



US006754873B1

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

(10) **Patent No.: US 6,754,873 B1**
(45) **Date of Patent: Jun. 22, 2004**

(54) **TECHNIQUES FOR FINDING RELATED HYPERLINKED DOCUMENTS USING LINK-BASED ANALYSIS**

cache:PJIPOZ9wxQsJ:gatekeeper.dec.com/pub/DEC/SRC/publications/monika/sigir98/pdf+lMOVED+Algorithms+for+topic&hl=en&ie=UTF-8.*

(75) **Inventors:** Kin Lun Law, Redwood City, CA (US); Georges R. Harik, Mountain View, CA (US)

Dean & Henzinger, "Finding related pages in the World Wide Web" Mar. 1, 1999, http://216.239.39.104/search?q=cache:fWTL2B22VcEJ:www.unizh.ch/home/mazzo/teports/www8conf/2148/pdf/pd1.pdf+Finding+Related+Pages+in+the+World+Wide+Web&hl=en&ie=UTF-8.*

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

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

Bharat & Henzinger, "Improved Algorithms for Topic Distillation in a Hyperlinked Environment" 1998 http://216.239.37.104/search?q=cache:PJIPOZ9wxQsJ:gatekeeper.dec.com/pub/DEC/SRC/publications/monika/sigir98/pdf+lMOVED+Algorithms+for+topic&hl=en&ie=UTF-8.*

(21) **Appl. No.:** 09/544,733

(22) **Filed:** Apr. 6, 2000

cache:PJIPOZ9wxQsJ:gatekeeper.dec.com/pub/DEC/SRC/publications/monika/sigir98/pdf+lMOVED+Algorithms+for+topic&hl=en&ie=UTF-8.*

Related U.S. Application Data

(60) Provisional application No. 60/155,277, filed on Sep. 20, 1999.

* cited by examiner

(51) **Int. Cl.** G06F 17/00; G06F 17/30

(52) **U.S. Cl.** 715/501.1; 715/514; 715/513; 707/3; 707/4; 707/5

(58) **Field of Search** 715/501.1, 514, 715/513; 707/4, 5, 3

Primary Examiner—Stephen S. Hong

Assistant Examiner—Adam L. Basehoar

(74) *Attorney, Agent, or Firm*—Harrity & Snyder LLP

(57) **ABSTRACT**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,895,470 A	*	4/1999	Pirolli et al.	707/102
6,285,999 B1	*	9/2001	Page	707/5
6,457,028 B1	*	9/2002	Pitkow et al.	715/513
6,591,261 B1	*	7/2003	Arthurs	707/2
6,665,837 B1		12/2003	Dean et al.	715/501.1

OTHER PUBLICATIONS

Bharat & Henzinger, "Improved Algorithms for Topic Distillation in a Hyperlinked Environment" 1998 <http://216.239.37.104/search?q=>

Techniques for finding related hyperlinked documents using link-based analysis are provided. Backlink and forwardlink sets can be utilized to find web pages that are related to a selected web page. The scores for links from web pages that are from the same host and links from web pages with numerous links can be reduced to achieve a better list of related web pages. The list of related web pages can be utilized as a feature to a word-based search engine or an addition to a web browser.

19 Claims, 14 Drawing Sheets

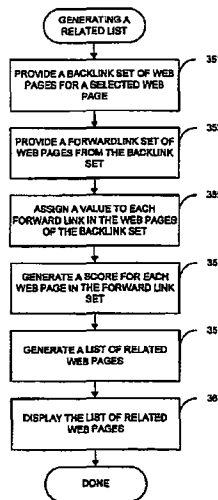


EXHIBIT 2107
Facebook, Inc. et al.
v.

