

Exhibit 2

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

(10) **Patent No.:** **US 6,714,966 B1**
(45) **Date of Patent:** ***Mar. 30, 2004**

- (54) **INFORMATION DELIVERY SERVICE**
 - (75) Inventors: **Fred B. Holt**, Seattle, WA (US); **Virgil E. Bourassa**, Bellevue, WA (US)
 - (73) Assignee: **The Boeing Company**, Seattle, WA (US)
 - (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 467 days.
- This patent is subject to a terminal disclaimer.

5,734,865	A	3/1998	Yu
5,737,526	A	4/1998	Periasamy et al.
5,754,830	A	5/1998	Butts et al.
5,761,425	A	6/1998	Miller
5,764,756	A	6/1998	Onweller
5,790,548	A	8/1998	Sistanizadeh et al.
5,790,553	A	8/1998	Deaton, Jr. et al.
5,799,016	A	8/1998	Onweller
5,802,285	A	9/1998	Hirviniemi
5,850,592	A	* 12/1998	Ramanathan 455/7
5,864,711	A	1/1999	Mairs et al.
5,867,660	A	2/1999	Schmidt et al.
5,867,667	A	2/1999	Butman et al.
5,870,605	A	2/1999	Bracho et al.

(List continued on next page.)

- (21) Appl. No.: **09/629,043**
- (22) Filed: **Jul. 31, 2000**
- (51) **Int. Cl.**⁷ **G06F 15/16**
- (52) **U.S. Cl.** **709/204; 709/205; 709/203; 709/243; 463/92**
- (58) **Field of Search** **709/204, 205, 709/227, 243, 203; 463/40, 42**

OTHER PUBLICATIONS

PR Newswire, "Microsoft Boosts Accessibility to Internet Gaming Zone with Latest Release," Apr. 27, 1998, pp. 1ff.*
 PR Newswire, "Microsoft Announces Launch Date for UltraCorps, Its Second Premium Title for the Internet Gaming Zone," Ma 27, 1998, pp. 1 ff.*
 Business Wire, "Boeing and Panthesis Complete SWAN Transaction," Jul. 22, 2002, pp. 1ff.*

(List continued on next page.)

(56) **References Cited**
U.S. PATENT DOCUMENTS

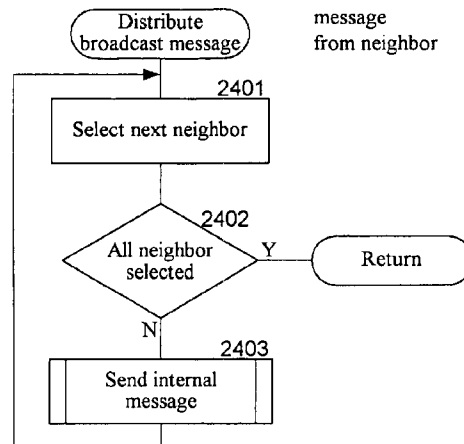
4,912,656	A	3/1990	Cain et al.
5,056,085	A	10/1991	Vu
5,058,105	A	* 10/1991	Mansour et al. 370/228
5,079,767	A	* 1/1992	Perlman 370/408
5,117,422	A	* 5/1992	Hauptschein et al. 370/255
5,309,437	A	5/1994	Perlman et al.
5,426,637	A	6/1995	Derby et al.
5,459,725	A	* 10/1995	Bodner et al. 370/390
5,471,623	A	* 11/1995	Napolitano, Jr. 709/243
5,535,199	A	7/1996	Amri et al.
5,568,487	A	10/1996	Sitbon et al.
5,636,371	A	6/1997	Yu
5,644,714	A	* 7/1997	Kikinis 709/219
5,673,265	A	9/1997	Gupta et al.
5,696,903	A	12/1997	Mahany
5,732,074	A	3/1998	Spaur et al.
5,732,086	A	* 3/1998	Liang et al. 370/410
5,732,219	A	3/1998	Blumer et al.

Primary Examiner—Dung C. Dinh
Assistant Examiner—Brad Edelman
(74) *Attorney, Agent, or Firm*—Perkins Coie LLP

(57) **ABSTRACT**

A computer network for providing an information delivery service for a plurality of participants over the network is disclosed. Each participant has connections to at least three neighbor participants. An originating participant sends data to the other participants by sending the data through each of its connections to its neighbor participants. Further, each participant sends data that it receives from a neighbor participant to its other neighbor participants. The network is m-regular where m is the exact number of neighbor participants of each participant and the network is an incomplete graph.

