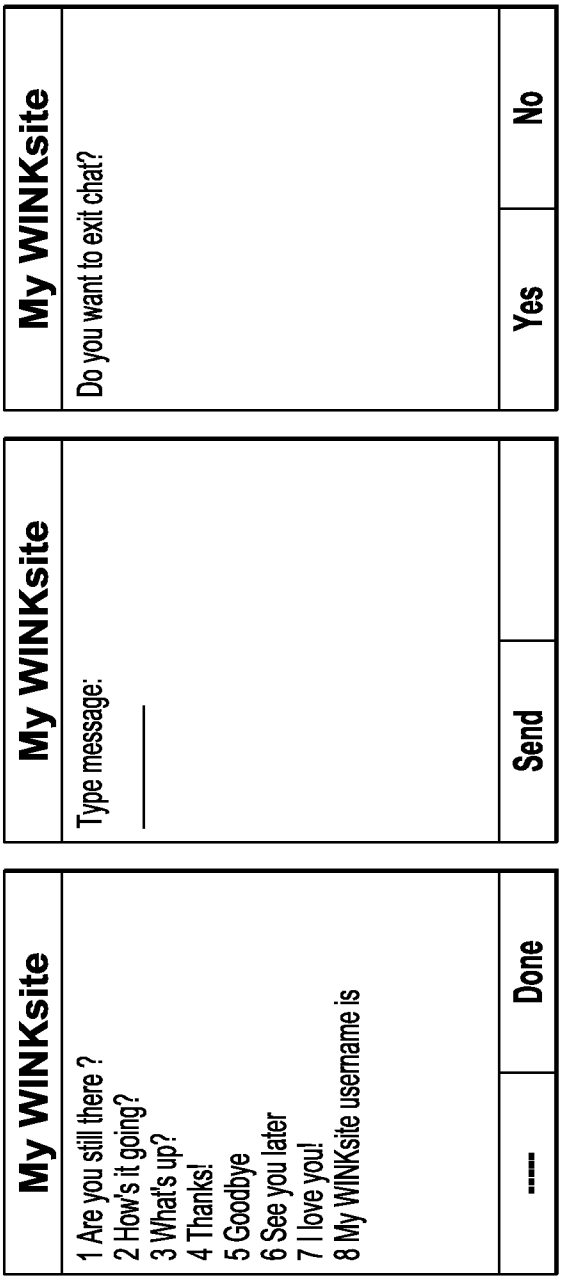

My WINKsite
CHAT DISCLAIMER
WINKsite cannot and does not screen the content included in the chat room. For this reason, WINKsite neither endorses nor assumes responsibility for any content that may be considered objectionable to the user.
Agree
Cancl
My WINKsite
CHAT
Type alias:
OK
My WINKsite
[Write Msg] (Msg)
* IDLE X SECS/MINS/HRS/DAYS/WKS
÷alias1:text 1
÷alias2:text 2
...
÷aliasn:text n
[Write Msg] (Msg)
Msg
Menu
My WINKsite
1 Quick text
2 Write msg
3 Exit chat

Done
My WINKsite
Quick Text
1 Emotions
2 Phrases

Done
My WINKsite
1 ;) Wink
2 :) Happy
3 :D Laugh
4 :(Sad
5 :O Suprised
6 :| Confused
7 :\ Oh well
8 8') Cool
9 :x Kiss
@}-;-- Rose

Done

FIG. 25j cont.

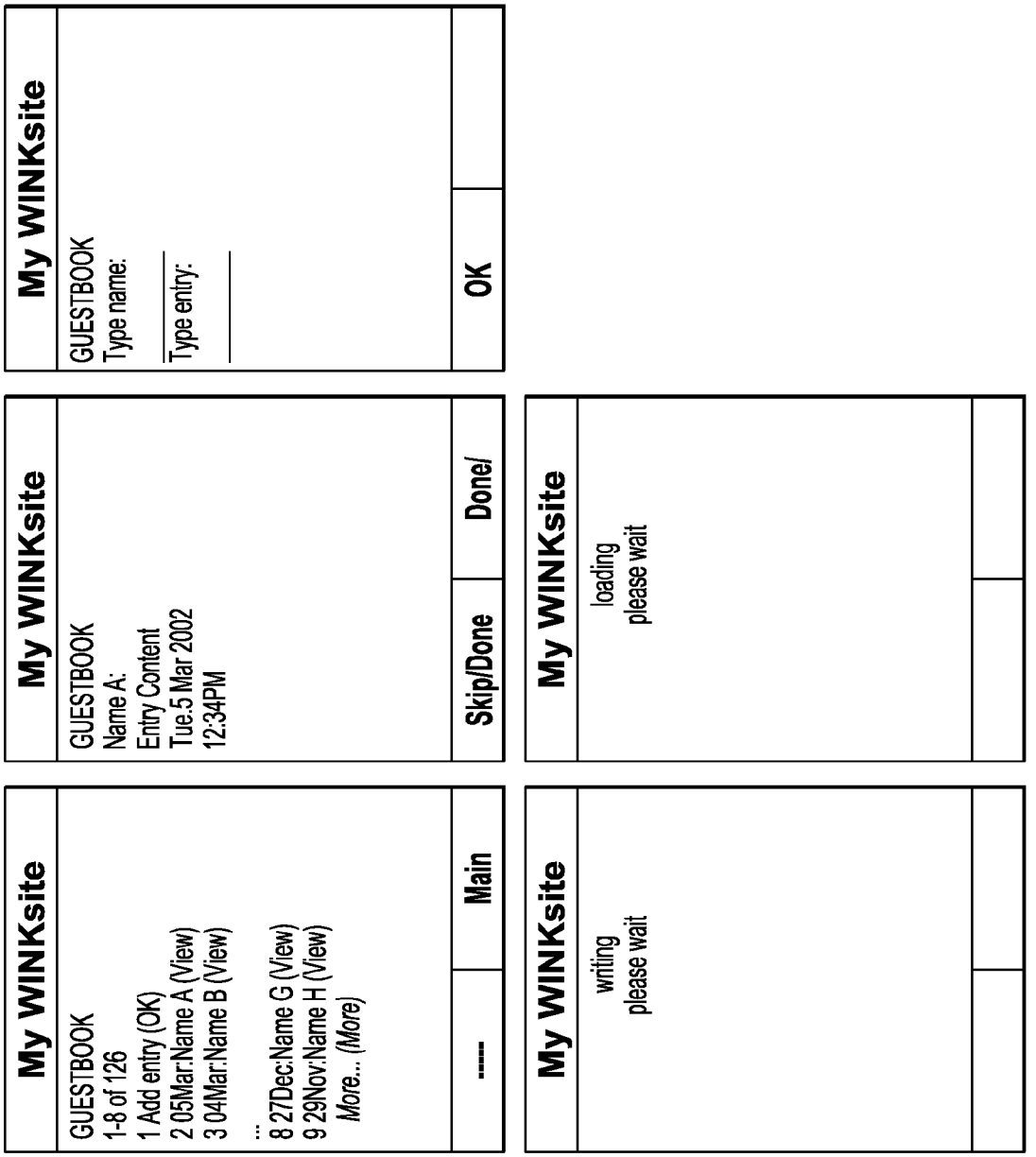

My WINKsite
1 Are you still there ?
2 How's it going?
3 What's up?
4 Thanks!
5 Goodbye
6 See you later
7 I love you!
8 My WINKsite username is

Done
My WINKsite
Type message:
Send
My WINKsite
Do you want to exit chat?
Yes
No

FIG. 25k

My WINKsite	
JOURNAL 1-9 of 126 1 11Jan:My Title A (OK) 2 09Jan:My Title B (OK) ... 8 03Jan:My Title H (OK) 9 26Dec:My Title I (OK) *More... (More)*	
-----	Main

My WINKsite	
JOURNAL *My Title* *Pg 1 of 3* This is the content for this item, which spans many pages, and can go on and on as much as needed... *Mon.11 Jan 2002* *12:34PM* *--- End ---* *1 More... (More)* **NOTE: title only on 1st pg.* **NOTE: date/time only on last pg.* **NOTE: "End" only on last pg.* **NOTE: "More..." not on last pg.*	
Done	


My WINKsite
GUESTBOOK
1-8 of 126
1 Add entry (OK)
2 05Mar:Name A (View)
3 04Mar:Name B (View)
...
8 27Dec:Name G (View)
9 29Nov:Name H (View)
More... (More)

Main
My WINKsite
GUESTBOOK
Name A:
Entry Content
Tue.5 Mar 2002
12:34PM
Skip/Done
Done/
My WINKsite
GUESTBOOK
Type name:
Type entry:
OK
My WINKsite
writing
please wait
My WINKsite
loading
please wait

