

Exhibit B



US006778193B2

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

(10) **Patent No.:** US 6,778,193 B2
(45) **Date of Patent:** Aug. 17, 2004

(54) **CUSTOMER SELF SERVICE ICONIC INTERFACE FOR PORTAL ENTRY AND SEARCH SPECIFICATION**

(75) Inventors: **Debra L. Biebesheimer**, Carmel, NY (US); **Donn P. Jasura**, Staatsburg, NY (US); **Neal M. Keller**, Somers, NY (US); **Daniel A. Oblinger**, New York, NY (US); **Mark E. Podlaseck**, New Preston, CT (US); **Stephen J. Rolando**, Katonah, NY (US)

(73) Assignee: **International Business Machines Corporation**, Armonk, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 625 days.

(21) Appl. No.: **09/778,136**

(22) Filed: **Feb. 7, 2001**

(65) **Prior Publication Data**

US 2002/0149614 A1 Oct. 17, 2002

(51) **Int. Cl.⁷** **G06F 15/00**

(52) **U.S. Cl.** **345/805; 345/854**

(58) **Field of Search** 345/853-855, 345/711, 802, 803, 804, 805, 799, 800, 801, 795-797, 738, 734-737, 771-773, 811, 815-818; 707/1, 10, 11, 5, 3; 706/60, 11, 47, 45

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,021,953 A	6/1991	Webber et al.
5,237,499 A	8/1993	Garback
5,303,361 A	4/1994	Colwell et al.
5,321,833 A	6/1994	Chang et al.
5,375,244 A	12/1994	McNair
5,446,891 A	8/1995	Kaplan et al.
5,524,187 A	6/1996	Feiner et al.
5,546,516 A	8/1996	Austel et al.

(List continued on next page.)

OTHER PUBLICATIONS

Mladenic, D, "Text-learning and related intelligent agents: a survey", IEEE Intelligent Systems, IEEE, vol. 14, No. 4, Jul. 1999, pp. 44-54, XP-002205012.

Göker, A, "Capturing Information Need by Learning User Context", 16th International Joint Conference in Artificial Intelligence: Learning About User Workshop, Jul. 31, 1999, pp. 21-27, XP-002205013.

(List continued on next page.)

Primary Examiner—Steven Sax

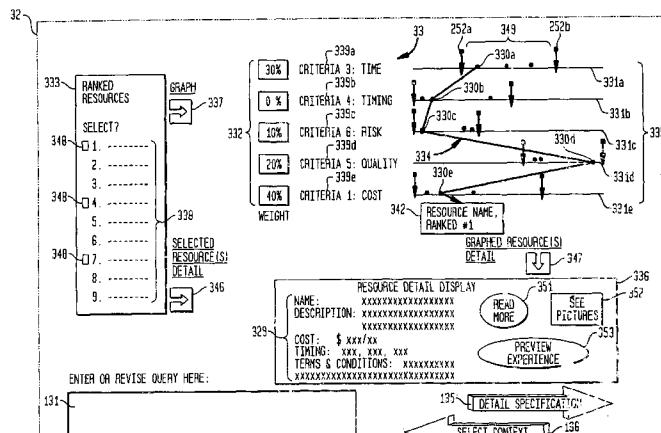
(74) **Attorney, Agent, or Firm—Scully, Scott, Murphy & Presser; Daniel P. Morris, Esq.**

(57)

ABSTRACT

A graphical user interface for a customer self service system that performs resource search and selection. The interface comprises an entry field enabling entry of a query for a resource and selection of one or more user context icons, each representing a context associated with the current user situation, and having context attributes associated therewith; a first visual workspace is provided for visualizing and exploring the set of resources that the customer self service system has determined to match the user's query, the system indicating a degree of fit of the determined resources with the query, based on the user's context, associated resource selection parameters and associated relevant resource evaluation criteria utilized by a search mechanism in the system; and, a second visual workspace including detail specification workspace for enabling user to select and modify user context attribute values and further relevant resource evaluation criteria; and a mechanism for enabling the user to continuously navigate among the first and second visual workspaces to enable increased specificity and accuracy of query's search parameters and resource evaluation criteria and thereby identify and improve selection logic and response sets fitted to a query. The graphical user interface permits user interactivity for querying a customer self service system and enhancing response set results for a variety of self service domains including education, real estate and travel.

