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

(10) Patent No.: **US 7,945,860 B2**
(45) Date of Patent: **May 17, 2011**

(54) **SYSTEMS AND METHODS FOR MANAGING CONVERSATIONS BETWEEN INFORMATION TECHNOLOGY RESOURCES**

(75) Inventors: **Guillaume N. Vambenepe**, Mountain View, CA (US); **Nicolas Catania**, Palo Alto, CA (US); **Bryan P. Murray**, Duvall, WA (US); **M. Homayoun Pourheidari**, Mountain View, CA (US)

(73) Assignee: **Hewlett-Packard Development Company, L.P.**, Houston, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 2732 days.

(21) Appl. No.: **10/438,576**

(22) Filed: **May 14, 2003**

(65) **Prior Publication Data**

US 2004/0230650 A1 Nov. 18, 2004

(51) **Int. Cl.**
G06F 3/048 (2006.01)
(52) **U.S. Cl.** **715/744**
(58) **Field of Classification Search** .... 709/223, 709/224, 204; 707/10, 103 R; 705/7; 719/328; 717/101; 715/744, 735, 765
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

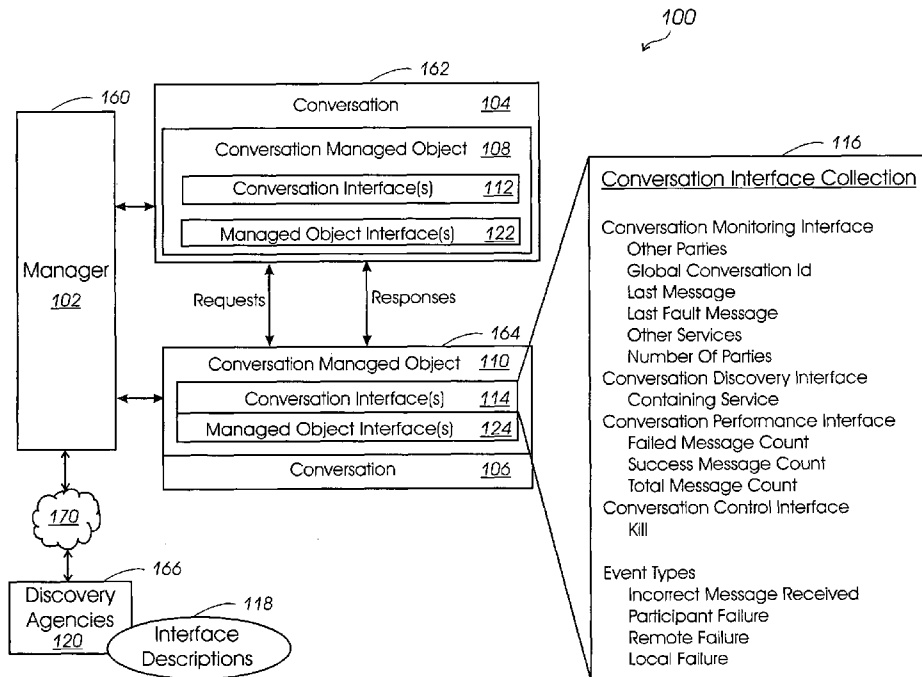|				
6,434,568	B1 *	8/2002	Bowman-Amuah	707/103 R
7,020,697	B1 *	3/2006	Goodman et al.	709/223
2003/0126136	A1 *	7/2003	Omoigui	707/10
2004/0064351	A1 *	4/2004	Mikurak	705/7
2004/0103186	A1 *	5/2004	Casati et al.	709/224
2004/0230650	A1 *	11/2004	Vambenepe et al.	709/204
2004/0230943	A1 *	11/2004	Pourheidari et al.	717/101
2004/0237094	A1 *	11/2004	Vambenepe et al.	719/328

* cited by examiner

Primary Examiner — Le Luu

(57) **ABSTRACT**

A system for managing a conversation includes one or more interfaces configured to provide management information about the conversation to a manager. The interface can be configured to provide information regarding a resource such as a Web service that contains the conversation. Information regarding the conversation that may be made available to the manager includes the number of failed messages processed by the conversation; the number of successful messages processed by the conversation; the total number of messages processed by the conversation; the number of other resources participating in the conversation; the identity of other resources participating in the conversation; an identifier of the conversation; the last message received; the last fault message received; and an identifier of the resource that contains the conversation.

