



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

(10) **Patent No.:** **US 7,668,939 B2**
(45) **Date of Patent:** **Feb. 23, 2010**

(54) **ROUTING OF RESOURCE INFORMATION IN A NETWORK**

(75) Inventors: **Mark J. Encarnacion**, Bellevue, WA (US); **Jason Flaks**, Bellevue, WA (US); **Jai Srinivasan**, Kirkland, WA (US)

(73) Assignee: **Microsoft Corporation**, Redmond, WA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 624 days.

(21) Appl. No.: **10/742,588**

(22) Filed: **Dec. 19, 2003**

(65) **Prior Publication Data**

US 2005/0138193 A1 Jun. 23, 2005

(51) **Int. Cl.**
G06F 15/177 (2006.01)

(52) **U.S. Cl.** **709/220**; 709/221; 709/222; 709/226

(58) **Field of Classification Search** 709/220, 709/226

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,966,135 A	10/1999	Roy et al.
6,084,952 A	7/2000	Beerman, Jr. et al.
6,119,167 A	9/2000	Boyle et al.
6,192,415 B1	2/2001	Haverstock et al.
6,430,624 B1	8/2002	Jamtgaard et al.
6,564,257 B1	5/2003	Emens et al.
6,643,650 B1	11/2003	Slaughter et al.
6,839,748 B1	1/2005	Allavarpu et al.
6,910,068 B2	6/2005	Zintel et al.
6,925,483 B1	8/2005	Niemi

7,120,585 B2	10/2006	Boulanov
7,149,755 B2	12/2006	Obrador
7,599,580 B2	10/2009	King et al.
2002/0027569 A1	3/2002	Manni et al.
2002/0029256 A1*	3/2002	Zintel et al. 709/218
2002/0077988 A1	6/2002	Sasaki et al.
2002/0092019 A1	7/2002	Marcus

(Continued)

FOREIGN PATENT DOCUMENTS

CN 1520659(A) 8/2004

(Continued)

OTHER PUBLICATIONS

Search Report and Written Opinion, PCT/US04/23957, mailed on May 9, 2006.

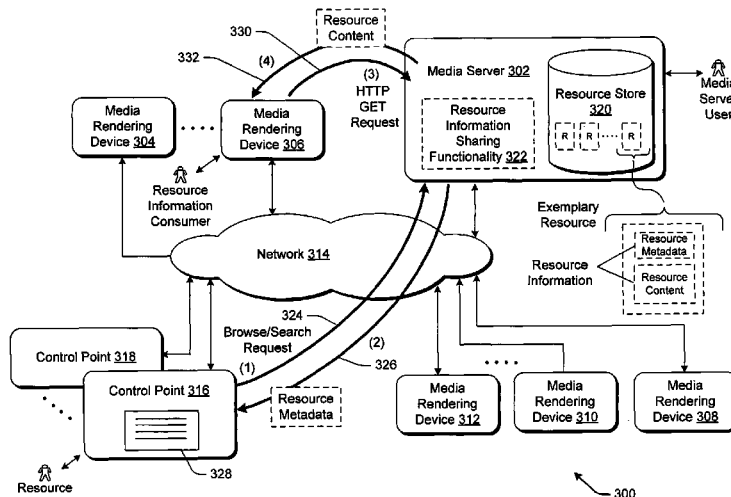
(Continued)

Primary Examiner—William C Vaughn, Jr.
Assistant Examiner—Maceeh Anwari
(74) *Attorney, Agent, or Firm*—Lee & Hayes, PLLC

(57) **ABSTRACT**

A media server in a Universal Plug and Play (UPnP) network includes a resource sharing service to govern the distribution of resource information regarding resources to rendering devices. In one case, the resource sharing service consults a criterion to determine whether an identified network device is authorized to receive resource information. In another case, the resource sharing service consults another criterion to determine whether a specified individual associated with the media server must consent to the transfer of the resource information in order for the transfer to occur. The resource information may include resource metadata that describes high level information regarding resources, as well as resource content. The media server includes various user interface presentations that allow the media server user to specify shared resources and distribution criteria.