17 Claims, 9 Drawing Sheets



US 6,778,193 B2

Page 2

U.S. PATENT DOCUMENTS

5,600,835 A	2/1997	Garland et al.
5,608,899 A	3/1997	Li et al.
5,619,709 A	4/1997	Caid et al.
5,710,899 A	1/1998	Eick
5,724,567 A	3/1998	Rose et al.
5,754,939 A	5/1998	Herz et al.
5,768,578 A	6/1998	Kirk et al.
5,787,422 A	7/1998	Tukey et al.
5,794,178 A	8/1998	Caid et al.
5,802,515 A *	9/1998	Adar et al. 707/5
5,826,260 A	10/1998	Byrd, Jr. et al.
5,841,437 A	11/1998	Fishkin et al.
5,850,531 A	12/1998	Cox et al.
5,918,217 A	6/1999	Maggioncalda et al.
5,930,501 A	7/1999	Neil
5,956,707 A *	9/1999	Chu 707/3
5,958,008 A	9/1999	Pogrebinsky et al.
5,974,412 A	10/1999	Hazlehurst et al.
5,999,192 A	12/1999	Selfridge et al.
5,999,927 A	12/1999	Tukey et al.
6,006,221 A	12/1999	Liddy et al.
6,009,422 A *	12/1999	Ciccarelli 707/4
6,012,053 A *	1/2000	Pant et al. 345/854
6,012,067 A	1/2000	Sarkar
6,014,661 A	1/2000	Ahlberg et al.
6,097,386 A	8/2000	Bardon et al.
6,105,023 A	8/2000	Callan
6,134,541 A	10/2000	Castelli et al.
6,173,287 B1	1/2001	Eberman et al.
6,173,289 B1	1/2001	Sonderegger et al.
6,226,408 B1	5/2001	Sirosh
6,237,006 B1	5/2001	Weinberg et al.
6,243,094 B1	6/2001	Sklar
6,256,633 B1	7/2001	Dharap

6,282,540 B1 *	8/2001	Goldensher et al. 707/6
6,326,962 B1	12/2001	Szabo
6,327,590 B1	12/2001	Chidlovskii et al.
6,347,313 B1	2/2002	Ma et al.
6,442,526 B1	8/2002	Vance et al.
6,470,383 B1	10/2002	Leshem et al.
6,490,577 B1	12/2002	Anwar
6,502,091 B1	12/2002	Chundi et al.
6,513,031 B1 *	1/2003	Fries et al. 707/5
6,519,586 B2 *	2/2003	Anick et al. 707/3
6,578,037 B1	6/2003	Wong et al.
6,594,670 B1	7/2003	Genser
6,601,059 B1 *	7/2003	Fries 707/3
2001/0051958 A1	12/2001	deVries et al.
2002/0129015 A1	9/2002	Caudill et al.
2003/0018632 A1	1/2003	Bays et al.

OTHER PUBLICATIONS

- Anonymous, "Taxonomized Web Search", IBM Technical Disclosure Bulletin, IBM Corp. New York, US, vol. 40, No. 5, May 1, 1997, pp. 195–196, XP-002133594; and.
- Davies, J., et al., "Knowledge Discovery and Delivery", British Telecommunications Engineering, London, GB, vol. 17, No. 1, Apr. 1, 1998, pp. 25–35, XP-000765546.
- Billsus, D., et al., "A learning agent for wireless news access," Proceedings of IUI 2000: International Conference on Intelligent User Interfaces, ACM, Jan. 9–12, 2000, pp. 33–36, XP-002205011.
- Olsen, K., et al., "Visualization of a Document Collection: The Vibe System", Information Processing & Management, Elsevier, Barking, GB, vol. 29, No. 1, 1993, pp. 69–81, XP 000574984.