17 Claims, 39 Drawing Sheets



U.S. PATENT DOCUMENTS

5,874,960	A	2/1999	Mairs et al.	
5,899,980	A	5/1999	Wilf et al.	
5,907,610	A	5/1999	Onweller	
5,925,097	A	* 7/1999	Gopinath et al.	709/200
5,928,335	A	7/1999	Morita	
5,935,215	A	8/1999	Bell et al.	
5,948,054	A	9/1999	Nielsen	
5,949,975	A	9/1999	Batty et al.	
5,956,484	A	9/1999	Rosenberg et al.	
5,970,232	A	* 10/1999	Passint et al.	709/238
5,974,043	A	10/1999	Solomon	
5,987,506	A	11/1999	Carter et al.	
6,003,088	A	12/1999	Houston et al.	
6,013,107	A	1/2000	Blackshear et al.	
6,023,734	A	2/2000	Ratcliff et al.	
6,029,171	A	2/2000	Smiga et al.	
6,032,188	A	2/2000	Mairs et al.	
6,038,602	A	3/2000	Ishikawa	
6,047,289	A	4/2000	Thorne et al.	
6,094,676	A	7/2000	Gray et al.	
6,115,580	A	* 9/2000	Chuprun et al.	455/1
6,167,432	A	* 12/2000	Jiang	709/204
6,173,314	B1	* 1/2001	Kurashima et al.	709/204
6,199,116	B1	3/2001	May et al.	
6,216,177	B1	4/2001	Mairs et al.	
6,223,212	B1	4/2001	Batty et al.	
6,243,691	B1	6/2001	Fisher et al.	
6,268,855	B1	7/2001	Mairs et al.	
6,271,839	B1	8/2001	Mairs et al.	
6,272,548	B1	* 8/2001	Cotter et al.	709/239
6,285,363	B1	9/2001	Mairs et al.	
6,304,928	B1	10/2001	Mairs et al.	
6,321,270	B1	* 11/2001	Crawley	709/238
6,463,078	B1	* 10/2002	Engstrom et al.	370/466
6,524,189	B1	* 2/2003	Rautila	463/40
2002/0027896	A1	* 3/2002	Hughes et al.	370/342

OTHER PUBLICATIONS

Azar et al., "Routing Strategies for Fast Networks," May 1992, INFOCOM '92, Eleventh Annual Joint Conference of the IEEE Computer and Communications Societies, vol. 1, pp. 170-179.*

Cho et al., "A Flood Routing Method for Data Networks," Sep. 1997, Proceedings of 1997 International Conference on Information, Communications, and Signal Processing, vol. 3, pp. 1418-1422.*

Komine et al., "A Distributed Restoration Algorithm for Multiple-Link and Node Failures of Transport Networks," Dec. 199 Global Telecommunications Conference, 1990, and Exhibition, IEEE, vol. 1, pp. 459-463.*

Peercy et al., "Distributed Algorithms for Shortest-Path, Deadlock-Free Routing and Broadcasting in Arbitrarily Faulty Hypercubes," Jun. 1999, 20th International Symposium of Fault-Tolerant Computing, 1990, pp. 218-225.*

Alagar, S. and Venkatesan, S., "Reliable Broadcast in Mobile Wireless Networks," Department of Computer Science, University of Texas at Dallas, Military Communications Conference, 1995, MILCOM '95 Conference Record, IEEE San Diego, California, Nov. 5-8, 1995 (pp. 236-240). International Search Report for The Boeing Company, International patent application No. PCT/US01/24240, Jun. 5, 2002 (7 pages).

U.S. patent application Ser. No. 09/629,570, Bourassa et al., filed Jul. 31, 2000.

U.S. patent application Ser. No. 09/629,577, Bourassa et al., filed Jul. 31, 2000.

U.S. patent application Ser. No. 09/629,575, Bourassa et al., filed Jul. 31, 2000.

U.S. patent application Ser. No. 09/629,572, Bourassa et al., filed Jul. 31, 2000.

U.S. patent application Ser. No. 09/629,023, Bourassa et al., filed Jul. 31, 2000.

U.S. patent application Ser. No. 09/629,576, Bourassa et al., filed Jul. 31, 2000.

U.S. patent application Ser. No. 09/629,024, Bourassa et al., filed Jul. 31, 2000.

U.S. patent application Ser. No. 09/629,042, Bourassa et al., filed Jul. 31, 2000.

Murphy, Patricia, A., "The Next Generation Networking Paradigm: Producer/Consumer Model," Dedicated Systems Magazine—2000 (pp. 26-28).

The Gamer's Guide, "First-Person Shooters," Oct. 20, 1998 (4 pages).