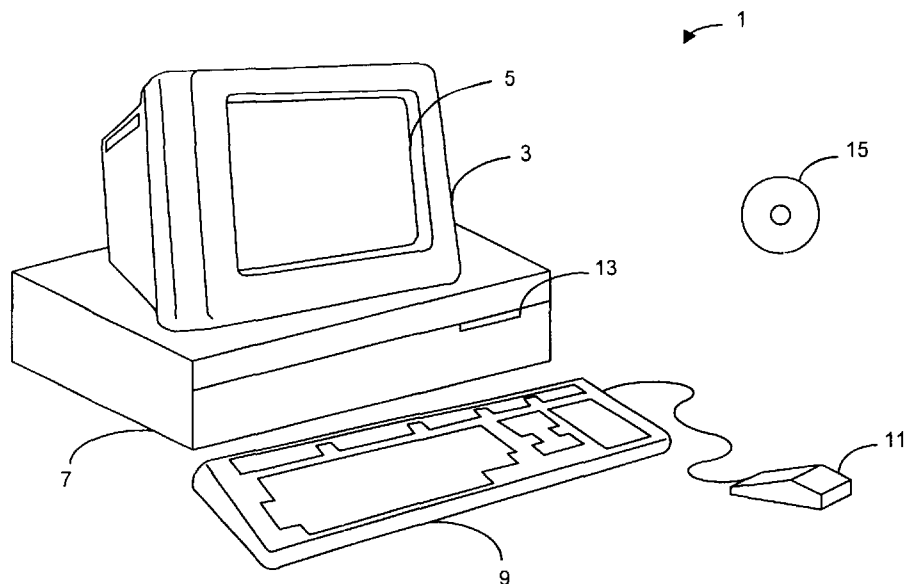


FIG. 1

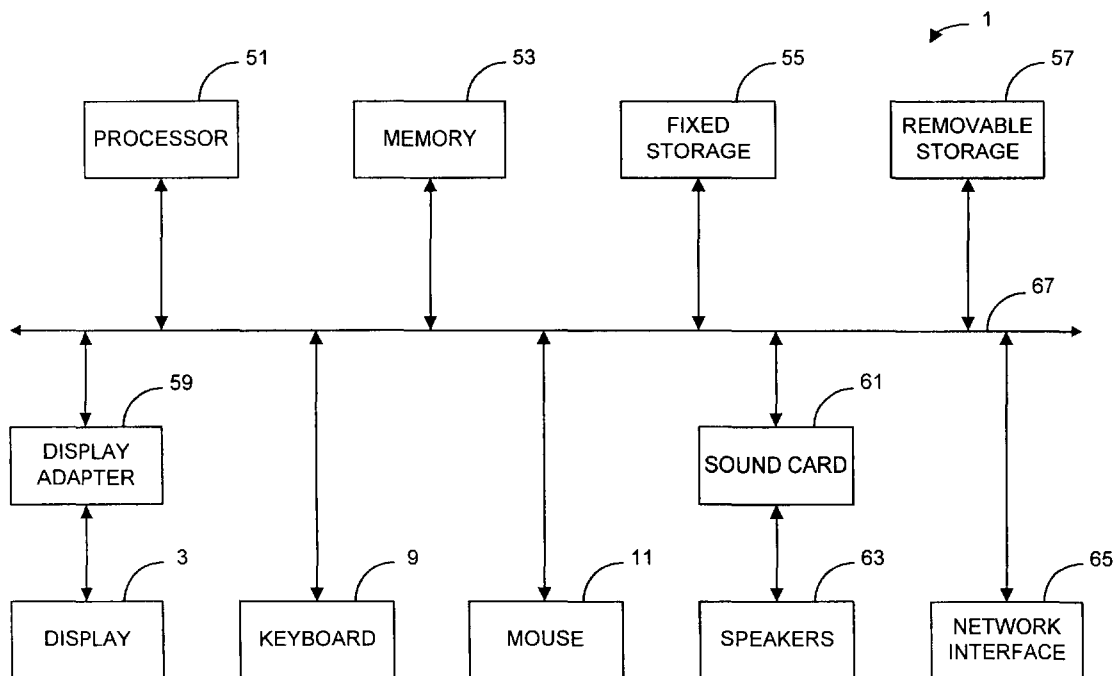