FIG. 25l

FIG. 25m

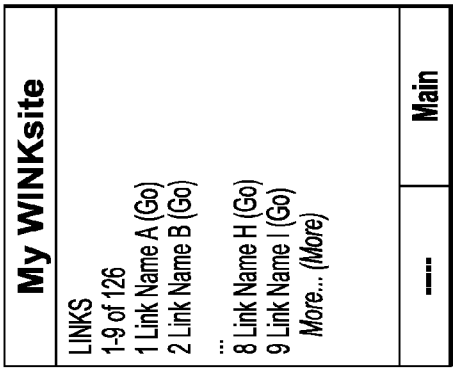


FIG. 25n

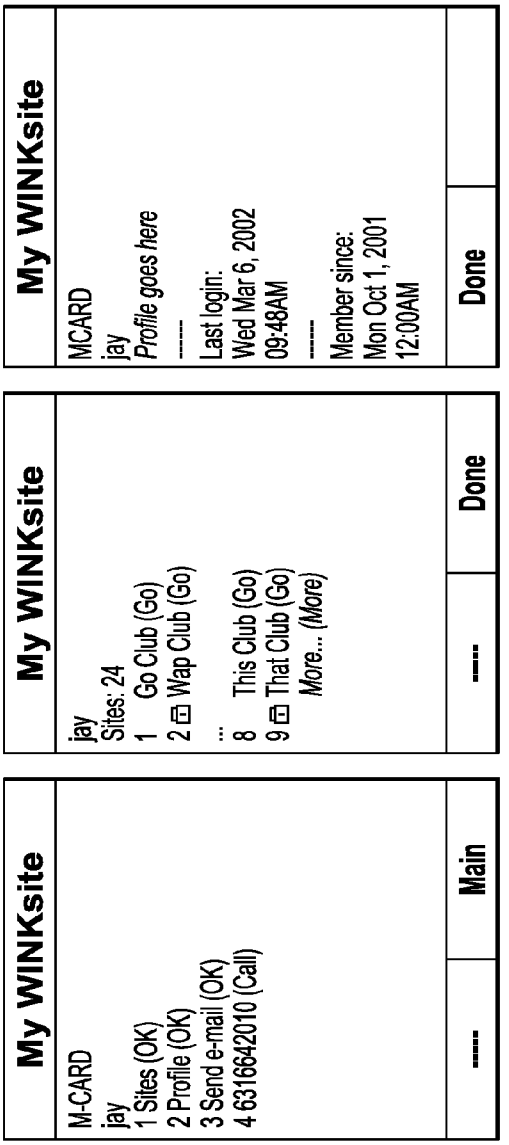
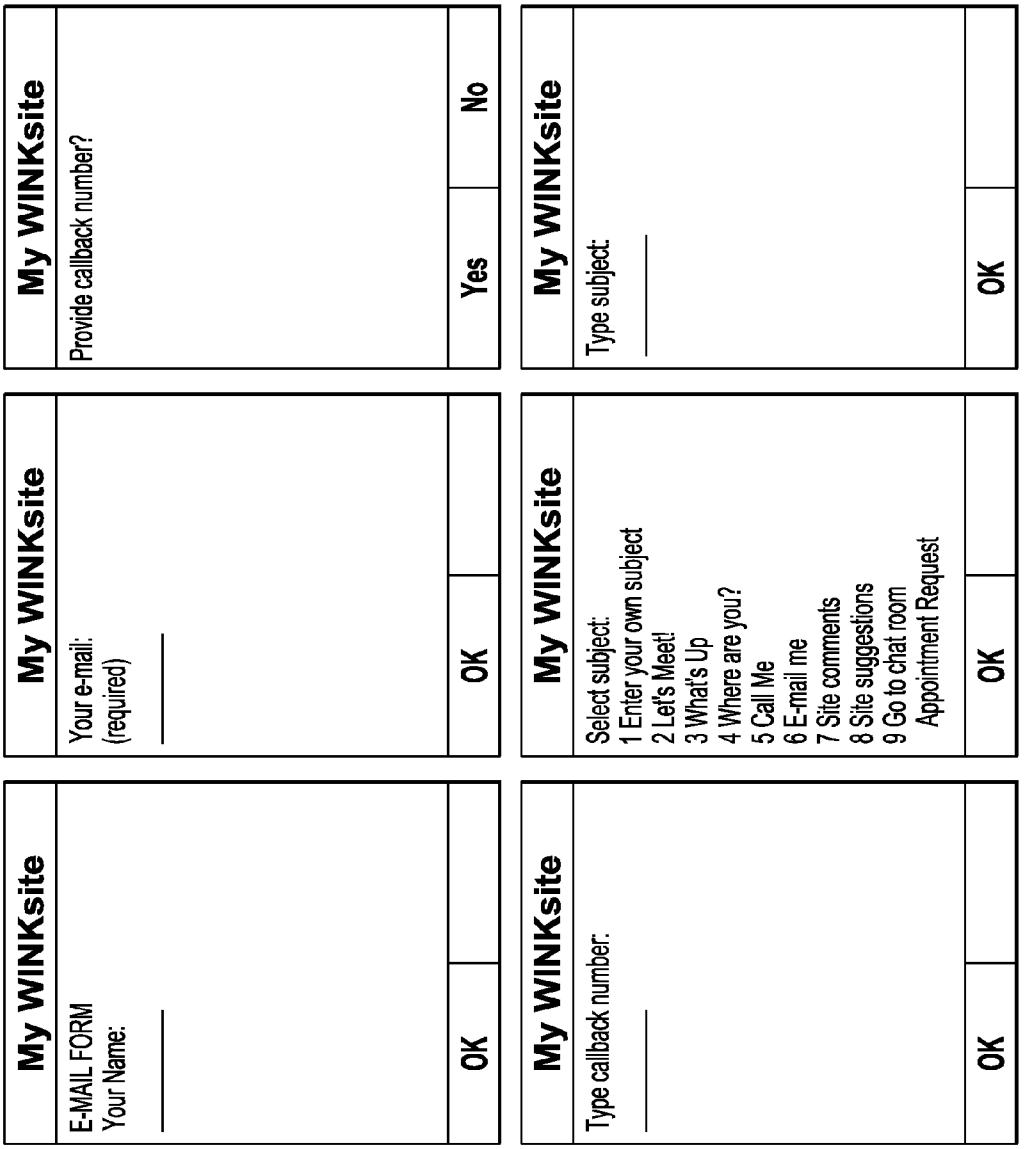
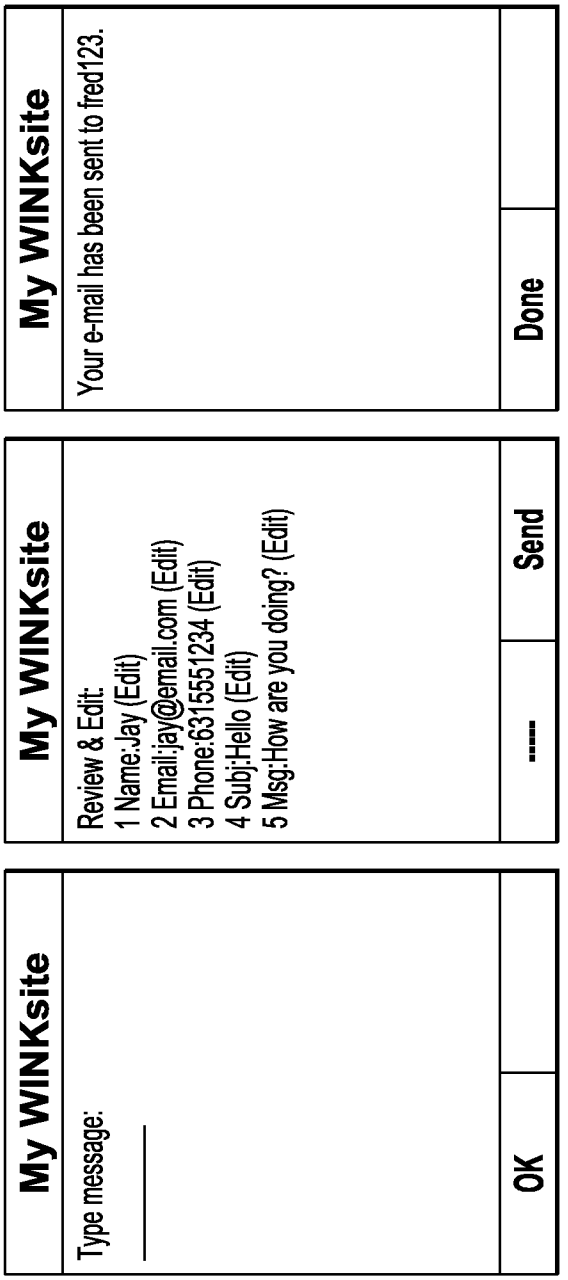


FIG. 25o


My WINKsite
E-MAIL FORM
Your Name:
OK
My WINKsite
Your e-mail:
(required)
OK
My WINKsite
Provide callback number?
Yes
No
My WINKsite
Type callback number:
OK
My WINKsite
Select subject:
1 Enter your own subject
2 Let's Meet!
3 What's Up
4 Where are you?
5 Call Me
6 E-mail me
7 Site comments
8 Site suggestions
9 Go to chat room
Appointment Request
OK
My WINKsite
Type subject:
OK


My WINKsite
Type message:
OK
My WINKsite
Review & Edit:
1 Name:Jay (Edit)
2 Email:jay@email.com (Edit)
3 Phone:6315551234 (Edit)
4 Subj:Hello (Edit)
5 Msg:How are you doing? (Edit)

Send
My WINKsite
Your e-mail has been sent to fred123.
Done

FIG. 25o cont.