The O'Reilly Network, "Gnutella: Alive, Well, and Changing Fast," Jan. 25, 2001 (5 pages) <http://www.open2p.com/lpt/>... [Accessed Jan. 29, 2002].

Oram, Andy, "Gnutella and Freenet Represents True Technological Innovation," May 12, 2000 (7 pages) The O'Reilly Network <http://www.oreillynet.com/lpt/>... [Accessed Jan. 29, 2002].

Internetworking Technologies Handbook, Chapter 43 (pp. 43-1-43-16).

Oram, Andy, "Peer-to-Peer Makes the Internet Interesting Again," Sep. 22, 2000 (7 pages) The O'Reilly Network <http://linux.oreillynet.com/lpt/>... [Accessed Jan. 29, 2002].

Monte, Richard, "The Random Walk for Dummies," MIT Undergraduate Journal of Mathematics (pp. 143-148).

Srinivasan, R., "XDR: External Data Representation Standard," Sun Microsystems, Aug. 1995 (20 pages) Internet RFC/STD/FYI/BCP Archives <http://www.faqs.org/rfcs/rfc1832.html> [Accessed Jan. 29, 2002].

A Databeam Corporate White Paper, "A Primer on the T.120 Series Standards," Copyright 1995 (pp. 1-16).

Kessler, Gary, C., "An Overview of TCP/IP Protocols and the Internet," Apr. 23, 1999 (23 pages) Hill Associates, Inc., <http://www.hill.com/library/publications/t...> [Accessed Jan. 29, 2002].

Bondy, J.A., and Murty, U.S.R., "Graph Theory with Applications," Chapters 1-3 (pp. 1-47), 1976 American Elsevier Publishing Co., Inc., New York, New York.

Cormen, Thomas H. et al., Introduction to Algorithms, Chapter 5.3 (pp. 84-91), Chapter 12 (pp. 218-243), Chapter 13 (p. 245), 1990, The MIT Press, Cambridge, Massachusetts, McGraw-Hill Book Company, New York.

The Common Object Request Broker: Architecture and Specification, Revision 2.6, Dec. 2001, Chapter 12 (pp. 21-1-12-10), Chapter 12 (pp. 13-1-13-56), Chapter 16 (pp. 16-1-16-26), Chapter 18 (pp. 18-1-18-52), Chapter 20 (pp. 20-1-20-22).

The University of Warwick, Computer Science Open Days, "Demonstration on the Problems of Distributed Systems," <http://www.dcs.warwick.ac.u...> [Accessed Jan. 29, 2002].

