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Shapiro

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(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 disclaimer.

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Related U.S. Application Data

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(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.

- 5,796,829 A 8/1998 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)

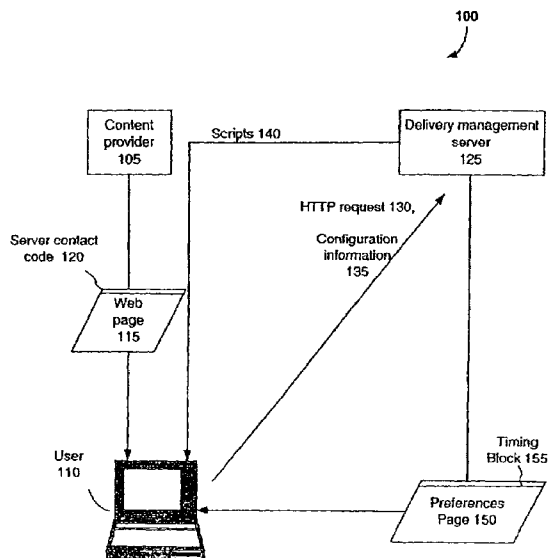
Primary Examiner—Robert B Harrell

(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/bcast/>, 2 pages.
"BrowserHawk features and benefits," [retrieved Jan. 23, 2004] at <http://www.cyscape.com/products/bhawk/features.asp>, 6 pages.
"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.emediacomunications.biz/sm5/sm5_clientcode.html, 4 pages.

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

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

A flowchart, [retrieved Sep. 20, 2002] at <http://www.emediacomunications.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