METHOD, APPARATUS AND SYSTEM FOR MANAGEMENT OF INFORMATION CONTENT FOR ENHANCED ACCESSIBILITY OVER WIRELESS COMMUNICATION NETWORKS

RELATED APPLICATION(S)

The present application is continuation of U.S. patent application Ser. No. 13/027,519 filed Feb. 15, 2011, which is a continuation of U.S. patent application Ser. No. 12/548,928 filed Aug. 27, 2009 and now issued as U.S. Pat. No. 7,908,342, which is a continuation of U.S. patent application Ser. No. 10/464,526 filed Jun. 18, 2003 and now issued as U.S. Pat. No. 7,599,983, which claims the priority of U.S. Provisional Application Ser. No. 60/389,430 filed Jun. 18, 2002, the disclosures of which are hereby incorporated by reference herein.

FIELD OF THE INVENTION

The present invention relates generally to network-based communication systems, and more particularly to techniques for information content management in such systems.

BACKGROUND OF THE INVENTION

One of the most rapidly expanding aspects of wireless networking involves the accessing of information content over wireless networks via web-enabled mobile devices. Examples of such devices include mobile telephones, personal digital assistants (PDAs), palmtop computers, etc. As is well-known, these and other web-enabled devices not only provide access to the Internet, but can also be used to support other types of wireless networking functionality, such as messaging, distributed collaboration, and location-based services.

An important challenge in this context relates to facilitating the process of creating, publishing, distributing or otherwise managing information content so as to provide optimal presentation consistent with the limited display space and navigational capabilities of typical mobile devices. Many users, for example, may wish to make specific personalized information content available via mobile devices to their friends, colleagues, subscribers or other entities. However, conventional techniques have been unable to meet this need in a satisfactory manner. By way of example, conventional techniques such as web site authoring tools and web logging ("blogging") are not optimized for use in the generation of information content for shared access via mobile devices.

These and other conventional techniques suffer from a number of significant drawbacks, including a failure to provide suitable integration of messaging, collaboration, location-based services or other wireless networking functionality with the generation of shared information content. As a result, it is generally not possible for different mobile device users to link to and take further action on a persistent version of a given set of shared information content. The conventional techniques thus fail to provide a mechanism that facilitates uniform, action-driven content access and associated user interaction via wireless networks. Also, such techniques generally require a significant amount of programming knowledge for their proper use, and are therefore not suitable for relatively unsophisticated users.

Accordingly, a need exists for improved techniques for managing information content in a manner that overcomes one or more of the drawbacks of the conventional techniques described above.

SUMMARY OF THE INVENTION

The present invention in an illustrative embodiment thereof provides techniques for efficient generation and management of mobile sites that are advantageously integrated with wireless networking functionality of a wireless network in a network-based communication system.

In accordance with one aspect of the invention, information content is managed in a network-based communication system by providing a first web-based interface accessible to a first user, the first web-based interface being configured to permit the first user to designate at least one data source that is external to the first web-based interface, maintaining persistent information content on behalf of the first user including content obtained from the data source designated by the first user, and generating a second web-based interface different than the first web-based interface, wherein access to at least a portion of the persistent information content is provided to each of one or more additional users via the second web-based interface in a manner controlled by the first user via the first web-based interface to thereby facilitate interaction between the first and additional users.

The first and second web-based interfaces may comprise respective content management and mobile web sites.

In accordance with another aspect of the invention, information content is managed in a network-based communication system by configuring a first web-based interface to permit a first user to designate one or more additional users that will share access to content with the first user via a second web-based interface, in accordance with accessibility rules established by the first user via the first web-based interface. The one or more additional users may be individuals that with the first user and by mutual consent collectively comprise a group of friends or other members sharing a common interest. The users in that group, relative to users not in the group, may be provided with exclusive access to the content via the second web-based interface.

The first web-based interface may be configured, by way of example, to permit the first user to control the sending of a communication to at least a given one of said one or more additional users indicating that the first user is proposing to share access to content with the given additional user. The communication may comprise an email message that provides the given additional user with an option of accepting or declining the access sharing proposal from the first user.

As another example, the first web-based interface may be configured to permit the first user to upload at least one information item, and the second web-based interface may be configured to provide the one or more additional users with access to that uploaded information item in accordance with the accessibility rules established by the first user.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1**A is a block diagram of an example network-based communication system configured in accordance with an illustrative embodiment of the invention.

FIG. **1**B is a block diagram showing one possible implementation of a given processing element in the system of FIG. **1**A.

FIG. **1**C shows a block diagram of one possible arrangement of system elements associated with the system of FIG. **1**A.

FIG. **1**D shows a schematic diagram of home page of a content management site in the system of FIG. **1**A.

FIGS. **2** and **3** show additional schematic diagrams of site pages associated with a content management site in the system of FIG. **1**A.

FIGS. **4** and **5** show schematic diagrams of site pages associated with a mobile site in the system of FIG. **1**A.

FIGS. **6** through **17** are screenshots of illustrative site pages associated with a content management site in the system of FIG. **1**A.

FIG. **18** shows an example mobile device suitable for use in the system of FIG. **1**A.

FIG. **19** is an exemplary operational flow diagram of a registration process in accordance with the invention.

FIG. **20** is an exemplary operational flow diagram of a login process in accordance with the invention.

FIG. **21** is an exemplary operational flow diagram of a mobile site creation process in accordance with the invention.

FIG. **22** is an exemplary operational flow diagram of a mobile site content authoring process in accordance with the invention.

FIG. **23** is an exemplary operational flow diagram of a directory process in accordance with the invention.

FIGS. **24** and **25** show typical illustrative examples of mobile site screens generated at a mobile device in the system of FIG. **1**A.

DETAILED DESCRIPTION

The present invention will be illustrated herein in the context of an exemplary network-based communication system and associated system elements and processes. It is to be appreciated, however, that the particular arrangements shown and described herein are presented by way of illustrative example only, and should therefore not be construed as limiting the scope of the present invention to any particular embodiment or group of embodiments. Those skilled in the art will recognize that the described techniques are more generally applicable to any wireless communication application in which it is desirable to provide improved integration of information content management with wireless network functionality.

FIG. **1**A shows an example network-based communication system **10** configured in accordance with an illustrative embodiment of the invention. The system **10** includes a wireless network **12** coupled to the Internet **14**, a set of mobile devices **15**, a set of servers **16** and a set of user terminals **18**. More specifically, mobile devices **15-1**, . . . **15-*n*** are coupled to the wireless network **12**, while servers **16-1**, . . . **16-*k*** and user terminals **18-1**, . . . **18-*r*** are coupled to the Internet **14**. The numbers n, k, and r are purely arbitrary, provided for simplicity and clarity of illustration only, and in a given implementation of this illustrative embodiment can take on any desired value. Also, alternative embodiments of the invention need not include the particular system elements shown, and may include other elements of a type and configuration known to those skilled in the art, in place of or in addition to the particular elements shown.

The mobile devices **15** and user terminals **18** may be more generally referred to herein as user devices.

The term "user" is intended to include, without limitation, an individual, a group of individuals, a business, an organization, or any other entity capable of deriving benefit from use of at least a portion of the system **10**. Actions described herein as being performed by or otherwise associated with a user may be performed by or otherwise associated with an individual or other entity, a corresponding device, or both the entity and the device.

The network configuration of system **10** illustratively comprises wireless network **12** and Internet **14**. However, the invention does not require this particular network arrangement. A network suitable for use with the invention may include any type of data communication network, including the Internet, an intranet, an extranet, a wide area network (WAN), a metropolitan area network (MAN), a wired local area network (LAN), an IEEE 802.11 or Wi-Fi wireless LAN, a satellite communications network, a virtual private network (VPN), a public switched telephone network (PSTN), a cellular network based on third generation (3G) wideband code division multiple access (CDMA) or other standard, as well as portions or combinations of these and other networks.

It is also to be appreciated that the invention is not limited with regard to the particular communication protocols that may be utilized in communicating information within the system **10** of FIG. **1**A. Examples of communication protocols utilizable in conjunction with the invention include Internet protocol (IP), transmission control protocol (TCP), user datagram protocol (UDP), real-time protocol (RTP), short message service (SMS), multimedia message service (MMS), wireless application protocol (WAP), session initiation protocol (SIP), etc.