FIG. 2

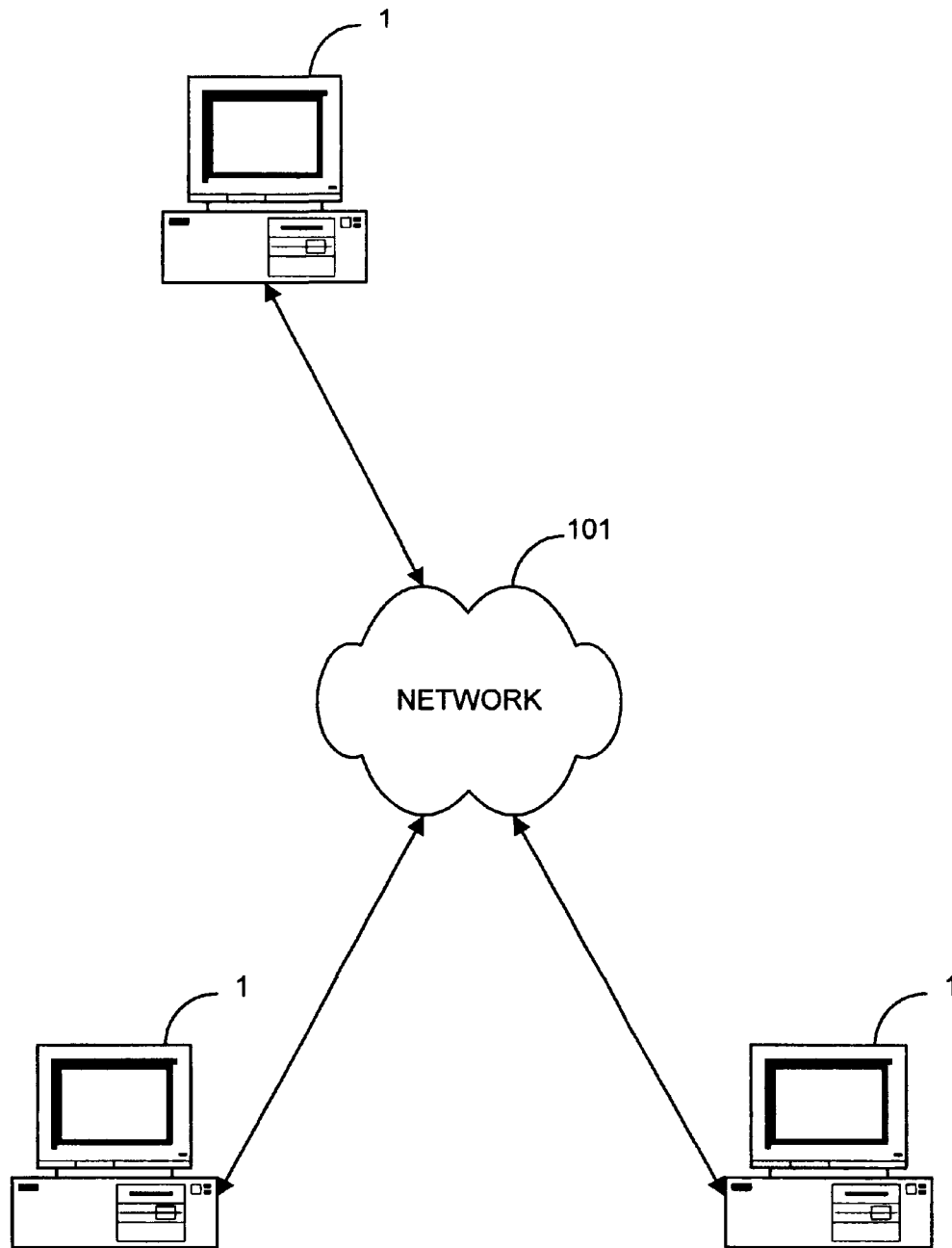


FIG. 3

