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(54) **TASK/DOMAIN SEGMENTATION IN APPLYING FEEDBACK TO COMMAND CONTROL**

(76) Inventor: **Richard Reisman**, 20 East 9th St., New York, NY (US) 10003

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(56) **References Cited**

U.S. PATENT DOCUMENTS

4,974,191 A	11/1990	Amirghodsi et al.	364/900
5,224,205 A	6/1993	Dinkin et al.	
5,511,208 A	4/1996	Boyles et al.	
5,715,395 A	2/1998	Brabson et al.	
5,748,945 A	5/1998	Ng	395/500
5,751,956 A	5/1998	Kirsch	395/200.33
5,764,906 A	6/1998	Edelstein et al.	395/200.49
5,794,050 A	8/1998	Dahlgren et al.	395/705
5,835,897 A	11/1998	Dang	705/2
5,855,020 A	12/1998	Kirsch	707/10
5,929,852 A	7/1999	Fisher et al.	345/335
5,974,444 A	10/1999	Konrad	709/503
6,006,222 A	12/1999	Culliss	707/5

6,014,665 A	1/2000	Culliss	707/5
6,029,192 A	2/2000	Hill et al.	709/206
6,067,539 A	5/2000	Cohen	707/2
6,151,624 A	* 11/2000	Teare et al.	709/217
6,192,364 B1	* 2/2001	Baclawski	707/10
6,269,361 B1	7/2001	Davis et al.	707/3
6,460,036 B1	10/2002	Herz	707/10

FOREIGN PATENT DOCUMENTS

WO	WO 99/19816	4/1999
WO	WO 99/39275	8/1999
WO	WO 99/39280	8/1999

OTHER PUBLICATIONS

J.E. Kendall et al., "Information Delivery Systems: An Exploration of Web Pull and Push Technologies," Communications of the Association for Information Systems, vol. 1, Art. 14, Apr. 1999.
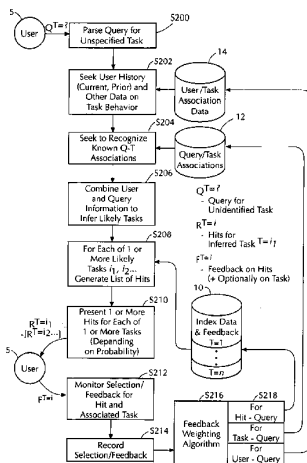
(Continued)

Primary Examiner—Mohammad Ali

(57) **ABSTRACT**

An apparatus for responding to a current user command associated with one of a plurality of task/domains includes: a digital storage device that stores cumulative feedback data gathered from multiple users during previous operations of the apparatus and segregated in accordance with the plural ity of task/domains; a first digital logic device that determines the current task/domain with which the current user command is associated; a second digital logic device that determines a current response to the current user command on the basis of that portion of the stored cumulative feedback data associated with the current task/domain; a first communication interface that communicates to the user the current response; and a second communication interface that receives from the user current feedback data regarding the current response. The current feedback data is added to the cumulative feedback data stored in the digital storage device and associated with the current task/domain.

17 Claims, 6 Drawing Sheets

OTHER PUBLICATIONS

K.E. Kendall, "Artificial Intelligence and Götterdämerung: The Evolutionary Paradigm of the Future," The Data Base for Advances in Information Systems, vol. 27, No. 4, Fall 1996, pp 99–115.

S. Alter, et al., "A General, Yet Useful Theory Of Information Systems", Communication of the Association for Information Systems, vol. 1, Art. 13, Mar. 1999.

J. Klensin et al., "Domain Names and Company Name Retrieval," RFC2345, Network Working Group Request for Comments: 2345, May 1998.

T. Bray et al., "Extensible Markup Language (XML) 1.0 W3C Recommendation Feb. 10, 1998," REC–xml–19980210, http://www.w3.org/TR/1998/REC–xml–19980210, Feb. 10, 1998.

Anonymous, "XML: Enabling Next–Generation Web Applications," Microsoft Corporation, http://msdn.microsoft.com/archive/en–us/dnarxml/html/xmlwp2.asp?frame=true, Apr. 3, 1998.

Anonymous, "UDDI Technical White Paper," http://www.uddi.org/pubs/Iru_UDDI_Technical_White_Paper.pdf, Sep. 6, 2000.