The mobile devices **15** can collectively comprise a wide variety of different devices configurable for communication over the network **12**. The term "mobile device" as used herein is intended to include, without limitation, any type of portable information processing device capable of being configured for communication over a network. Examples of mobile devices **15** utilizable in system **10** of FIG. **1**A include a mobile telephone, a personal digital assistant (PDA), a palmtop computer, a hand-held computer, a laptop computer, a tablet computer, a global positioning system (GPS) receiver or other GPS-based navigational device, an MP3 player or other type of audio player, a pager, a watch or other timepiece, a camera, a portable game player, etc.

The servers **16** may comprise, by way of example, network computers or other types of computers or processing elements capable of being configured for the maintenance, storage, delivery or other processing of information received or deliverable over the Internet or other type of network.

Although not specifically denoted as such in the figure, one or more of the user terminals **18** may each comprise a mobile device. Also, a given one of the user terminals **18** may comprise a non-mobile device, including, by way of example, a desktop personal computer, a workstation, a minicomputer, a mainframe computer, a television, a set-top box, a kiosk, etc.

FIG. **1**B shows one possible implementation of an information processing element **20** of the system **10**. The processing element **20** may be viewed as being representative of a given one of the mobile devices **15**, a given one of the servers **16**, or a given one of the user terminals **18**. The processing element **20** in this implementation includes a processor **22**, a memory **24**, and a network interface **25**, which communicate with one another over a set of bus lines **26**. The processor **22** may comprise, for example, a microprocessor, a central processing unit (CPU), an application-specific integrated circuit (ASIC), a computer, or any other type of digital data processing device, as well as portions or combinations of such devices. The memory **24** may comprise electronic memory such as random access memory (RAM), read-only memory (ROM), disk-based memory, or any other type of storage device, as well as portions or combinations of such devices.

The network interface **25** provides an interface for the processing element **20** to the wireless network **12** or Internet **14**.

The memory **24** of processing element **20** stores one or more software programs which are executed by the processor **22** in providing at least a portion of the system functionality described herein as being associated with the corresponding mobile device, server or user terminal. One skilled in the art would understand that memory **24** is an example of a computer-readable storage medium.

In accordance with one aspect of the invention, the system **10** in the illustrative embodiment provides at least one content management site accessible to a system user. The user may be a user associated with one of the mobile devices **15**, or any other system user. The content management site may be supported by one or more of the servers **16**, and may be accessed by the user over Internet **14** via one of the user terminals **18**. The content management site permits the user to enter information in accordance with a specified format comprising a plurality of selectable mobile information channels each corresponding to an information category. The mobile information channels are also referred to as "M-channels" herein, and will be described in greater detail below. The entered information is processed to generate a mobile web site comprising information content that is accessible via one or more of the mobile devices **15** over the wireless network **12** of the system **10**. The information content of the mobile site is preferably configured such that a persistent version thereof is accessible via the one or more mobile devices **15** over the wireless network **12**.

The content management site can also be accessed via one of the mobile devices **15**, and used to create a mobile site also accessible via that mobile device and one or more other mobile devices.

The system **10** can support any desired number of content management sites and any desired number of mobile sites that are generated and managed via the content management sites. For example, a given content management site can be associated with a particular business or other entity, and can be used to generate a plurality of mobile sites for various users associated with that business or other entity. An operator of the content management site can offer mobile site building and other content management services to such entities for a fee. The operator may also provide customization services, so that a given entity can create mobile sites that bear corresponding corporate trademarks, logos or other symbols, or that are customized in other ways.

In the illustrative embodiment, the content management sites and the mobile sites may each be implemented as a corresponding web site accessible over the Internet **14**, although this is not a requirement of the invention. Other embodiments may implement one or more of the content management sites or one or more of the mobile sites as intranet sites, extranet sites or other information sources accessible via these or other types of networks.

Advantageously, the information content of a given mobile site generated in the system **10** may be configured so as to integrate therewith information associated with at least one wireless networking functionality of the wireless network **12**. This information may be determinable based at least in part on one or more parameters associated with the above-noted mobile information channels or M-channels. Examples of such information include information specifying at least one messaging action implementable over the wireless network, information specifying at least one collaboration action implementable over the wireless network, and information specifying at least one location-based service action implementable over the wireless network. Other types of information associated with wireless networking functionalities may also or alternatively be used.

Accessibility to a given mobile site may be controlled so as to permit one or more third parties to view at least a portion of the mobile site without any such parties being registered users of the content management or mobile site portions of the system.

A given content management site may be provided, for example, by a service provider or other entity operating the wireless network **12**, and a user thereof may be a subscriber of that entity. More particularly, the content management site may include identifying information indicating association of the site with the entity operating the wireless network, and may be made accessible only to subscribers of the wireless network.

As another example, a given content management site used for generation and management of a mobile site may be provided to the user contingent upon purchase of specified goods or services associated with the wireless network **12**.

Numerous other content management site configurations may be used in implementing the invention.

A given mobile site in accordance with the invention can be generated for a group comprising multiple members having a common interest. For example, a mobile site may be generated for a family, a group of friends, a club, a sports team, a business, a sales force, a civic group, a fan group, a political party, a campaign, a charity, or any other type of multi-member organization. Such a site may be used for efficient dissemination of relevant information to group members via the wireless network **12**. For example, the site can be used to generate messages, using instant messaging (IM), SMS, MMS, pages, emails, voice-over-IP (VoIP) calls, cellular telephone calls, or any other suitable messaging format, that are sent to organization members over the wireless network. Such a message from a given member of the organization can direct other members to access the mobile site to obtain additional information regarding events, news, cancellations, reschedulings, updates, polls, special requests, etc. Organization members can easily and efficiently post information and generate messages to other members so as to facilitate collaboration and other types of interaction.

A given mobile site, also by way of example, may be associated with an event, and information identifying the event and its associated mobile site may be transmitted via the wireless network **12** to mobile devices of one or more users that are determined to be likely to have an interest in the subject matter of the event. The event may be a movie, a concert, a sporting event, a political rally, a contest, a promotion, particular goods or services being offered for sale by a vendor at certain prices or on certain conditions, etc. Such interested users may be determined, for example, by comparing generalized demographic data associated with the event with personal demographic data previously stored for the system users, or utilizing other marketing data based techniques. A mobile site of this type is especially useful for implementing follow-up marketing actions, user registration, etc.

As another example, a given mobile site may be associated with a particular geographic location. More specifically, the given mobile site may be generated for a "waypoint" specified by particular latitude and longitude coordinates representing a geographic location utilized in the activity of geocaching, or other location-based activity. In generating such a mobile site utilizing the techniques of the invention, a user could enter information such as a title, a location specified by latitude, longitude, elevation, or other location-identifying

information, a difficulty level, a terrain quality, one or more hints, a map, or other types of information. Along with typical items found in a conventional geocache, such as trinkets and a log, a password could be included that provides access to a corresponding mobile site which can be utilized by other users to validate that they have found the geocache. Contests or promotions could also be organized to provide specified rewards to a first user to reach a given geocache. The first user to reach the geocache can be identified by determining the first user to log into the geocache mobile site using the appropriate password. Visitors to the mobile site may be provided with an ability to leave a note or other message describing aspects of their journey, what items they took from the geocache, what items they placed in the geocache, etc. Mobile sites corresponding to geocaches may be searched for by zip code, state, country, keyword, waypoints, GPS coordinates, etc. A mobile device with built-in GPS capability may be used to facilitate interaction with mobile sites corresponding to geocaches or other geographic locations. Mobile sites corresponding to these and other geographic locations can be accessed, for instance, using a GPS-based automotive navigation device, or other types of user devices.

As an additional example, a given mobile site may be associated with a game. More specifically, a mobile site may be generated for a game and accessed from a web-enabled gaming device or other type of user device. The mobile site could provide information such as tips, tricks, player profiles, and player locations, and could also be used to support collaboration or other types of communication between players. Players may also be permitted to access the mobile site from non-gaming user devices, to participate in game-related activities that could lead to increasing their health points, skill level, number of lives, hit points, magic level, equipment, apparatus, gear, etc.

As a further example, a given mobile site may be associated with a user of IM, SMS, MMS, email or other type of messaging service. More specifically, a mobile site may be generated for a particular user so that other users exchanging messages with the particular user are provided with access to persistent information content that facilitates their interaction with the particular user. Such an arrangement is particularly useful as the volume of wireless "spam" is continually increasing and users require an "island in the storm" at which they can interact in a controlled, private collaborative workspace. Additionally, when a user accesses an email or other type of message using a mobile device, that user can be directed to a mobile site for follow-up marketing actions or other activities.

As another example, a given mobile site may be associated with a television program, movie, music artist or other entertainment-related entity. More specifically, a mobile site may be generated for a broadcast program and accessed by a user from a set-top box while the user is watching that program. Interaction activities involving provided content could then take place between viewers, the network, and advertisers.

As yet another example, a given mobile site may be associated with a particular product via product name, bar code, radio frequency identification (RFID), or other type of product-identifying information. Such a mobile site could be configured to provide, for its associated product, additional information of interest to product users, customer service access, ordering or purchase support, etc.

Of course, the foregoing are merely examples of mobile sites that may be generated and managed using the techniques of the invention. Numerous other types of mobile sites may be used in implementing the present invention.

