

US007356575B1

(12) United States Patent Shapiro

(54) SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR REMOTELY DETERMINING THE CONFIGURATION OF A MULTI-MEDIA CONTENT USER

(75) Inventor: Jody Shapiro, San Jose, CA (US)

(73) Assignee: Sony Corporation, Tokyo (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 499 days.

This patent is subject to a terminal dis-

claimer.

(21) Appl. No.: 10/700,409

(22) Filed: Nov. 3, 2003

Related U.S. Application Data

- (63) Continuation-in-part of application No. 09/986,683, filed on Nov. 9, 2001.
- (60) Provisional application No. 60/516,017, filed on Oct. 31, 2003.

(51) **Int. Cl.** *G06F 13/00* (2006.01)

(52) U.S. Cl. 709/220

(58) **Field of Classification Search** None See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

3,394,352 A	7/1968	Wernikoff et al.
3,913,093 A	10/1975	De Vincentiis et al.
5,526,397 A	6/1996	Lohman
5,657,015 A	8/1997	Nakajima et al.

(10) Patent No.: US 7,356,575 B1 (45) Date of Patent: *Apr. 8, 2008

5,796,829 A	9/1009	Newby et al.
, ,		•
5,818,537 A	10/1998	Enokida et al.
5,818,933 A	10/1998	Kambe et al.
5,838,927 A	11/1998	Gillon et al.
5,848,134 A	12/1998	Sekiguchi et al.
5,949,876 A	9/1999	Ginter et al.
5,991,795 A	11/1999	Howard et al.
6,122,290 A	9/2000	Kawamata

(Continued)

FOREIGN PATENT DOCUMENTS

EP 0 727 888 8/1996

(Continued)

OTHER PUBLICATIONS

Rakesh Mohan et al., Content Adaptation Framework: Bringing the Internet to Information Appliances (IBM), Multimedia Services and Technology Issues, Global Telecommunications Conference—Globecom '99, pp. 2015-2021.

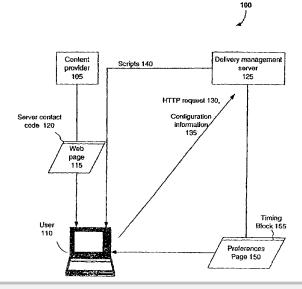
(Continued)

Primary Examiner—Robert B Harrell (74) Attorney, Agent, or Firm—Frommer Lawrence & Haug LLP; William S. Frommer; Thomas F. Presson

(57) ABSTRACT

A method for remotely determining the configuration of a computer of a multimedia content user includes sending player detection code to the user's computer and receiving configuration information regarding the user's computer. A method of determining a connection speed of a computer includes determining a size of a timing block based on an estimated bandwidth and retrieving the timing block. The connection speed is determined based on the timing block size and the times at which transfer begins and ends.

18 Claims, 17 Drawing Sheets





U.S. PATENT DOCUMENTS

6,247,050	B1	6/2001	Tso et al.	
6,594,699	B1 *	7/2003	Sahai et al	709/228

FOREIGN PATENT DOCUMENTS

EP	0 992 922	4/2000
EP	1 026 872	8/2000
EP	1 032 217	8/2000
EP	1 043 655	10/2000
WO	WO 00 72517	11/2000

OTHER PUBLICATIONS

Richard Han et al., Dynamic Adaptation in an Image Transcoding Proxy for Mobile Web Browsing (IBM), IEEE Personal Communications, Dec. 1998, pp. 8-17.

"Broadcast Help," [retrieved Aug. 20, 2002] at http://help.yahoo.com/help/us/bcst/, 2 pages.

"BrowserHawk features and benefits," [retrieved Jan. 23, 2004] at http://www.cyscape.com/products/bhawk/features.asp, 6 pages.
"Yelhad Broadcast." [retrieved Aug. 20, 2003] at http://broadcast.

"Yahoo! Broadcast," [retrieved Aug. 20, 2002] at http://broadcast.yahoo.com/home.html, 3 pages.

"Larry Bouthillier's Streaming Media Player Detection Tutorial—Client-side code," [retrieved Sep. 20, 2002] at http://www.emediacommunications.biz/sm5/sm5_clientcode.html, 4 pages.

"Streaming Media Player/Connection Speed Detection Tutorial," [retrieved Sep. 20, 2002] at http://www.emediacommunications.biz/sm5/index.html, 2 pages.

A flowchart, [retrieved Sep. 20, 2002] at http://www.emediacommunications.biz/sm5/playDetectFlow.gif, 1 page.

A flowchart, [retrieved Sep. 20, 2002] at http://www.emediacommunications.biz/sm5/playerDataObjectUML.gif, 1 page.

Youn J et al: "Video Transcoding for Multiple Clients" Proceedings of the SPIE, SPIE, Bellingham, VA, US, vol. 4067, No. PART 1-3, Jun. 2000, pp. 76-85, XP008012075 ISSN: 0277-786X.