35 Claims, 4 Drawing Sheets

100

160

162

Conversation 104

Conversation Managed Object 108

Conversation Interface(s) 112

Managed Object Interface(s) 122

Responses

Requests

164

Conversation Managed Object 110

Conversation Interface(s) 114

Managed Object Interface(s) 124

Conversation 106

Manager 102

170

166

Discovery Agencies 120

Interface Descriptions

118

116

Conversation Interface Collection

Conversation Monitoring Interface
Other Parties
Global Conversation Id
Last Message
Last Fault Message
Other Services
Number Of Parties
Conversation Discovery Interface
Containing Service
Conversation Performance Interface
Failed Message Count
Success Message Count
Total Message Count
Conversation Control Interface
Kill

Event Types
Incorrect Message Received
Participant Failure
Remote Failure
Local Failure

FIG. 1A

_152_

Managed Object Interface Collection

Types   Events
  Notification   RelationshipsChanged
  Relationship   Status Values
  Managed Object   Operational
  FaultDetail   Failed
  Error   Inactive
                    Unknown

Managed Object Identity Interface
  ManagementUri
Managed Object Configuration Interface
  Name   Resource Version
  Type   ManagedObjectVersion
  Description   CreatedOn
  Owner   SupportedEventTypes
  Vendor   SupportedRelations
Managed Object Monitoring Interface
  Status
Managed Object Discovery Interface
  Relationships
  GetSpecificRelationships
Managed Object Control Interface
  Status
  Name
Managed Object Collection Interface
  Get
  Set
  Perform
  Members
Event Push Interface
  Push Subscribe
  Push Cancel Subscription
EventPull Interface
  Pull Subscribe
  Pull Cancel Subscription
  Get Events Since ID
  Get Events Since Date
  Get Events Range By Date
Event Callback Interface
  Notify