The term "mobile site" as used herein is intended to include, without limitation, a web site, a collaborative workspace, a data mailbox, a collaborative community, an Internet storefront, one or more M-channels and/or an associated data set, or other similar element(s), as well as portions or combinations thereof.

The above-noted M-channels will now be described in greater detail. As mentioned previously, M-channels are utilized at the content management site of the illustrative embodiment to facilitate the generation of mobile sites and the management of associated content. More specifically, the M-channels allow unsophisticated users to easily and efficiently author message data or other types of information content to be made accessible via a collaborative workspace, a data mailbox, a collaborative community, or other type of mobile site or portion thereof generated or otherwise managed in the system **10**. Features such as task, action, event, location, delivery or collaborative enabling of specified M-channel content may be specified along with access methods, automatic generation of wirelessly accessible navigation menus, content presentation views, etc.

The particular configuration of the M-channels, and the content integration options associated therewith, may vary from implementation to implementation depending upon factors such as the particular wireless networking functionalities available in the system.

Examples of M-channels suitable for use in the illustrative embodiment include channels denoted herein as mobile ID/business card (also referred to as a "contact" M-channel), announcements, chat, events, guest book, diary/journal, bookmarks/links, discussion forum, survey/poll, newsletter/zine, notes, email, address book, contribute/donate, mobile volunteer management, company directory, in/out board, field reports, feedback, form builder, live data/in-out syndication, mobile document library, products catalog/shopping cart, services catalog/shopping cart, appointments, task list/assignments, promotions, offers, coupons, sweepstakes, contests, photo blog, etc. Numerous other information categories may be represented by corresponding mobile information channels at a content management site in accordance with the invention.

The notation "/" as used herein should be understood to refer to "and/or" unless otherwise indicated.

Additional details regarding the operation of exemplary M-channels in accordance with the invention will be described below in conjunction with certain of the site pages of FIGS. **2** through **17**, as well as in conjunction with the operational flow diagrams of FIGS. **21** and **22**.

As indicated previously, the content management aspects of the system **10** can be implemented at least in part utilizing software associated with processing elements of the system. A more particular example of one possible arrangement of such elements will now be described in conjunction with FIG. **1**C. Of course, this is simply one possible arrangement, and a wide variety of other arrangements suitable for implementing the techniques of the invention will be readily apparent to those skilled in the art.

Referring now to FIG. **1**C, a set of processing elements **30** in the system **10** includes a plurality of "suites," each suite comprising a particular arrangement of hardware, software and/or firmware elements implemented using one or more of the mobile devices **15**, servers **16** and user terminals **18** of the system **10**. More specifically, the set of processing elements **30** comprises a display suite **32** associated with a display server **33**, a management and processing suite **34** associated with an interaction server **35**, a data integration suite **36** associated with a data integration server **37**, and a services

integration suite **38** associated with a services integration server **39**. Each of the servers **33**, **35**, **37** and **39** may comprise one or more of the servers **16** or other elements shown in FIG. **1**A, or suitable portions or combinations thereof.

Communications between the suites **32**, **34**, **36** and **38** may be carried out using conventional connections established over wireless network **12** or Internet **14**, or using other communication channels or transport media of a type known in the art.

In the display suite **32**, a number of example user devices, including mobile phone **40**, smart phone **41**, pocket PC **42**, Palm device **43**, iMode phone **44**, personal computer **45**, set-top box **46**, game and/or camera **47** and other wireless devices **48**, interact with the display server **33**. The display server **33** interacts with elements of one or more of the other suites in controlling the presentation of particular screens on the various user devices. Certain of the user devices in suite **32** may be viewed as representative examples of mobile devices **15**, while others may be viewed as representative examples of user terminals **18**.

The management and processing suite **34** includes a management and M-channel engine **50**, a personalization and rules engine **51**, an authoring and publishing engine **52**, a presentation engine **53**, and a distribution, delivery and service engine **54**. The interaction server **35** controls the interface between these engines and the display server **33** of the display suite **32**. The management and processing suite **34** in this example provides the above-noted content management site(s) utilized to generate and otherwise manage mobile sites in accordance with the techniques of the invention.

The data integration suite **36** includes extensible markup language (XML) and/or rich site summary (RSS) feeds **60**, database and/or file **61**, syndication services **62**, device-captured data **63**, web services **64**, and other data sources **65**. The data integration server **37** controls the interface between these data sources and the interaction server **35** of the management and processing suite **34**.

Other XML-related protocols that may be utilized in conjunction with the invention include, for example, remote procedure call (RPC), outline processor markup language (OPML), and simple object access protocol (SOAP).

The services integration suite **38** includes an MMS center **70**, an SMS center **71**, email systems **72**, billing systems **73**, voice systems **74**, and other systems **75**, each of which may be viewed as representative of a particular type of wireless networking functionality accessible to the mobile devices **15** via the wireless network **12**. The services integration server **39** controls the integration of information associated with these wireless networking functionalities with the content of the mobile site generated via the content management site.

FIG. **1**D shows a home page of an example content management site in the illustrative embodiment of the invention. The example content management site in the context of the illustrative embodiment comprises an Internet web site used to generate and otherwise manage mobile sites. A given one of the mobile sites may be referred to herein as a "Winksite," where "Wink" may be viewed generally as a shortened form of the term "wireless ink," reflecting the wireless content management aspects of the invention.

It is to be appreciated that certain aspects of the content management site may be made accessible via one or more of the mobile sites and vice-versa. The notation "Winksite" may therefore also be used to denote a content management site or portion thereof, or a hybrid site comprising aspects of both a content management site and one or more mobile sites.

Additional schematic diagrams of web pages associated with the example content management site or a corresponding mobile site will be described in conjunction with FIGS. **2** through **5**. Related screenshots of the web pages associated with the content management site will be described with reference to FIGS. **6** through **17**. It should again be emphasized, however, that the arrangements shown are presented by way of illustrative example, and should therefore not be construed as limiting the scope of the invention in any way.

The content management site may be viewed as being part of a mobile communications publishing platform provided by the system **10** of FIG. **1**A. This platform integrates aspects of wireless network functionality with mobile site content generation, thereby facilitating user interaction via the mobile devices **15**. The content management site in the illustrative embodiment is designed to generate and otherwise manage dynamic, time-sensitive, task-oriented mobile sites, including wireless collaborative workspaces and communities. The content management site allows content such as data, media, multimedia, messages, news, features, events, polls, competitions and advertising to be rapidly created, entered into the system, and then subsequently syndicated, distributed, shared, collaborated with or acted upon by users of mobile devices.

By utilizing the content management site, system users can create one or more personal or business mobile sites with various sets of features, and then share such sites via the mobile Internet or other wireless network with friends, family, colleagues, or other groups of any type. The content management site makes it simple for unsophisticated users to upload, enter, create, syndicate, distribute or otherwise manage content that is important to them, in a manner that allows such content to be accessed, shared, and acted upon from a mobile device.

Referring now to FIG. **1**D, a home page **100** of the content management site provides a user interface comprising a series of display regions denoted by blocks **102** through **142**, each associated with a corresponding user-activatable control mechanism. These control mechanisms may be implemented as a plurality of hypertext links, each of which, when activated, instantiates a subordinate user interface comprising one or more other pages of data associated with the content management site. The home page **100** and other pages referred to herein may be configured using hypertext markup language (HTML), XML, or other any suitable web page formatting language, as well as combinations of such languages.

Access to the home page **100** may be provided to all system users, regardless of whether or not those users have previously registered with the system. A given user accesses the home page **100** by entering a corresponding uniform resource locator (URL) in a web browser of their associated user device. Although not specifically shown in the figure, introductory, instructional or other explanatory text, as well as graphics and various forms of advertising, including so-called click-through or banner advertising, may be included on the home page **100**.

A registration process is preferably provided in order to allow users to establish an account with the system. Such a process can be initiated by activation of the hyperlink associated with block **104**. Previously-registered users can login to their accounts by activating the hyperlink associated with block **102**. Details of the registration and login processes associated with respective blocks **104** and **102** will be described below in conjunction with the respective flow diagrams of FIGS. **19** and **20**.

Access to certain system features associated with certain blocks, such as blocks **108** through **124**, may be limited to registered users. Registered users may also be referred to herein as "members."

The text and graphics of the home page **100**, although initially the same for both registered and unregistered users, may be periodically updated or otherwise customized to display account information or other information that is unique to a registered user, upon login of such a user.

Block **106** in FIG. **1**D represents a display region containing a link to an optional logoff process. The logoff process enables a registered user who has previously logged in to activate a control so as to redirect his or her browser to the non-customized version of home page **100**. This feature is useful, for example, in a situation in which multiple users share the same personal computer or other terminal. More specifically, a given registered user who has logged in may, without turning off the computer or closing its Internet connection, and even without closing the browser or pointing it to another URL, conceal and prevent further access to his or her account information while also enabling another registered or unregistered user to access the home page **100**.