103 Claims, 21 Drawing Sheets



U.S. PATENT DOCUMENTS

2002/0120577	A1	8/2002	Hans et al.	
2002/0161755	A1	10/2002	Moriarty	
2002/0161884	A1	10/2002	Munger et al.	
2002/0194604	A1	12/2002	Sanchez et al.	
2003/0097338	A1	5/2003	Mankovich et al.	
2003/0110507	A1	6/2003	Dimitrova et al.	
2003/0117433	A1*	6/2003	Milton et al.	345/738
2003/0135576	A1	7/2003	Bodin	
2003/0163811	A1*	8/2003	Luehrs	725/25
2003/0233471	A1	12/2003	Mitchell et al.	
2004/0143667	A1	7/2004	Jerome	
2004/0148399	A1	7/2004	Fenzia et al.	
2004/0158823	A1	8/2004	Saint-Hilaire et al.	
2004/0172376	A1	9/2004	Kobori et al.	
2004/0220926	A1*	11/2004	Lamkin et al.	707/3
2004/0243700	A1	12/2004	Weast	
2005/0044197	A1	2/2005	Lai	
2005/0058066	A1	3/2005	Sung	
2005/0091268	A1	4/2005	Meyer et al.	
2005/0125564	A1	6/2005	Bushmitch	
2005/0138137	A1	6/2005	Encarnacion et al.	
2005/0138179	A1	6/2005	Encarnacion et al.	
2005/0138192	A1	6/2005	Encarnacion et al.	
2005/0138193	A1	9/2005	Encarnacion et al.	
2005/0160458	A1	7/2005	Baumgartner	
2005/0166231	A1	7/2005	Terakado et al.	
2005/0188092	A1	8/2005	Short et al.	
2005/0198493	A1	9/2005	Bartas	
2005/0220139	A1	10/2005	Aholainen	
2005/0254524	A1	11/2005	An	
2006/0168225	A1	7/2006	Gunning et al.	
2007/0088832	A1	4/2007	Tsang et al.	
2007/0107016	A1	5/2007	Angel et al.	
2007/0156726	A1	7/2007	Levy	
2008/0077501	A1	3/2008	Kamei et al.	
2008/0090513	A1	4/2008	Collins et al.	

FOREIGN PATENT DOCUMENTS

CN	1600002(A)	3/2005
JP	2003256260	9/2003
WO	WO03098446	A1 11/2003

OTHER PUBLICATIONS

"TwonkyMedia—Features," available at <<<http://www.twonkyvision.de/UPnP/>>>, accessed on Nov. 8, 2005, 2 pages.

"RomPager Product Family," available at <<<http://www.allegrosoft.com/products.html>>>, accessed on Nov. 8, 2005, 2 pages.

"SimpleWare Media Server," available at <<<http://www.simpledevices.com/mediaserver.shtml>>>, accessed on Nov. 8, 2005, 2 pages.

"SoftPedia, Nero MediaHome," available at <<<http://www.softpedia.com/get/Internet/File-Sharing/Nero-MediaHome.shtml>>>, accessed on Nov. 8, 2005, 3 pages.

U.S. Appl. No. 11/192,510, entitled, "Strategies for Queuing Events for Subsequent Processing," filed on Jul. 29, 2005, naming the inventors of James H. Dooley, Jason S. Flaks, Mukul Gupta, Sean D. Kelly, and Charles Alan Ludwig.

Steinfeld, Edward F., "Devices that play together, work together," EDN, Sep. 13, 2001, pp. 65-70.

Steinfeld, Edward F., "Knock! Knock! 'Who's There?': Using UPnP to Respond to Inquiries," Circuit Cellular Online, May 2001, pp. 1-5.

Bell, Gordon et al., "A Call for the Home Media Network," Communications of the ACM, vol. 45, No. 7, Jul. 2002, pp. 71-75.

Universal plug and Play Device Architecture: Version 1.0, Microsoft Corporation, Jun. 8, 2000, available at <http://www.upnp.org/download/UPnPDA10_20000613.htm>, 52 pages.

"Understanding Universal Plug and Play," Jun. 2000, Microsoft Corporation, available at <http://www.upnp.org/download/UPNP_UnderstandingUPNP.doc>, 39 pages.

"MediaRenderer:I Device Template Version 1.01," Microsoft Corporation, Jun. 25, 2002, available at <<http://www.upnp.org/download/MediaRenderer%201.0.pdf>>, 11 pages.

"UPnP AV Architecture:083," Microsoft Corporation, Jun. 12, 2002, available at <<http://www.upnp.org/download/UPnP AV Architecture%200.83.prtad.pdf>>, 22 pages..

"ConnectionManager:I Service Template Version 1.01," Microsoft Corporation, Jun. 25, 2002, available at <<http://www.upnp.org/download/ConnectionManager%201.0.pdf>>, 25 pages.

"ContentDirectory:I Service Template Version 1.01," Microsoft Corporation, Jun. 25, 2002, available at <<http://www.upnp.org/download/ContentDirectory%201.0.prtad.pdf>>, 89 pages.

MSDN Library introductory page entitled "UPnP Framework," Microsoft Corporation, accessed on Oct. 19, 2003, available at <http://msdn.microsoft.com/library/default.asp?url=/library/en-us/wceupnps/html/_wcecomm_win32_UPnP_Framework.asp>, 1 page.