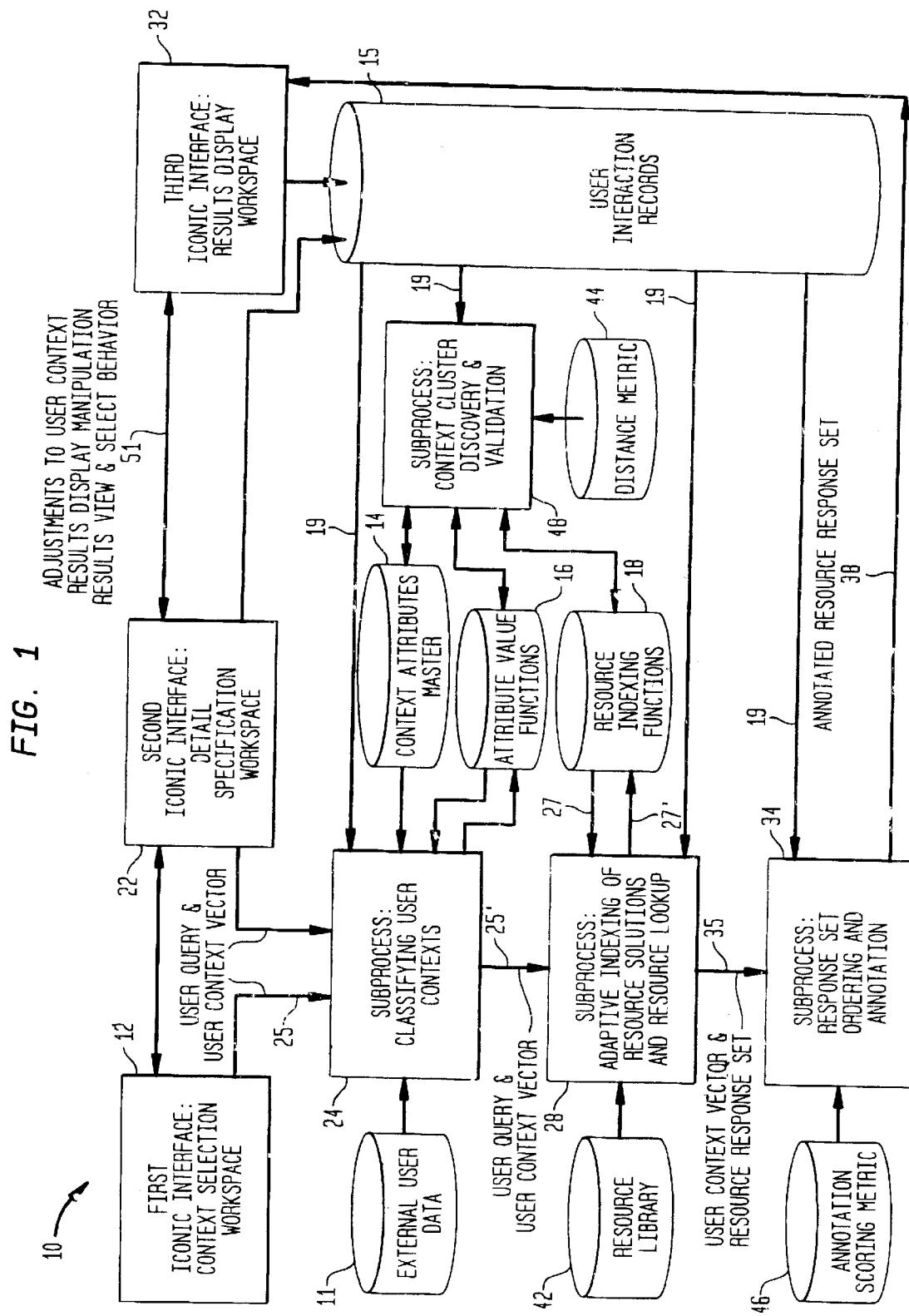
* cited by examiner

U.S. Patent

Aug. 17, 2004

Sheet 1 of 9

US 6,778,193 B2



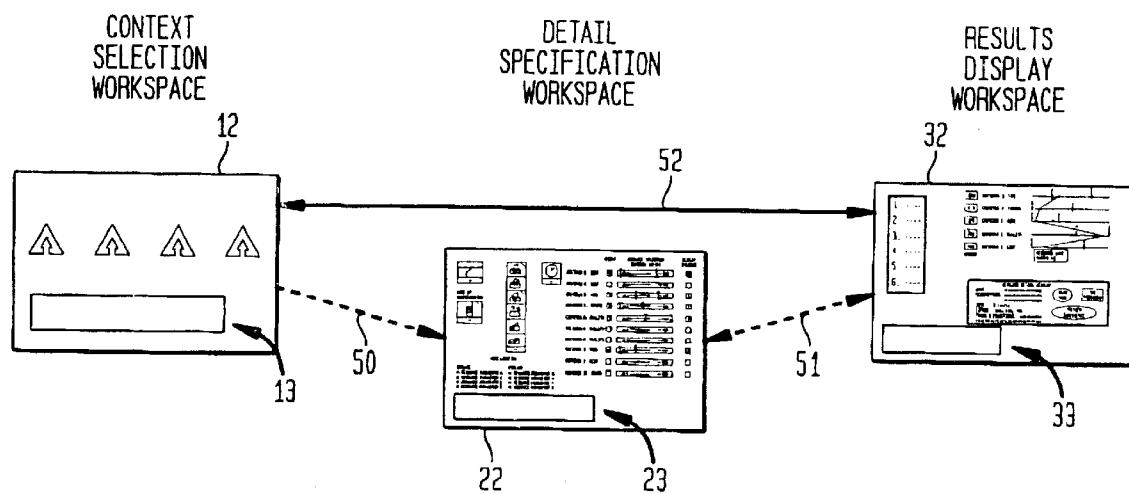
U.S. Patent

Aug. 17, 2004

Sheet 2 of 9

US 6,778,193 B2

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.