FIG. **2** shows a start page **200** of the example content management site in the illustrative embodiment of the invention. The start page **200** provides a user interface comprising a series of display regions denoted by blocks **202** through **242**, each associated with a corresponding user-activatable hypertext link or other control mechanism. The start page **200** may be accessed, for example, by activating the link associated with block **108** of FIG. **1**D.

FIG. **3** shows a main menu page **300** of the example content management site in the illustrative embodiment of the invention. The main menu page **300** provides a user interface comprising a series of display regions denoted by blocks **302** through **344**, each associated with a corresponding user-activatable hypertext link or other control mechanism. The main menu page **300** may be accessed, for example, by activating the link associated with block **222** of FIG. **2**.

An example of a preference feature that may be made available only to registered users is an address book feature. This feature can be accessed by activating the link associated with block **320** in FIG. **3**. Such a feature allows the names, email addresses, mobile telephone numbers and other contact information of potential message recipients to be recorded and then easily selected when a message is to be sent.

A given registered user may be permitted to elect to share his or her address book information, or other types of user information, with other users. Such sharing can be implemented by activating a link (not shown) to a page where the user may provide identifying information about the other individual(s) with whom he or she proposes to share information. The site software may be configured such that, if any of the other individuals are registered users, an email message is sent to those individuals. The email message may contain a link to the URL of a page at which the individuals will be given the option of accepting or declining the information sharing proposal.

If any of the other individuals are not registered users, then an attempt may be made to obtain an email address for each of those other non-registered users. For any such non-registered users for which an email address is obtained, an email message may be sent containing a link, along with appropriate explanatory text, to the site registration process to be described in conjunction with FIG. **19**. After completing the registration process, the individual will be given the option of accepting or declining the information sharing proposal.

A given registered user may also be permitted to designate one or more other users selected, for example, from among those listed in a directory or contact list, with whom the given user would like to interact. Any such other users may be notified in the manner indicated above and provided with an opportunity to accept or deny the proposed interaction.

Another preference feature that may be provided to registered users is an ability to designate one or more of the mobile sites available in the directory of the content management site as "favorite" mobile sites. This can substantially reduce the number of screens or pages that need be reviewed in order to select a particular mobile site to visit. However, it should be understood that registered users who have designated certain mobile sites as favorite mobile sites are not thereafter limited to making their selections only from among those favorites. Each such user may still choose to review and select from all of the available mobile sites within the directory.

Yet another preference feature that may be made available to registered users is an ability to post one or more messages on a "community bulletin board" that is accessible to both registered and non-registered users. This feature allows non-registered users to become aware of the messages posted by registered users, thereby encouraging further registrations and increasing use of the site.

Registered users may also be permitted to track the activity of their associated mobile sites by creating, selecting or otherwise designating an avatar whose health, personality, responses, behavior or other characteristics reflects in some manner the level of activity associated with the sites. Such an avatar may be used to provide an "at a glance" representation of the popularity, usage, traffic patterns or other characteristic(s) of a corresponding mobile site.

It is also possible to provide different levels of service for different registered users. For example, certain registered users may be permitted to elect to upgrade their registration to one or more "preferred" levels of service. The various levels of service may be designated using different colors or other sets of designations, such as "copper," "silver," "gold" and "platinum," or "individual," "individual plus," "business" and "business plus." As their registration level increases, the corresponding registered users will receive additional benefits, such as increased storage space, bandwidth or publishing features and options.

A variety of other techniques may be used to encourage user registration. For example, demographic data or other types of marketing data may be used to identify particular groups likely to benefit from registration, and particular mobile sites can be pre-created and made available to such groups on a trial basis, upon registration, or upon satisfaction of other conditions. The mobile site addresses for all of the members of each group will preferably reflect in some common way one or more unique characteristics of the group.

Referring now to FIGS. **4** and **5**, these figures show a mobile site home (M-home) page **400** and a Winksite page **500**, respectively, of an example mobile site in the illustrative embodiment of the invention. The pages **400** and **500** provide user interfaces comprising series of display regions denoted by blocks **402** through **432**, and **502** through **544**, respectively, with each of the blocks being associated with a corresponding user-activatable hypertext link or other control mechanism. The mobile site home page **400** may be accessed, for example, by entering a corresponding URL of the mobile site into a browser at one of the mobile devices **15**. The Winksite page **500** may be accessed, for example, by activating the link associated with block **402** of FIG. **4** and completing an associated login process.

As noted above, FIGS. **6** through **17** are screenshots of illustrative site pages associated with a content management site in the system of FIG. **1**A. These screenshots will now be described in greater detail.

With reference to FIG. **6**, an example of a home page of the content management site is shown. This home page screenshot may be viewed as corresponding generally to the home page **100** schematically shown in FIG. **1**D. The home page in this example includes, among other elements, elements **602** through **658** arranged as shown. A web site logo **602** can be included, along with site branding and promotional copy **638**, associated with an entity providing the content management site. A login section includes fields **604** and **606** for entering respective user name and password information, along with a "Start in" selector **608** and a login button **610**. The home page further includes links **612**, **614**, **618**, **622**, **624**, **630**, **632**, **634**, **636**, **646**, **648**, **650**, **652**, **654**, **656**, **658** and **660**, banner advertisements **620**, explanatory text **640**, a feedback entry field **642**, and a user information submission field **644**.

FIG. **7** shows an example of a start page of the content management site. This start page screenshot may be viewed as corresponding generally to the start page **200** schematically shown in FIG. **2**. The start page in this example includes, among other elements, a logout link **700**, user account information **702**, account settings links **704**, information **706** specifying the mobile sites associated with that user, and a link **708** allowing the user to build a new mobile site.

A given registered user, after initial registration, may access his or her registration information directly, on an as-needed basis, in order to make changes therein as appropriate. For example, a registered user may wish to change his or her password or username, or to provide updated address or contact information. The account information link in the set of account setting links **704** instantiates a subordinate user interface comprising a site page that may be configured as shown in FIG. **14**. Other links in the set of account setting links **704** similarly provide access to pages allowing entry or revision of information associated with a user M-card, profile, interests, offers, etc.

FIG. **8** shows an example of a main menu page of the content management site for managing a given mobile site associated with a system user. This main menu page screenshot may be viewed as corresponding generally to the main menu page **300** schematically shown in FIG. **3**. The main menu page in this example includes information **802** identifying user account information and the particular mobile sites associated with that user, page navigational links **804**, mobile site information **806** associated with a selected one of the mobile sites associated with the user, M-channel information **808**, and a delete site field **810**.

FIGS. **9**A and **9**B show example M-channel pages of the content management site. These pages correspond generally to particular ones of the M-channels identified in M-channel information **808** of a selected mobile site in FIG. **8**.

With reference initially to FIG. **9**A, the page as shown corresponds to an M-channel for which the user has not yet entered any content. The page includes a button **900** which permits a user to add an item of content to the M-channel, and explanatory text **902** which indicates that the user currently has no content in the channel, and describes the manner in which the user can add content items to the channel.

FIG. **9**B shows a page for which the user has added an item of content. The page includes information **904** specifying, among other things, the title or name of the content item, the date and time of its posting to the site, and its status. If the item has a "published" status, the corresponding content is visible to users visiting the associated mobile site. If the item has an "unpublished" status, the corresponding content is not visible to users visiting the associated mobile site.

FIG. **10** shows an example page for use in adding content to a given one of the M-channels. This page may be accessed, for example, upon activation of the add button **900** in the M-channel page of FIG. **9**A.

The content management site of the system **10** in the illustrative embodiment thus allows a user to manage content for access via the mobile devices **15** by interaction with one or more specified M-channels. As indicated above, a user selects a particular M-channel by activating the corresponding link **808** in FIG. **8**. This action instantiates a subordinate user interface to the selected M-Channel, represented by the page shown in FIG. **9**A. The user then activates the add button **900** of FIG. **9**A, which instantiates a subordinate user interface to an authoring wizard associated with that M-channel, represented by the page shown in FIG. **10**.

FIG. **11** shows an example page for use in managing a contact list associated with one or more of the M-channels. This page may be accessed, for example, from the main menu page **300**.

FIG. **12** shows an example page for use in adding a new contact to the contact list of FIG. **11**. This page may be accessed, for example, by activating an "add an item" button in the page of FIG. **11**.

FIG. **13** shows an example page for use in creating a new mobile site. This page may be accessed, for example, by activating the "build new site" link **708** in the start page of FIG. **7**. The mobile site creation page includes fields allowing a user to name the mobile site, to specify a URL for the mobile site, and to enter a description of the mobile site.

FIG. **14** shows an example page for use in establishing or updating a user account with the system. This page may be accessed, for example, as part of a registration process initiated by activating the link associated with block **104** in FIG. **1**D, or by activating the link associated with block **228** of the start page in FIG. **2**.

FIG. **15** shows an example page of member list results generated by performing a search in the member directory of the content management site. The directory may be accessed, for example, by activating the link associated with block **110** in FIG. **1**D or the link associated with block **208** in FIG. **2**.