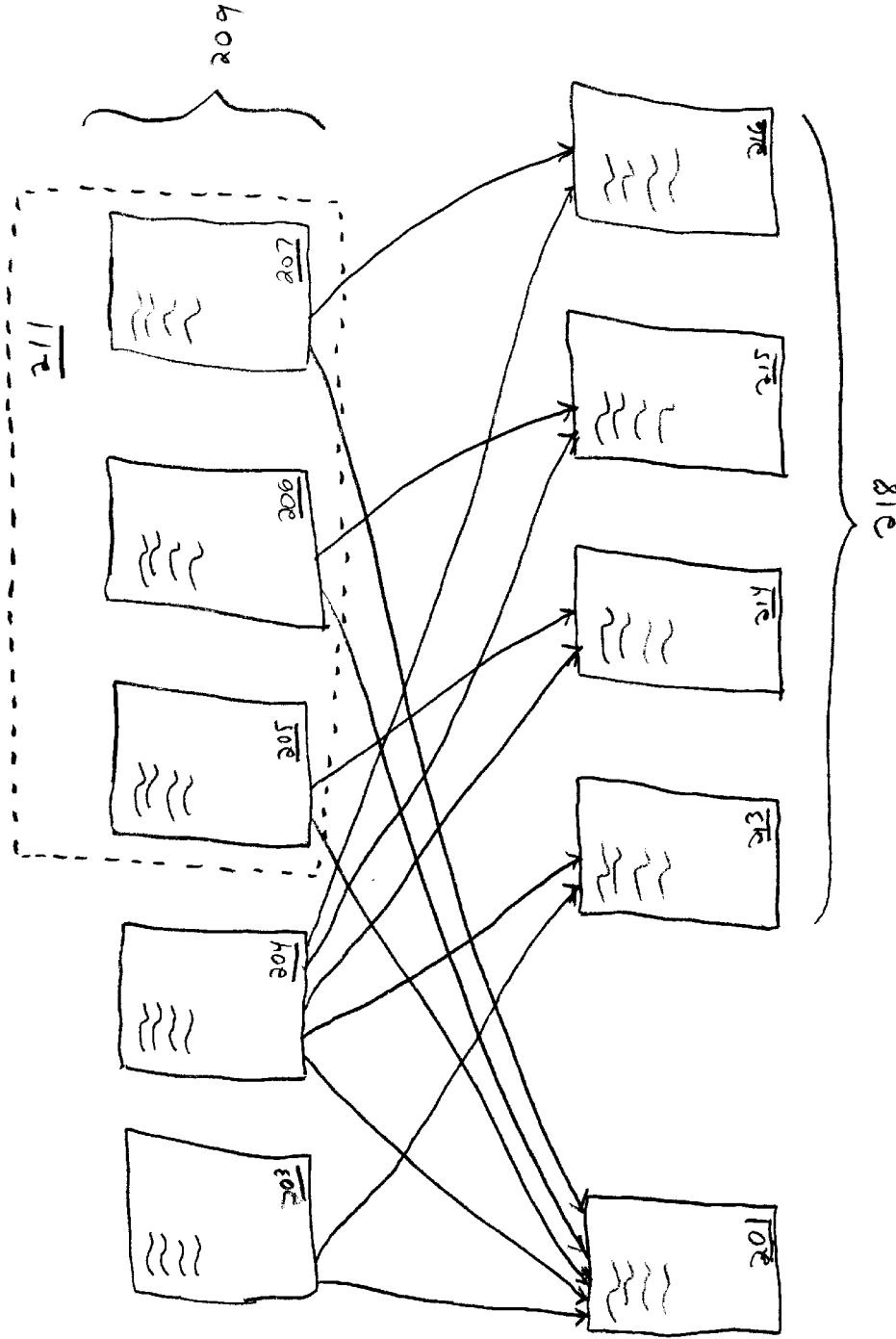


FIG. 4

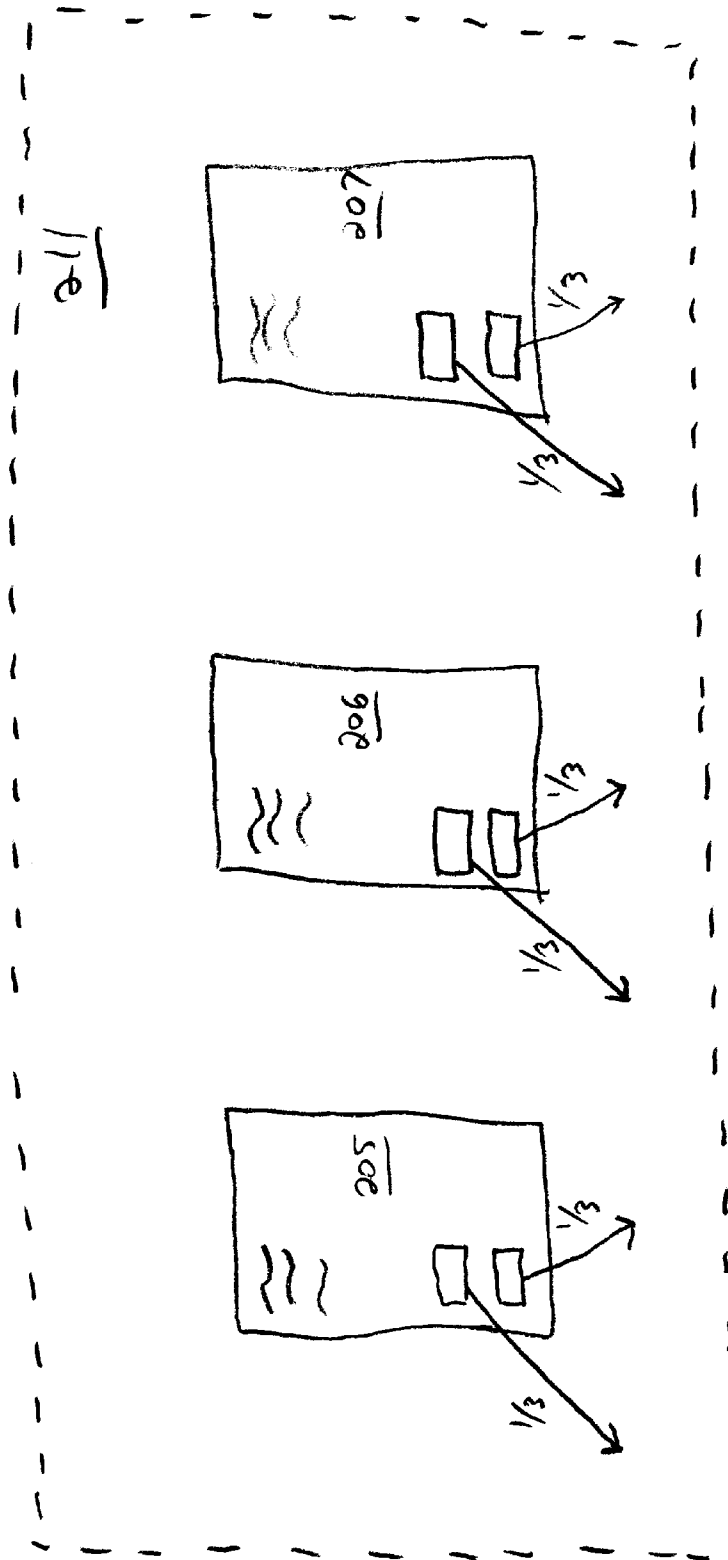


FIG. 5

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.