Anonymous, "electronic business XML (ebXML) Requirements Specification—ebXML Candidate Draft Apr. 28, 2000," http://www.ebxml.org/specdrafts/RSV09.htm, Apr. 28, 2000.

Anonymous, "BizTalk™ Framework 1.0 Independent Document Specification," BizTalk Enabling Software to Speak the Language of Business, Microsoft Corporation, Nov. 30, 1999.

Philip Costa, "Navigating the Sea of XML Standards," Giga Information Group, Dec. 14, 1999.

"How does inference find work?" available at http://www.infind.com/about.html as of Nov. 11, 1999.

Kathleen Hall, "Ask Jeeves Takes Direct Hit", available http://www.gigaweb.com/Content/GIB/RIB–022000–00177.html, as of Feb. 19, 2000.

"Latest engines go vertical in search of relevant information", Harvard Computing Group Report, available at http://www.bettergetter.com/betterg/demo/whitepaper.jsp as of Dec. 20, 1999.

"About the W3–CorporaProject" available at http://www.essex.ac.UK/W3c/corpus_ling/about.html as of Aug. 24, 2000.

"Language Translation" available at http://www–dse.doc.ic.ac.UK/~nd/surprise_97/journal/vol4/hks/trans.html as of Aug. 23, 2000.

"Conclusion" available at http://www–dse.doc.ic.ac.UK/~nd/surprise_97/journal/vol4/hks/conclu.html as of Aug. 23, 2000.

"Language Software," available at http://www–dse.doc.ic.ac.UK/~nd/surprise_97/journal/vol2/hks/lan_trans.html as of Aug. 23, 2000.

"Symmetry Health Data Systems Achieves Patent ETG and 'Dynamic Time Window' new industry standards." available at http://www.Symmetry–health.com/PR_Patent.html as of Jun. 21, 2000.

"Resource For The Semantic Web", available at http://www.semanticweb.org/resources.html as of May 27, 2000.

Web Design Issues "What a Semantic Can Represent" available at http://www.w3.org/DesignIssues/RDFnot.html as of Dec. 8, 2000.

Bob Metcalfe, "Web Father Berners–Lee Shares Next–Generation Vision of the Semantic Web." InfoWorld vol. 21, Issue 21, May 24, 1999.

Tim Berners–Lee "The Meaning of a Document–Axioms of Web Architecture," available at http://www.w3.org/DesignIssues/Meaning.html, Dated 1999, last modified Jan. 24, 2000.

Alexander Chislenko, "Semantic Web Vision Paper" Version 0.28, Jun. 29, 1997, available at http://www.lucifer.com/~sasha/Articles/SemanticWeb. html.

Tim Berners–Lee, "Semantic Web Road Map", Sep. 1998, last modified Oct. 14, 1998, available at http://www.W3.org/DesignIssues/Semantic.html.

Tim Berners–Lee, "Semantic Web as a Language of Logic", 1998, last modified Apr. 14, 2000, available at http://www.W3.org/DesignIssues/Logic.html.

"Semantic Search—The SHOE Search Engine", available at http://www.cs.umd.edu/projects/plus/SHOE/search/, as of May 29, 2000.

"Telcordia™ Latest Semantic Indexing Software (LSI): Beyond Keyword Retrieval," available at http://lsi.research.telcordia.com/lsi/papers/execsum.html as of Dec. 11, 2000.

Jeff Heflin et al., "Searching the Web with SHOE", Dept. of Computer Science, University of Maryland.

"The SHOE FAQ", available at http://www.cs.umd.edu/projects/plus/SHOE/faq.html as of May 29, 2000.

Dagobert Soergel, Review of WordNet, D–Lib Magazine, Oct. 1998, available at http://www.dlib.org/dlib/October98/10bookreview.html.

Harold Boley, et al., "Tutorial on Knowledge Markup Techniques", Aug. 22, 2000, available at http://www.semanticweb.org/knowmarktutorial/ as of May 29, 2000.

Paula J. Hane, "Beyond Keyword Searching—Oingo and Simpli.com Introduce Meaning–Based Searching," Dec. 20, 1999, available at http://www.infotoday.com/newsbreaks/nbl1220–2.htm.

Sharon Cleary, "Simpli.com Uses Linguistics to Help Web Engines Do Better Searches", Wall Street Journal Interactive Edition, Feb. 7, 2000.