FIG. **16** shows an example page for automated response management. This page may be accessed, for example, from the main menu page **300**.

FIGS. **17**A and **17**B show example pages corresponding to a user identification card or business card, also referred to herein as an M-card, or part of a contact M-channel. Such pages may be accessed, for example, by activating links associated with blocks **218** in FIG. **2** or **528** in FIG. **5**.

Exemplary mobile site pages will now be described in greater detail with reference to FIGS. **18**, **24** and **25**.

FIG. **18** shows an example mobile device **15-1** suitable for use in the system of FIG. **1**A. The mobile device **15-1** in this example is in the form of a web-enabled mobile telephone, but as indicated previously herein, the invention does not require the use of any particular type or configuration of mobile device. The mobile device **15-1** as shown in FIG. **18** includes a display screen **1800** on which an example screenshot associated with a mobile site main menu page is shown. This screenshot may correspond, for example, to a portion of the page **400** previously described in conjunction with FIG. **4**. Additional example screenshots that may be viewed as being generally associated with the mobile site main menu page **400** or the mobile site page **500** are shown in FIGS. **24**A-**24**G and FIGS. **25**A-**250**.

The operation of certain aspects of the system **10** of FIG. **1**A will now be described with reference to the flow diagrams of FIGS. **19** through **23**.

FIG. **19** shows an example registration process (R) accessible via the content management site. A user enters the registration process at step **1900**, and is prompted to create a user name and password in step **1902**, to provide account information that includes a variety of personal information such as first name, last name, date of birth and gender in step **1904**, to provide mobile phone information in step **1906**, and to provide a variety of location information such as zip code, state, country and time zone in step **1908**. The entered information establishes a personal profile for the user, and is stored in a memory or other storage device associated with the content management site.

In step **1910**, the user reviews legal information pertaining to the use of the content management site and its terms of service. Step **1912** determines whether the user is of the requisite age to use the site, step **1914** determines if the user accepts specified terms and conditions, step **1916** determines if the submitted information will be accepted or declined, and step **1918** determines if valid information has been submitted. A negative determination in any of steps **1912**, **1914** and **1918** results in the process returning to step **1900** to allow the user to make at least one more registration attempt. A negative determination in step **1916** terminates the registration process and returns the user to the home page (HP) from which the registration process was initiated, as indicated at **1930**.

After positive determinations in steps **1912**, **1914**, **1916** and **1918**, a database entry is created for the user in step **1920**, a user URL and redirect file are created in step **1922**, a welcoming email is sent to the user in step **1924**, and the registration is completed in step **1926**. At this point, a user may be permitted to build a mobile site, as indicated by the transition to the site building indicator (B).

Referring now to FIG. **20**, an example login process (L) accessible via the content management site is shown. A user enters a login page at step **2000**, and is requested at step **2002** to confirm that he or she is a "member," i.e., that he or she is already registered with the system. If the user is not registered, a link to the registration process (R) described previously and depicted in FIG. **19** is activated. Otherwise, step **2004** determines if the user has forgotten his or her password. If this is the case, steps **2006** through **2012** are executed to prompt the user to enter a user name, and/or other identifying information, and to click a send button, such that an email containing the forgotten password is then sent to the user, after which the process returns to step **2000**. A negative determination in step **2004** results in execution of steps **2014** through **2018**, prompting the user to enter a user name and password, to select an area of the content management site to start in, and to click a button to submit the login information. Step **2020** determines if the submitted login information is correct. If it is, the process ends, and the user can be directed, for example, to the home page (HP), the directory (D), the start page (SP), or to any other desired page of the site. The resulting presented page is preferably customized to include information specific to the user, such as the information shown generally at **702** in FIG. **7**.

If the login information entered by the user is incorrect, the process may return to step **2000** so that correct or more current login information may be submitted. While in some embodiments of the invention these verification steps could be repeated indefinitely, it is preferable to place a limit on the number of times that the system will continue to attempt such verification without success, after which the login process will end and no further submissions of login information will be accepted from that user until some specified remedial action takes place. Similar restrictions may be placed on repetition of the registration process previously described in conjunction with FIG. **19**.

FIG. **21** shows an example process for creating a mobile site using the content management site. This process may be accessed, for example, upon completion of the registration process, or upon activation of the link associated with block **226** of FIG. **2**. After initiation of the mobile site creation process in step **2100**, the user is prompted in step **2102** to enter a site title, in step **2104** to enter a site URL, in **2106** to enter a site description, in step **2108** to enter a category, and in step **2110** to enter keywords. Steps **2102** to **2110** should be viewed as examples of the type of information a registered user could be asked to enter in order to create the mobile site, but a given mobile site in accordance with the invention can of course be created using other types of information.

Step **2112** determines if the submitted information is to be saved or canceled. The latter results in the process being directed to the home page (HP), the start page (SP), or other specified page of the content management site. If the submitted information is to be saved, step **2114** determines if the submitted information is valid. If the submitted information is not valid, the process returns to step **2100** to allow the user at least one additional attempt to create the mobile site. A positive determination in step **2114** results in the execution of content and/or data device formatting step **2116**, database entry creation step **2118**, and site URL and redirect file creation step **2120**. The URL is used to access the mobile site that is created as a result of the FIG. **21** process.

Step **2122** represents the start of an M-channel selection wizard. From the M-channel selection wizard step, the user can choose a template, task and/or goal in step **2124**, choose appropriate fields in step **2126**, and select desired options in step **2130**. At this point, the process generates the appropriate rules for the display engine in step **2132**, and then activates or otherwise generates one or more M-channels for the mobile site in step **2134**. The result is a site specific M-channel list as indicated in step **2146**, an example of which was previously described in conjunction with the screenshot of FIG. **8**. Supplementary to this portion of the process, the user is also provided with an opportunity in steps **2136**, **2138**, **2140**, **2142** and **2144** of FIG. **21** to add additional M-channels, options, external services, and the like to the mobile site. Any such added elements are taken into account in generating the site specific M-channel list in step **2146**. At the completion of step **2146**, the process returns to the main menu (MM), from which the M-channel wizard step **2122** can again be initiated to further modify the previously-created mobile site.

Turning now to FIG. **22**, an example process for content authoring at the content management site is shown. The user in step **2202** selects a particular M-channel for which the content is to be authored. Step **2204** generates an M-channel content list, and step **2206** allows the status of the various content items to be changed from published to unpublished and vice-versa. Steps **2208** and **2210** allow content items on the M-channel content list to be erased. From the M-channel content list generated in step **2204**, an item authoring wizard may be initiated in step **2212**. This wizard facilitates the authoring of a content item by prompting the user to enter date and time in step **2214**, to enter a title in step **2216**, to enter message content, data template or both in step **2218**, to select or upload media in step **2220**, to select distribution, delivery and service options in step **2224**, and to select publishing options in step **2226**.

Selectable or uploadable media may include, for example, an XML/RSS feed, a database entry, a syndication item, a

document, a video, a photo, a graphic, a music file, etc. Distribution, delivery and service options may include, for example, a distribution list based on group(s) or individual(s), SMS delivery, MMS delivery, email delivery, WAP availability, syndication availability, particular content to be combined or otherwise integrated with the content item upon delivery, etc. The publishing options may specify launch date, expiration date, private, public, group-specific, etc.

Step **2230** determines if a save button or a cancel button has been activated. Activation of the cancel button returns the process to the M-channel content list in step **2204**. Activation of the save button causes formatting of the message content and/or data device in step **2232**. Step **2234** determines if media has been selected for upload. If so, the selected media is uploaded in step **2236**. In any case, step **2238** then determines if distribution, delivery and service options have been set. A positive determination results in the setting of the distribution, delivery and service options in step **2240**. The process then proceeds to step **2242**, in which the generated content item and its associated settings are saved, preferably by storage in a database or other memory or storage device of the system, as indicated at **2244**. The process then returns to the M-channel content list in step **2202**.

Step **2246** initiates a distribution, delivery and service engine which sends the content item out to a rules-based display engine in step **2250** which then, driven by the options previously selected in steps **2224** and **2226**, handles the presentation of the content in a manner appropriate to the mobile devices **15** on which it is to be viewed. The distribution, delivery and service engine may also take into account one or more external services **2248** as indicated. The display engine further provides appropriate interaction mechanisms consistent with the content and its associated options. In addition, alerts and/or other messages can be sent out in step **2252** based on options selected in step **2224** for notifying the recipient(s) that the content item is now available for access via the mobile site. The M-channel content list, and more specifically the item view associated with the particular content item, are updated as appropriate, in steps **2254** and **2256**.