MSDN Library entry entitled "Fast User Switching," Microsoft Corporation, accessed on Oct. 30, 2003, available at <http://msdn.microsoft.com/library/default.asp?url=/library/en-us/directx9_c/directx/play/understand/voice/usersswitching.asp>, 1 page.

MSDN Library entry entitled "The LocalSystem Account," Microsoft Corporation, accessed on Feb. 6, 2004, available at <http://msdn.microsoft.com/library/default.asp?url=/library/en-us/ad/ad/the_localsystem_account.asp>, 1 page.

MSDN Library entry entitled "The LocalService Account," Microsoft Corporation, accessed on Oct. 30, 2003, available at <http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dlproc/base/localservice_account.asp>, 2 pages.

"DeviceSecurity:1 Service Template, For UPnP Device Architecture 1.0" Retrieved from the internet <<http://www.upnp.org/standardizeddcp/docs/DeviceSecurity_1.0cc_001.pdf>> on Nov. 17, 2003.

Fuchs, A. et al., "End to End Content Delivery using UPnP and WiFi Networking", Future Generation Software Architectures in the Automotive Domain - Draft Paper, Connected Services in Mobile Networks - San Diego, CA, USA, Jan. 10-12, 2004.

* cited by examiner

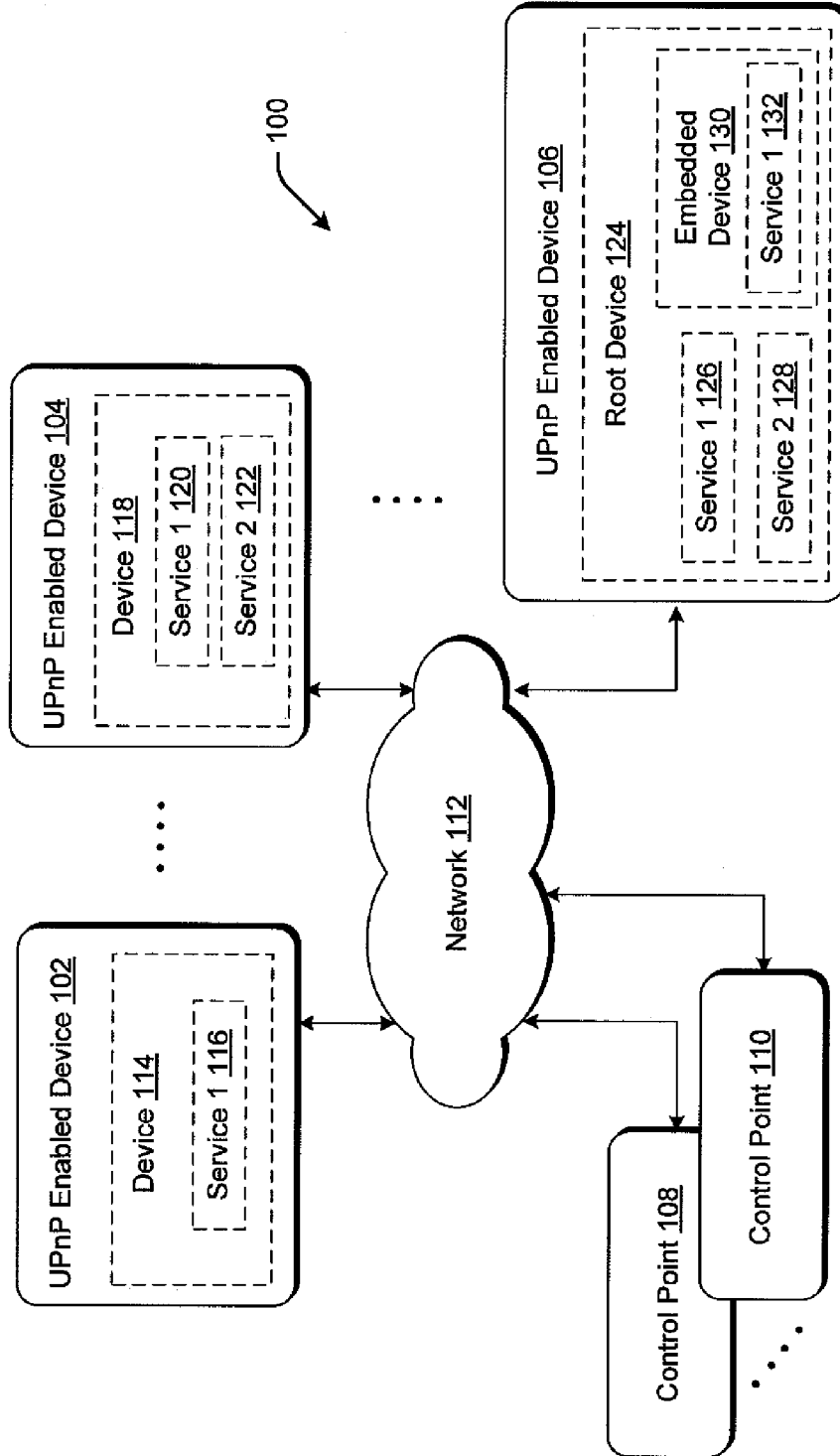


Fig. 1 (Prior Art)