"Simplified Technology White Paper", available at http://www.simpli.com/search_white_paper.html.

Reed Hellman, "A Semantic Approach Adds Meaning to the Web", Computer, Dec. 1999.

"What is 1 jump", available at http://www.1jump.com/as of Nov. 11, 1999.

"Alexa FAQ's", available at http://www.alexa.com/whatisalexa/faq.html as of Feb. 14, 1998.

"1 jump for Windows features and benefits" available at http://www.1jump.com/featurebenefit.html as of Nov. 11, 1999.

"1 jump company and contact information", available at http://www.1jump.com/corp.html as of Nov. 11, 1999.

"Alexa User Paths", available at http://www.alexa.com/whatisalexa/user_paths.html. as of Feb. 14, 1998.

John F. Ince, "Searching for Profits: The pioneers had to expand to make money. Will the next wave fare any better?" Upside, May 2000 available at http://www.upsidetoday.com.

Jim Rapoza, "Alexa's Theory of Relativity Filtering analytical algorithms link to Web sites—relevant or not", PC Week Labs available at http://www.Zdnet.com/pcweek/reviews/0818/18alex.html as of Feb. 14, 1998.

"1 jump Help menu", available at http://www.alexa.com.

BAA 00–07 Proposer Information Pamphlet: Agent Based Computing, available at http://www.darpa.mil/iso/ABC/BAA0007PIP.htm.

GlobalBrain.net, Home Page, Background and Technology from GlobalBrain.net Web site www.GlobalBrain.net, Jun. 1999.

"Real Name Temporarily Suspends Registration of Generics", from The Search Engine Report, Jan. 4, 2000, from at http://searchenginewatch.internet.com/sereport/00/01–real-names.html.

Tim Bray, "RDF and Metadata", from http://www.xml.com/xml/pub/98/06/rdf.html, 1998.

Ora Lassila, "Web Metadata: A Matter of Semantics", IEEE Internet Computing, Jul.–Aug. 1998.

Elizabeth Gardner, "Hollywood Marketers Debate Idea of URL for Every Movie", WebWeek, Jan. 19, 1998.

"Netword Receives Patent for Internet Keyword System", Netword.com Press Release, Jun. 16, 1999.

"Direct Hit Receives Funding From Draper Fisher Jarvetson", DirectHit.com Press Release, May 15, 1998.

"Direct Hit Signs Deal With Wired Digital's Hot Bot for Popularity Engine", DirectHit.com Press Release, Aug. 19, 1998.

DirectHit.com, Company & Background Articles and Frequently Asked Questions, from http://system.direchit.com/, Oct. 1998.

"Technology Overview" from DirectHit Web Site, www.directhit.com, printed Jun. 1999.

"Centraal Corporation Redefines Internet Navigation", Press release from realnames.com, Mar. 12, 1998, http://company-.realnames.com/iwrelease.asp.

"Centraal Corporation FAQ", from http://company.realnames.com/FAQ.asp, Mar. 1998.

Michael Tchong, "Centraal Debuts", Mar. 11, 1998 ICONO-CAST, from http://company.realnames.com/iconocast.asp.

"Access, Searching and Indexing of Directories (asid)", Jan. 1998, from http://www.ietf.cnri.reston.va.us/html.charters/asid–charter.html.

"GoTo.com, The First Ever Market–Driven Search Directory", GoTo.com Press Release, Feb. 21, 1998, from http://www.goto.com/release.html.

"URL Expansion Proposal", UseNet Thread, Jan. 1996.

Elizabeth Gardner, "Dislike Your URL? Now You Can Register a 'Netword'", WebWeek, Aug. 18, 1997.

"Netword LLC Receives Notice of Allowance", Netword.com press release, Dec. 9, 1997.

"Internet Keywords Give Consumers Direct Access to Online Resources", Netword.com Press Release, May 12, 1997.

"Why Use Networds?", Netword.com Web Site, Company Profile, FAQs, Feb. 1998 from http://www.netword.com.

R. Fielding, "How Roy Would Implement URNs and URCs Today", Internet Draft of the Internet Engineering Task Force (IETF), Jul. 7, 1995.

J. Klensin et al., "Domain Names and Company Name Retrieval", Internet Draft of the Internet Engineering Task Force (IETF), Jul. 29, 1997.

K. Sollins, "Architectural Principles of Uniform Resource Name Resolution", Informational Memo, Internet Society, Jan. 1998.