FIG. **23** shows an example directory process that may be implemented at the content management site. The directory process is initiated in step **2302**, and in step **2304** permits a user to go directly to another user, which may result in the retrieval at step **2306** of the identification card or business card, also referred to herein as an M-card, of the other user. It is also possible in step **2314** to perform a member search, which may include specifying in steps **2316**, **2318** and **2320** the respective beginning, containing or ending parameters of the member name. This leads to a member results list in step **2321** that can be used to retrieve one or more M-cards in step **2306**. Another option is to view a member list, as indicated in step **2322**, from which the user can select a letter and/or a number, leading again to a member results list in step **2321**. The M-cards retrieved in step **2306** can be used to provide user profile information in step **2308**, to view a mobile site or sites associated with the corresponding user(s) in step **2310**, or to call via direct dial or otherwise the corresponding user(s) in step **2312**. The direct dial call may be placed to a phone (P) or any other device capable of participating in a voice or data call.

It is also possible from the directory step **2302** to initiate a site search in step **2330**, which may include specifying in steps **2332**, **2334** and **2336** the respective beginning, containing or ending parameters of the desired site. This leads to a site results list in step **2338** that can be used to retrieve one or more user mobile sites in step **2340**. Other mobile site directory functions include generation of a site list in step **2350**, leading to user selection of a letter and/or a number in step **2352**, generation of site categories in step **2360**, leading to user selection of a category in step **2362**, and generation of keywords in step **2370**, leading to user entry of a particular keyword or keywords in step **2372**. Each of these functions results in generation of a site results list in step **2338**, from which a user mobile site can be accessed in step **2340**.

It is to be appreciated that the processes and their associated steps as described in conjunction with the operational flow diagrams of FIGS. **19** through **23** are merely exemplary, and the invention does not require the particular steps shown, or their particular order of execution.

The above-described illustrative embodiment of the invention provides a number of significant advantages relative to conventional techniques.

For example, the system **10** as described herein is advantageous in that it can be used to allow content providers to cost-effectively publish, distribute and generate revenue from a mobile content service.

Also, the system provides a platform for the development of a wide variety of personalized content applications for users of mobile devices, thereby allowing wireless network service providers not only to increase their subscriber base, but also to reduce turnover in their subscriber base.

Furthermore, the invention allows users to more efficiently communicate, collaborate and otherwise interact with their friends or colleagues instantly and seamlessly within a single system that provides a mobile web site integrating existing wireless networking functionalities, such as IM, SMS, MMS, location-based services, or email, with personally authored content.

Yet another advantage of the system described in conjunction with the illustrative embodiment is that it does not require users to download and install any particular client-side software. The generation of a given mobile site and the management of the content associated therewith is driven in the illustrative embodiment from the content management site at the server side of the system, accessible via a standard browser. The system is configured to operate independently of the user device operating system or other user device configuration parameters, such that a given user may author, create, publish, send, convey, share, receive, respond to, subscribe to, collaborate with, track, transact, maintain and manage personalized messaging content from any type of user device running any operating system.

It should again be emphasized that the illustrative embodiment as described above is presented by way of example only, and should not be construed as limiting in any way. Numerous alternative embodiments within the scope of the appended claims will be readily apparent to those skilled in the art.

What is claimed is:

1. A method for managing information content in a network-based communication system, the method comprising the steps of:

providing a first web-based interface accessible to a first user, the first web-based interface being configured to permit the first user to activate a given mobile information channel for sharing content between the first user and one or more additional users; and

generating a second web-based interface different than the first web-based interface, wherein the second web-based interface provides each of the one or more additional users access to at least a portion of the shared content via the given mobile information channel to thereby facilitate interaction between the first user and the one or more additional users;

wherein the given mobile information channel supports messaging between the first user and the one or more additional users over a wireless network; and

wherein the mobile information channel is configured to permit the first user to send messaging content to the one or more additional users and to receive messaging content from the one or more additional users.

2. The method of claim **1** wherein the first web-based interface is configured to permit the first user to designate accessibility rules controlling access of said one or more additional users to respective portions of the shared content.

3. The method of claim **1** wherein the first web-based interface comprises a content management web site and the second web-based interface comprises a mobile web site accessible independently of the content management web site via one or more mobile devices.

4. The method of claim **1** wherein the first web-based interface is configured to permit the first user to selectively specify a first portion of said shared content as having a published status and a second portion of said shared content as having an unpublished status, and wherein the second web-based interface provides said one or more additional users with access to the first portion of said shared content that the first user has specified in the first web-based interface as having the published status and does not provide said one or more additional users with access to the second portion of said shared content that the first user has specified in the first web-based interface as having the unpublished status.

5. The method of claim **1** wherein the shared content comprises a plurality of content items and the first web-based interface is configured to permit the first user to selectively specify one of a published status and an unpublished status for each of said content items, the second web-based interface providing access to those of the content items that the first user has specified in the first web-based interface as having the published status and not providing access to those of the content items that the first user has specified in the first web-based interface as having the unpublished status.

6. The method of claim **1** wherein the first web-based interface is identified by a first uniform resource locator and the second web-based interface is identified by a second uniform resource locator different than the first uniform resource locator.

7. The method of claim **1** wherein the shared content is obtained from a device-captured data source of the first user, said device-captured data source comprising a source of at least one of device-captured video data, device-captured image data, device-captured audio data and device-captured location coordinates.

8. The method of claim **1** wherein the first web-based interface permits the first user to upload at least one information item, and wherein the second web-based interface provides said one or more additional users with access to said at least one uploaded information item in accordance with accessibility rules established by the first user via the first web-based interface.

9. The method of claim **1** wherein the one or more additional users comprise individuals that with the first user and by mutual consent collectively comprise a group of members that have access to at least a portion of said shared content via the second web-based interface.

10. A non-transitory computer-readable storage medium having embodied therein executable code of one or more software programs for use in managing information content in a network-based communication system, wherein said executable program code when executed by a processing element of the communication system implements the steps of the method of claim **1**.

11. An apparatus for use in managing information content in a network-based communication system, the apparatus comprising:

a processing element comprising a processor coupled to a memory;

the processing element providing at least a portion of a first web-based interface accessible to a first user, the first web-based interface being configured to permit the first user to activate a given mobile information channel for sharing content between the first user and one or more additional users;

the processing element generating a second web-based interface different than the first web-based interface, wherein the second web-based interface provides each of the one or more additional users access to at least a portion of the shared content via the given mobile information channel to thereby facilitate interaction between the first user and the one or more additional users;

wherein the given mobile information channel supports messaging between the first user and the one or more additional users over a wireless network; and

wherein the mobile information channel is configured to permit the first user to send messaging content to the one or more additional users and to receive messaging content from the one or more additional users.

12. The apparatus of claim **11** wherein the first web-based interface is configured to permit the first user to designate accessibility rules controlling access of said one or more additional users to respective portions of the shared content.

13. The apparatus of claim **11** wherein the processing element comprises at least one server.

14. The apparatus of claim **13** wherein the server is accessible over the Internet via a network interface.

15. A network-based communication system, comprising:

a plurality of servers configured to communicate over a network;

at least one of the servers providing at least a portion of a first web-based interface accessible to a first user, the first web-based interface being configured to permit the first user to activate a given mobile information channel for sharing content between the first user and one or more additional users;

wherein said at least one server generates a second web-based interface different than the first web-based interface, wherein the second web-based interface provides each of the one or more additional users access to at least a portion of the shared content via the given mobile information channel to thereby facilitate interaction between the first user and the one or more additional users;

wherein the given mobile information channel supports messaging between the first user and the one or more additional users over a wireless network; and

wherein the mobile information channel is configured to permit the first user to send messaging content to the one or more additional users and to receive messaging content from the one or more additional users.

16. The method of claim **1** further comprising maintaining a contact list for the given mobile information channel, the contact list comprising the one or more additional users.

17. The method of claim **1** further comprising distributing advertising content to the one or more additional users via the given mobile information channel.

18. The method of claim **17** wherein distributing advertising content comprises inserting advertising content along with messaging content in the given mobile information channel.

19. The method of claim **1** wherein the second web-based interface is configured to provide at least a portion of the shared content to the one or more additional users utilizing one of a short message service (SMS) and a multimedia message service (MMS).

20. The method of claim **1** wherein the given mobile information channel comprises a chat channel.

21. The method of claim **1** wherein the messaging content comprises personalized messaging content for the first user.

22. The method of claim **21** wherein the given mobile information channel integrates location-based service information of the wireless network with the personalized messaging content.

23. The method of claim **1** wherein the messaging content comprises at least one of an image, a video, a short message service (SMS) message and a multimedia message service (MMS) message.

24. The method of claim **1** wherein the messaging content comprises at least one of announcements, notes, surveys, promotions and contests.

25. The method of claim **1** wherein at least a portion of the shared content is authored by the first user.

26. The method of claim **1** wherein the first web-based interface is configured to allow the first user to title the given mobile information channel.

27. A method comprising:

generating a given mobile information channel for sharing content authored by a first user with one or more additional users; and

providing each of the one or more additional users access to at least a portion of the shared content via the given mobile information channel to facilitate interaction between the first and additional users;

wherein the given mobile information channel supports messaging between the first user and the one or more additional users over a wireless network; and

wherein the mobile information channel is configured to permit the first user to send messaging content to the one or more additional users and to receive messaging content from the one or more additional users.

* * * * *