* cited by examiner

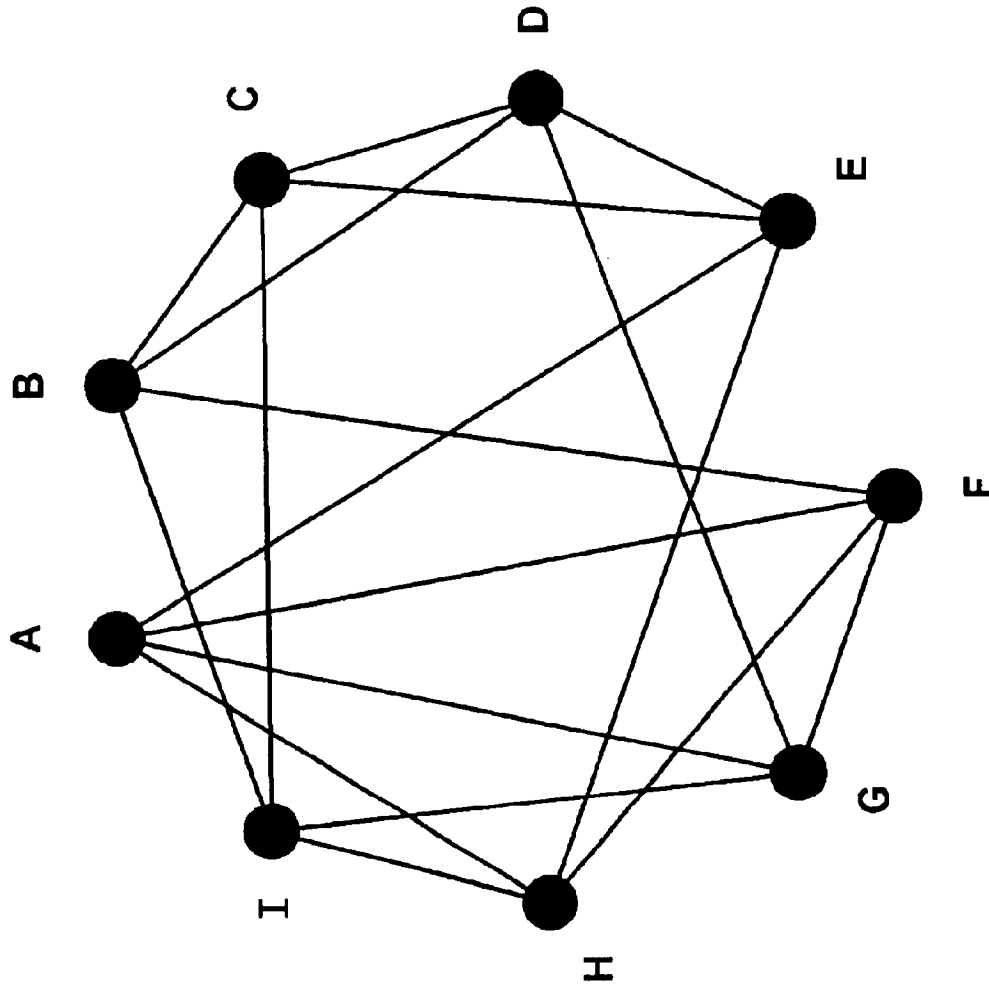


Fig. 1

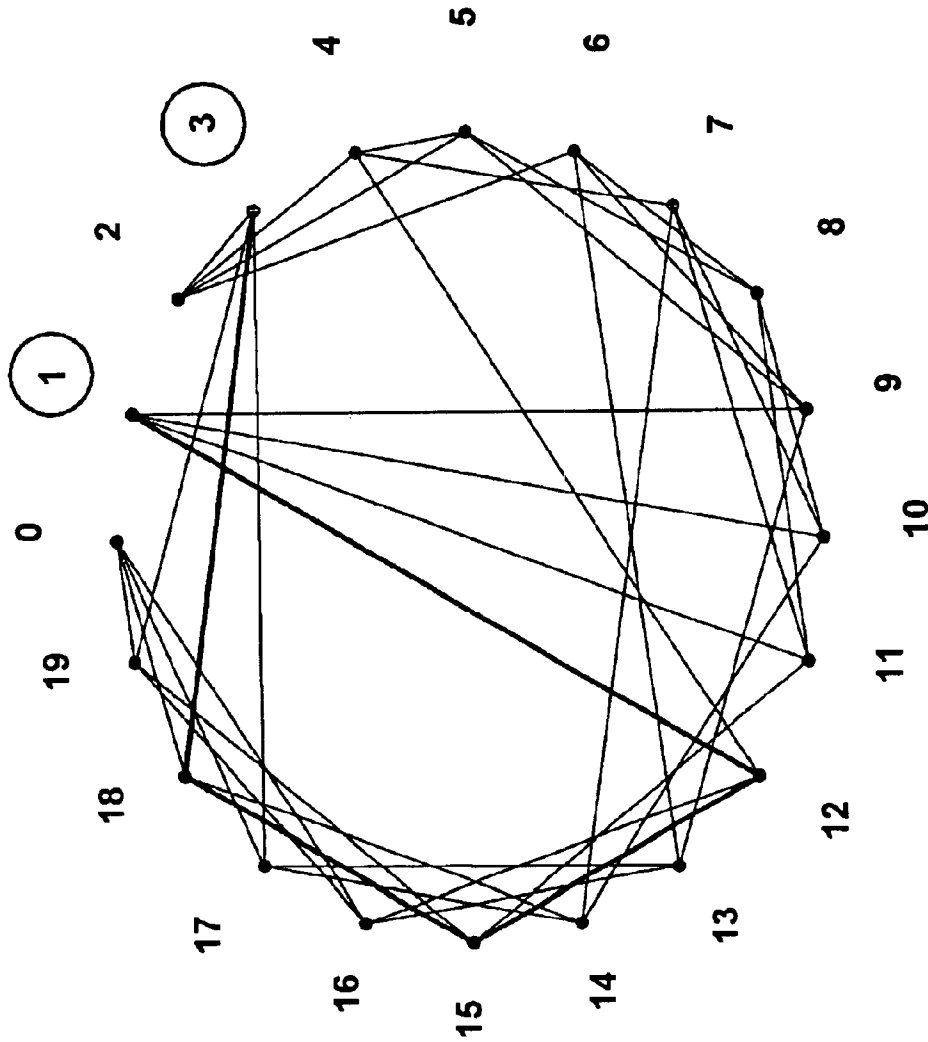


Fig. 2

Explore Litigation Insights

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

Real-Time Litigation Alerts



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

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

Advanced Docket Research



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

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

Analytics At Your Fingertips



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

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

API

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

LAW FIRMS

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

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

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.