Control <u>208</u>	Eventing <u>210</u>	Presentation <u>212</u>
Description <u>206</u>		
Discovery <u>204</u>		
Addressing <u>202</u>		

Fig. 2 (Prior Art)

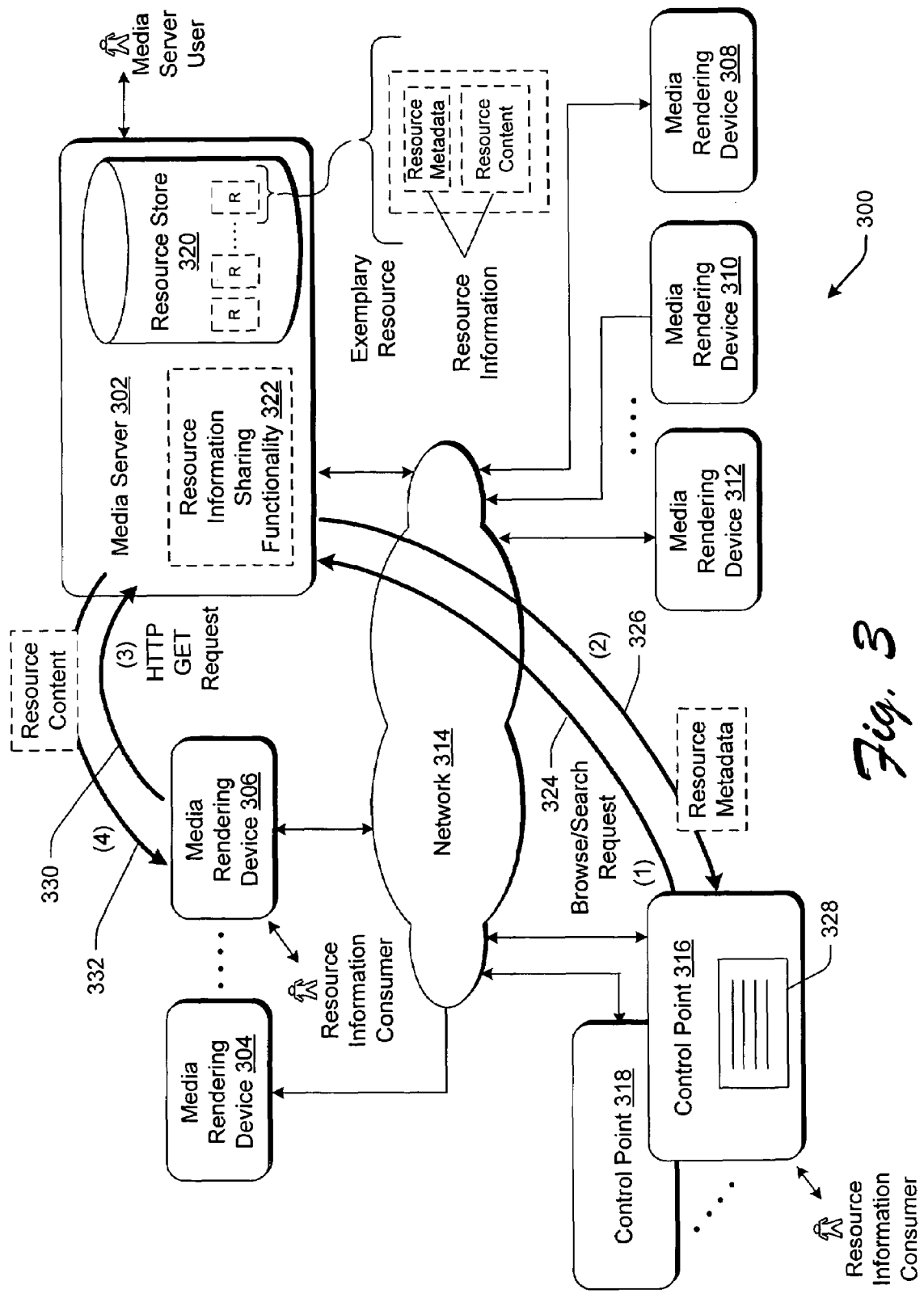


Fig. 3

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.