_168_

Managed Object _148_

Managed Object
Interfaces
_150_

_160_

Manager
_102_

_170_

_166_

Discovery
Agencies
_120_

_118_

Interface
Descriptions

FIG. 1B

200

Client
202

Online Store   206

Authentication
Service
208

On Line
Ordering
Service
204

Payment Processor 212

Billing
Service
210

conversation 214
add to cart

conversation 216
charge
authorization

Manager   102

170

Discovery
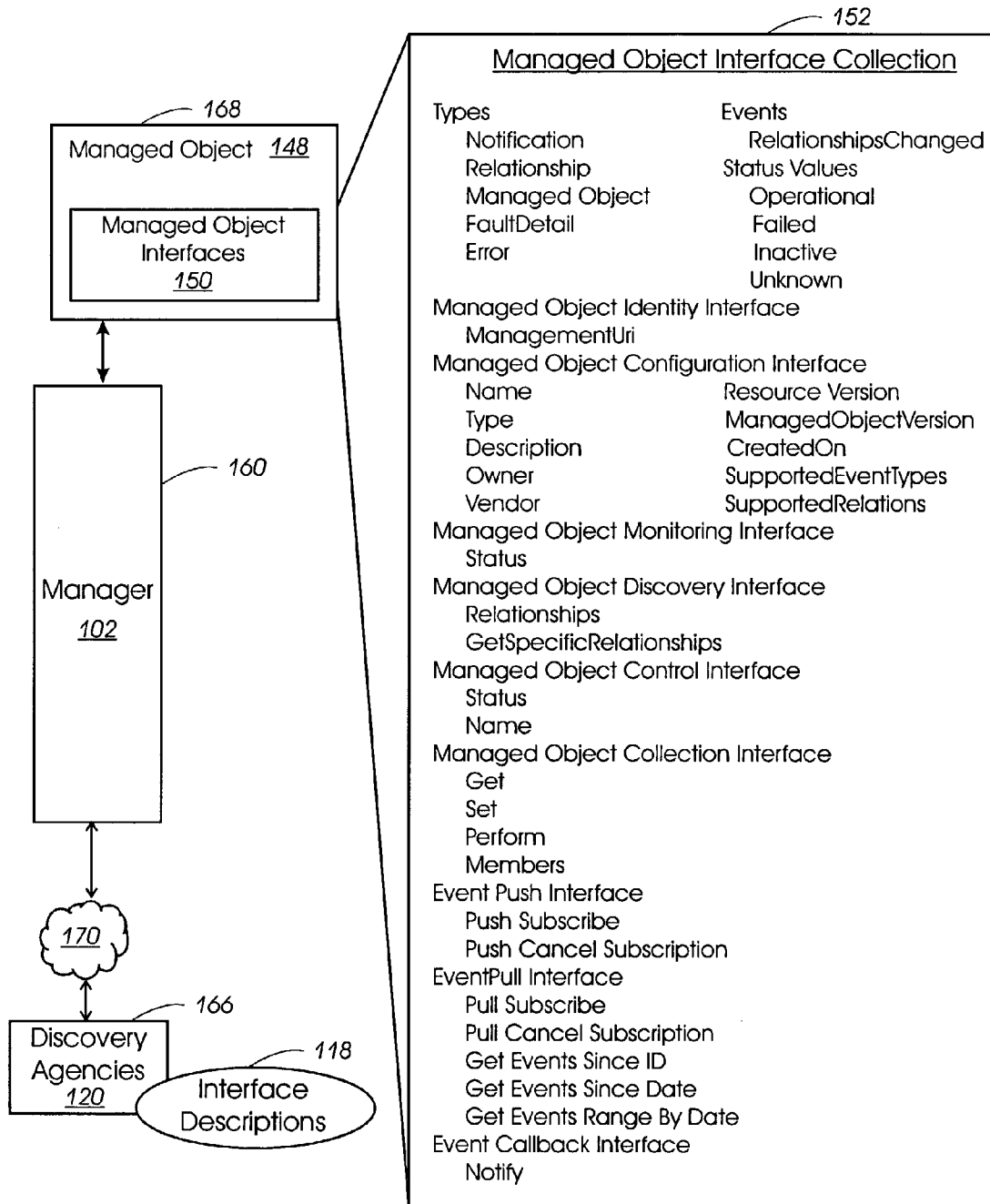Agencies
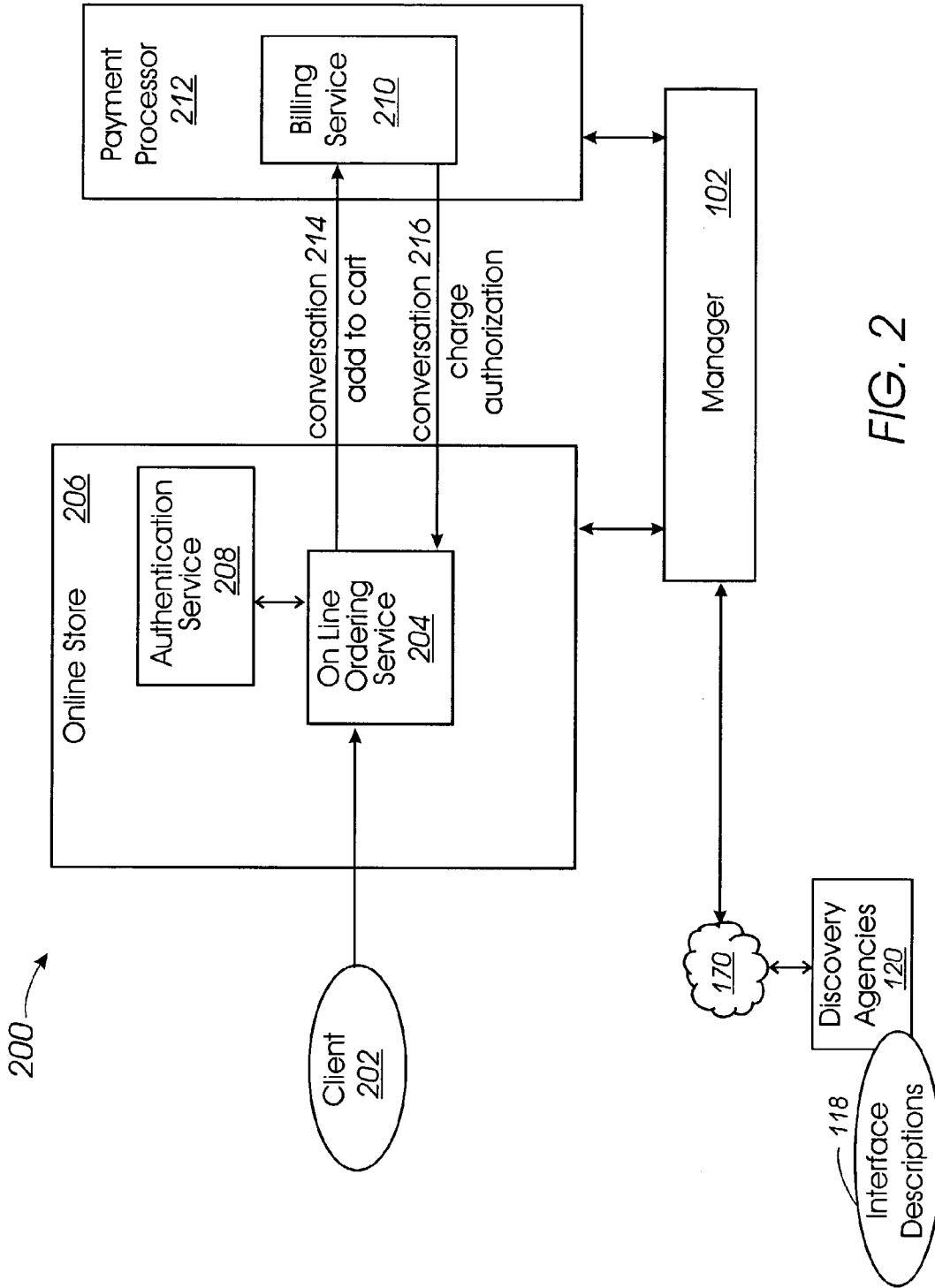120
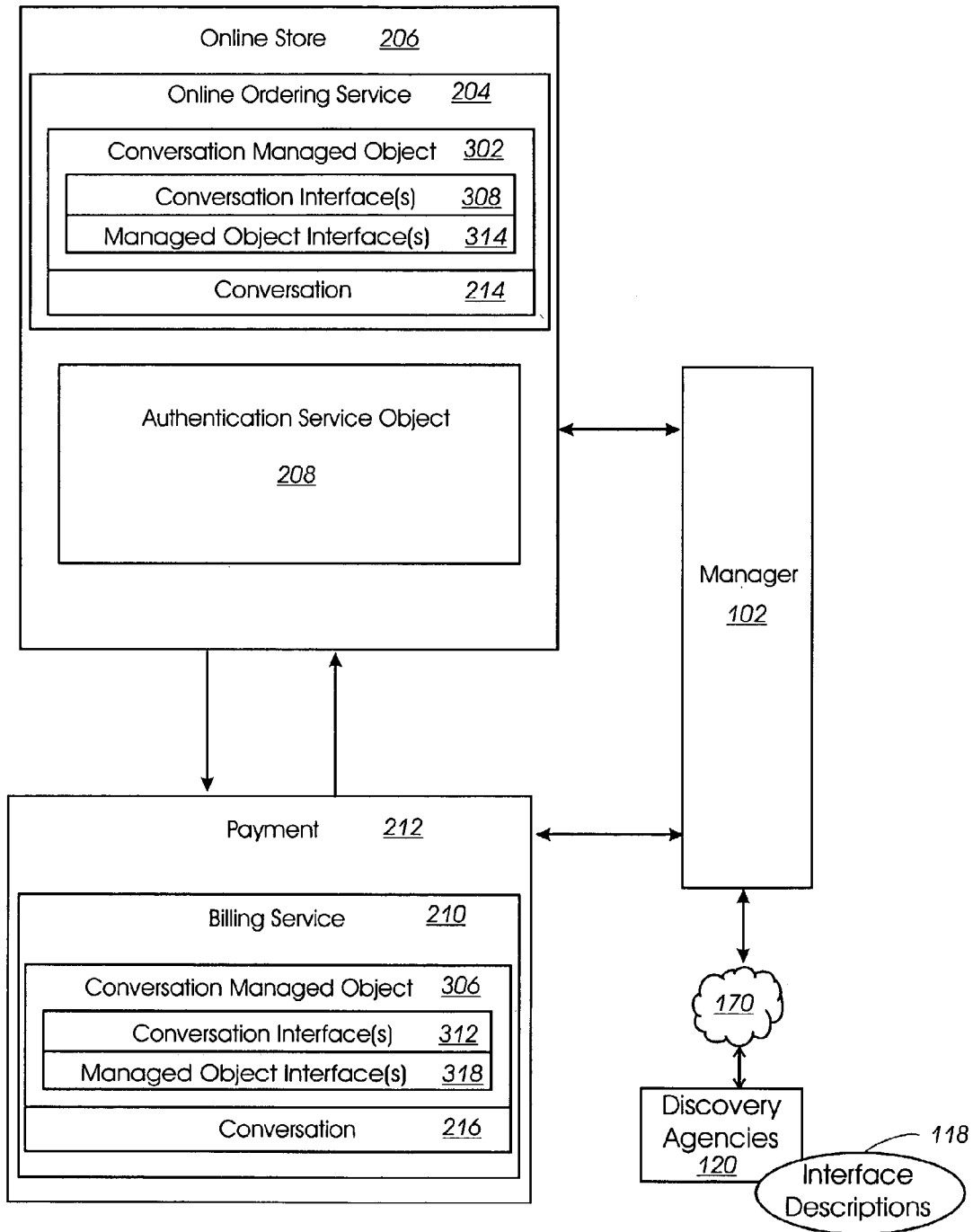
118

Interface
Descriptions

FIG. 2

FIG. 3

DOCKET ALARM

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.