Tim Berners–Lee, "Web Architecture from 50,000 feet.", from http://www.w3.org/DesignIssues/Architecture.html., Sep. 1998.

S. Kille, "Using the OSI Directory to Achieve User Friendly Naming", Request For Comments: 1781, Internet Society, Mar. 1995.

"Global Brain To Offer Profile Searching", The Search Engine Report, Nov. 4, 1998.

S. Chakrabarti, "Mining The Web's Link Structure", Computer (IEEE), Aug. 1999.

Julie Pitta, "!&#$%.com", Forbes, Aug. 23, 1999.

J. Zittrain, "Keyword: Obsolete", Wired, Sep. 1998.

Scot Finnie, "You Can Get Satisfaction: Try IE5", Windows Magazine Online, Jun. 1, 1999, Issue: 1006.

"Internet Explorer 3.0 for Windows 3.1 and NT 3.51: Tips and Tricks", on Microsoft Website, 1997.

"How To Search the Internet from the Address Bar In Internet Explorer", Microsoft Article ID: Q221754, www-.microsoft.com, Jul. 17, 1999.

"Auto Search", from Microsoft Website, Mar. 18, 1999.

"Microsoft and Yahoo! Make Web Searches Easier For Microsoft Internet Explorer 3.0 Users Auto search to Feature Yahoo! Search Capabilities", Microsoft Media Alert, Aug. 13, 1996.

Ask Jeeves sample query, from www.askjeeves.com, Dec. 1999.

Ralph Swich et al., "Resource Description Framework (RDF)" and "Frequently Asked Questions about RDF", W3C Technology and Society Domain, printed Sep. 30, 1998 from http://www.w3.org/RDF and http://www.w3.org/RDF/FAQ.

"Why Use Google! Beta" and "Google! Beta Help" from http://www.google.com, 1999.

"What is Ask Jeeves", from http://www.askjeeves.com/docs/about/whatisaksjeeves.html, 1999.

"NBC's Snap.Com and GlobalBrain.Net Unveil Sophisticated New Technology And Services to Harness the Brain Power of Internet Users", http://www.globalbrain.net/html/release.html, Jun. 14, 1999.

GlobalBrain.net, Corporate–Technology, at http://www.globalbrain.net/html/technology.html, 1998–99.

M. MacLachlan, "Keywords Threaten Domain Name System", TechWeb, Nov. 9, 1998.

M. MacLachlan, "Netscape to Release Communicator 4.5 Beta", TechWeb, Jun. 17, 1998.

"Centraal Corporation: Company Background", from http://company.realnames.com/Backgrounder.asp, Mar. 1998.

Amy Dunlop, "Plotting an Internet Address Revolution", Internet World, Mar. 12, 1998.

Alex Lash, "A Simpler Net Address System", CNET NEWS.COM, Mar. 12, 1998.

"Startup Offers Net Addresses Sans Dots, Dashes", Reuters, Mar. 13, 1998, from http://www.zdnet.com/zdnn/content/reut/0312/293902.html.

Chris Sherman, "What's New With Web Search", onlineinc-.com/onlinemag, pp. 27–31.

Jeff Pemberton, "Google Raises the Bar on Search Technology", Organizing the World's Information, onlineinc.com/onlinemag, pp. 43–46.

Greg. R. Notess, "The Never–Ending Quest Search Engine Relevance", May/Jun. 2000, onlineinc.com/onlinemag, pp. 35–38.

Susan Feldman, "Find What I Mean, Not What I Say", May/Jun. 2000, www.onlineinc.com/onlinemag, pp. 49–56.

"Up and Cominyg Search Technologies", May/Jun. 2000, onlineinc.com/onlinemag, pp. 75–77.

"A.COMversation about Internet Search Engines", May 27, 2000, http://www.digitalmass.com/news/packages/click/roundtable1.html.

Shumeet Baluja, Vibhu Mittal, Rahul Sukthankar, "High Performance Named–Entity Extraction", http://www.ph.tn-.tudelft.nl/PRInfo/reports/msg00431.html, Jun. 29, 1999, (abstract).

Boris Chidlovskii et al., "Collaborative Re–Ranking of Search Results", AAAI–2000 Workshop on AI for Web Search, Online, Jul. 30, 2000, XP002250910.