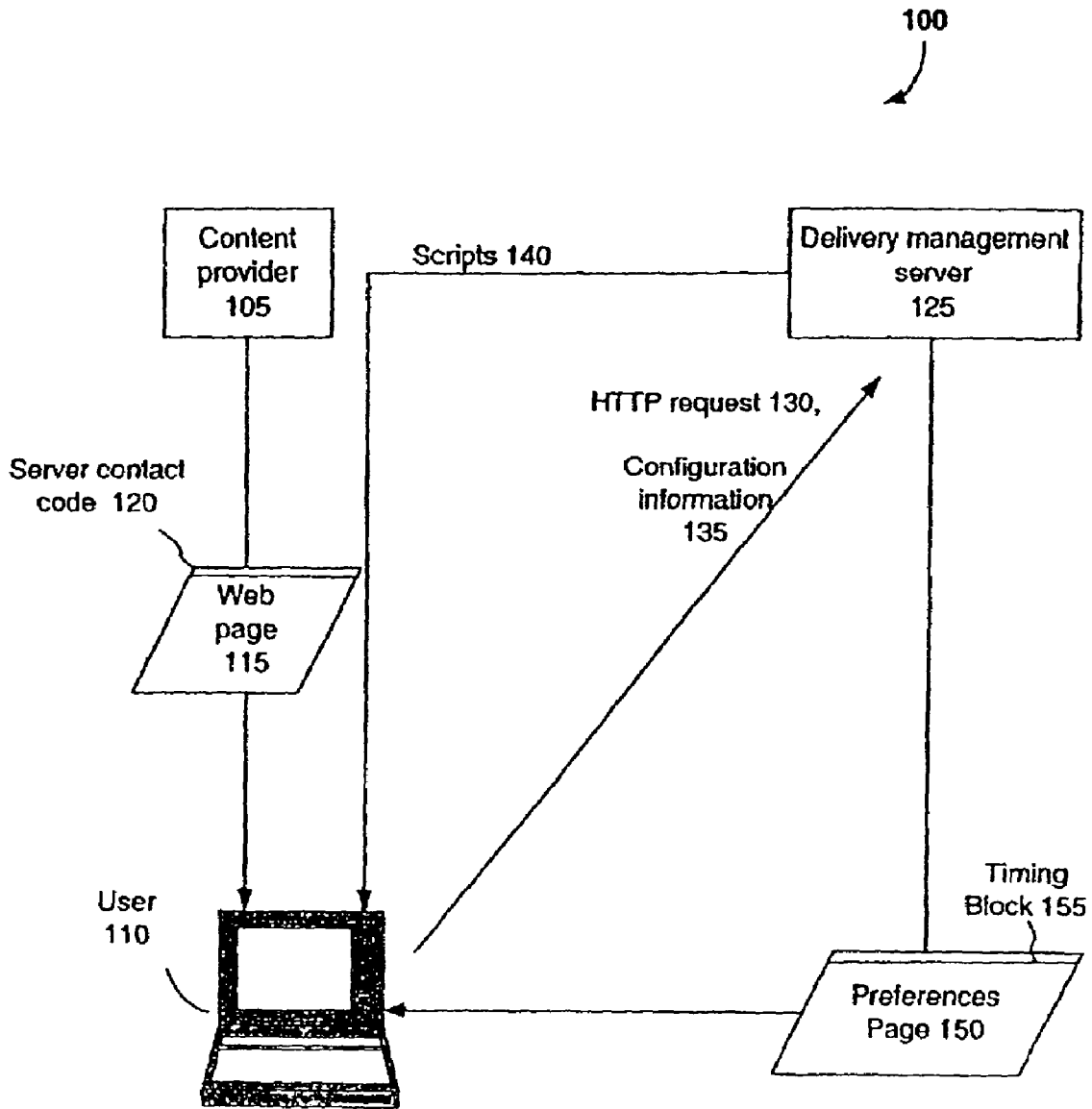


FIG. 1

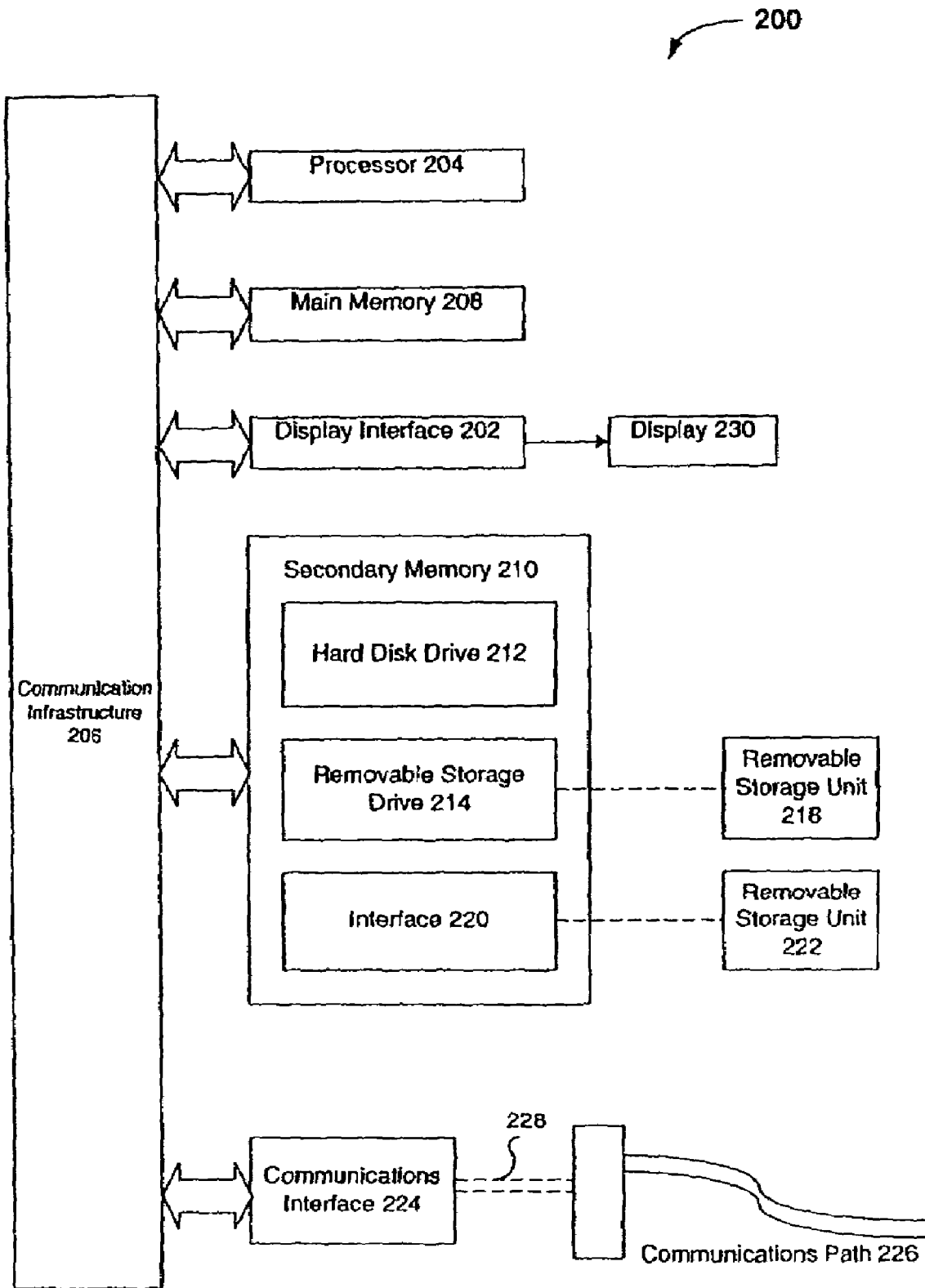


FIG. 2