Smith J R et al: "Content-based transcoding of images in the Internet" Image Processing. 1998 ICIP 98. Proceedings. 1998 International Conference on Chicago, IL, USA Oct. 4-7, 1998, Los Alamitos, CA, USA,IEEE Comput. Soc, US, vol. 3, Oct. 4, 1998, pp. 7-11, XP010586855 ISBN: 0-8186-8821-1.

* cited by examiner



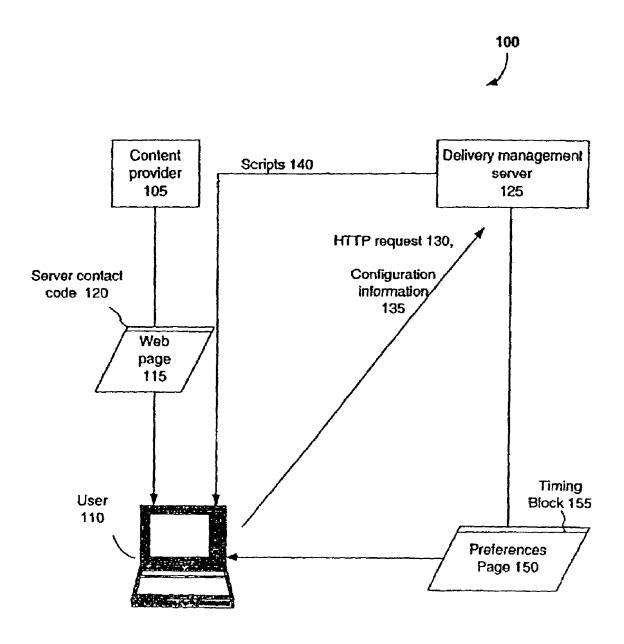
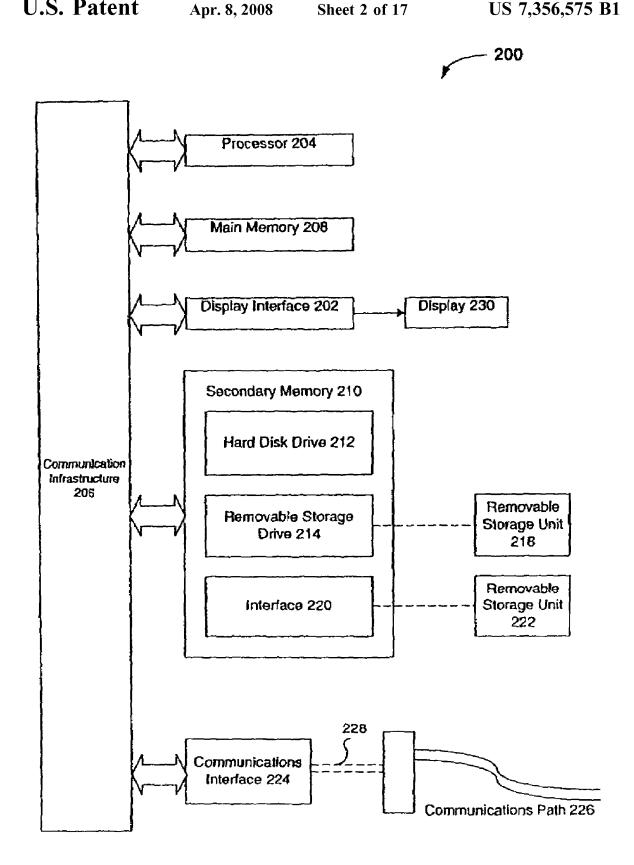


FIG. 1





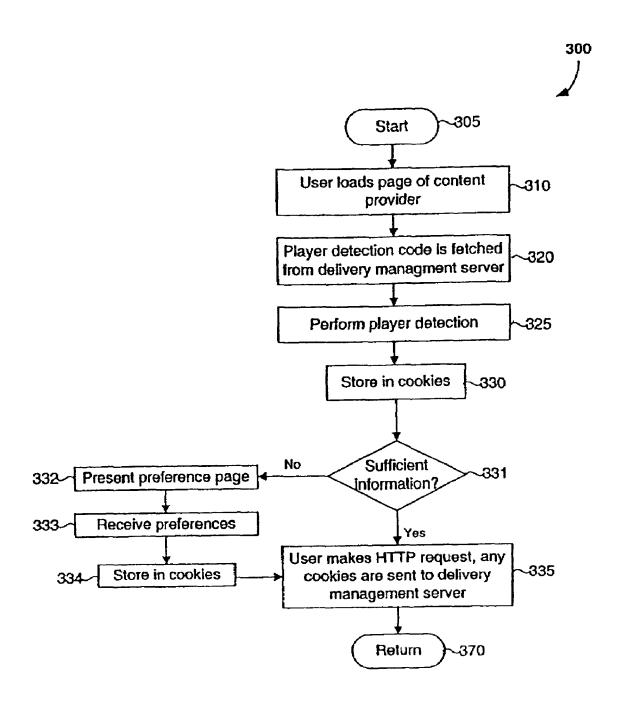


FIG. 3A



DOCKET

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.