Alton–Scheidl R. et al., "Select: Social and Collaborative Filtering of Web Documents and News", Proceedings of the 5th ERCIM workshop on user interfaces for all: user–tailored information environments, Online, Nov. 28, 1999–Dec. 1, 1999, XP002250911.

Andreas Paepcke et al., "Beyond Documents Similarity: Understanding Value–Based Search and Browsing Technologies", Sigmond Record, ACM, USA, Online, vol. 29, No. 1, Mar. 2000, pp. 80–92, XP002250912.
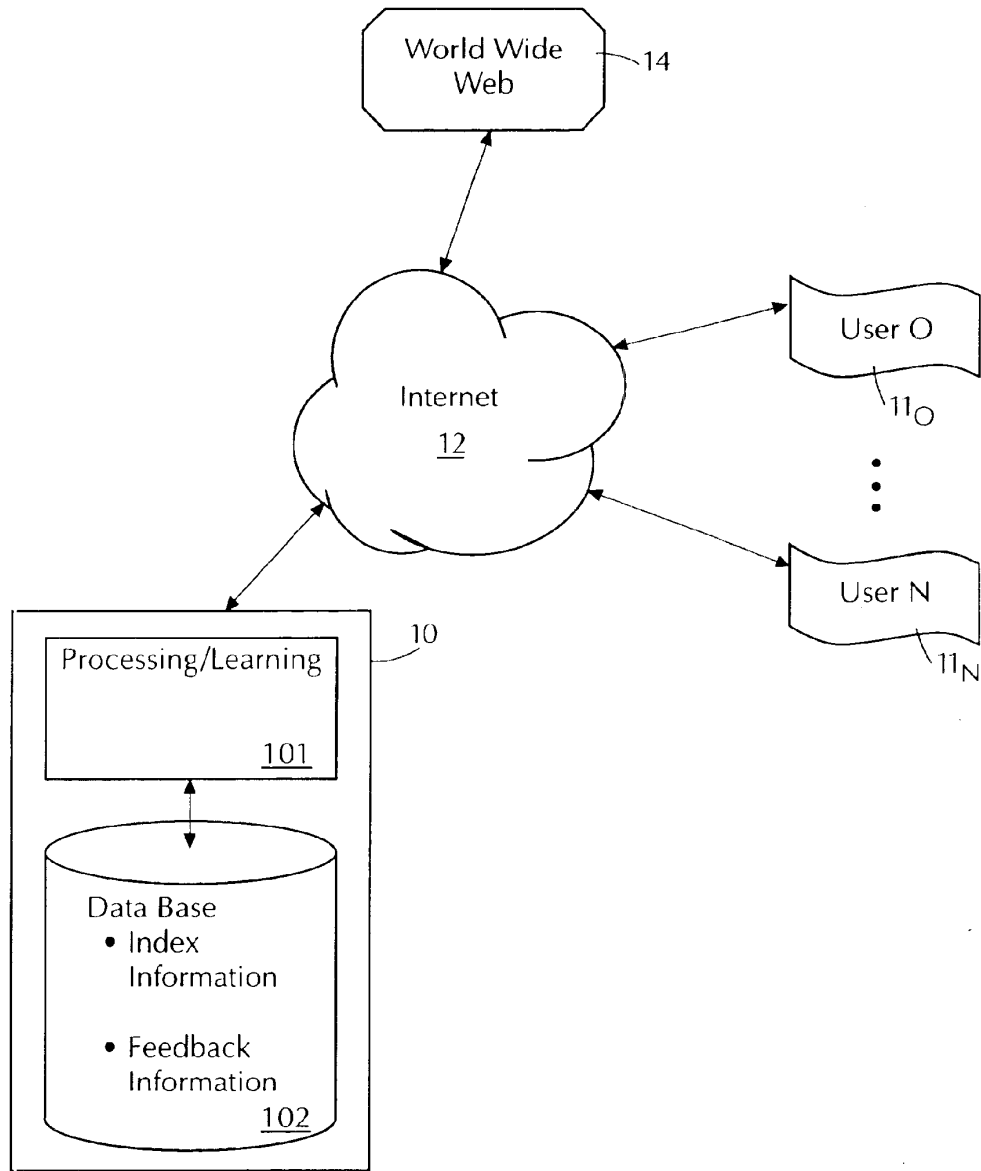
* cited by examiner

FIG. 1A

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