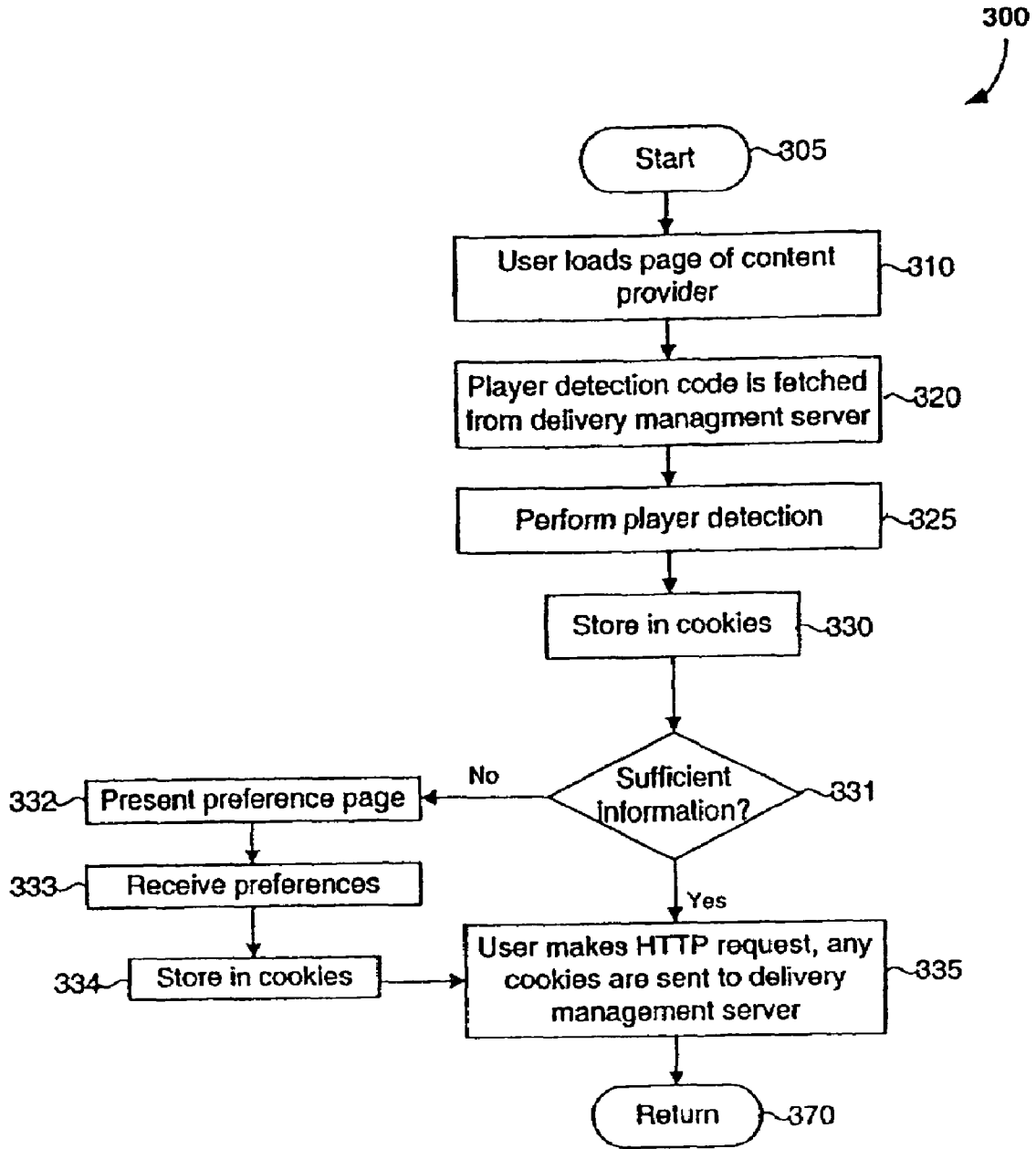


FIG. 3A

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