

EXHIBIT 5



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

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(45) **Date of Patent:** **Mar. 11, 2014**

(54) **SYSTEM, METHOD, AND APPARATUS FOR
POLICY-BASED DATA MANAGEMENT**

(56) **References Cited**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 2908 days.

(57) **ABSTRACT**

A policy-based data management system, method, and apparatus are disclosed. The system, method, and apparatus are configured to operate over a distributed storage system such as a storage area network (SAN). Files to be stored on the network are each assigned a service class and a storage pool based on the application of policies to file attributes such as file name, type, user, etc. The service class and storage pool designations are stored as metadata. Files may be retrieved using the metadata to identify the storage pool where the file is stored, and the service class listed within the metadata may be used to control the manner in which the file is handled. A metadata server may be utilized to provide the appropriate service class of files in response to requests from remote clients that may be of different computing platforms.

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(22) Filed: **Mar. 14, 2003**

(65) **Prior Publication Data**

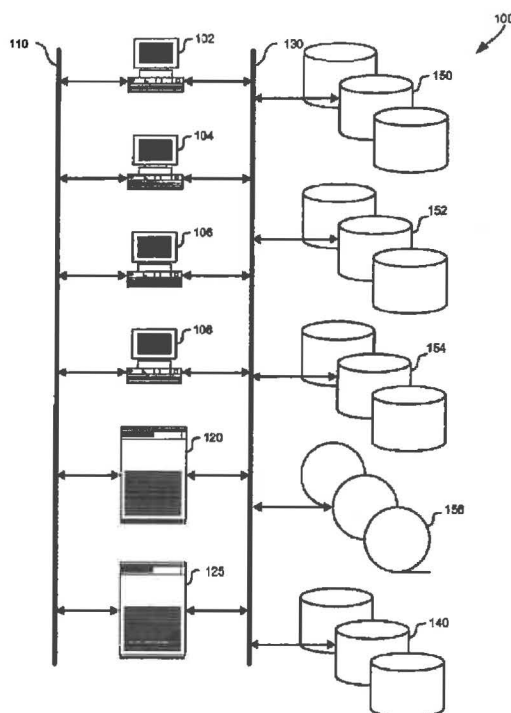
US 2004/0199566 A1 Oct. 7, 2004

(51) Int. Cl. **G06F 15/16** (2006.01)

(52) U.S. Cl. USPC **709/201; 709/203; 709/208**

(58) Field of Classification Search USPC **707/1; 709/208, 207**
See application file for complete search history.

27 Claims, 8 Drawing Sheets



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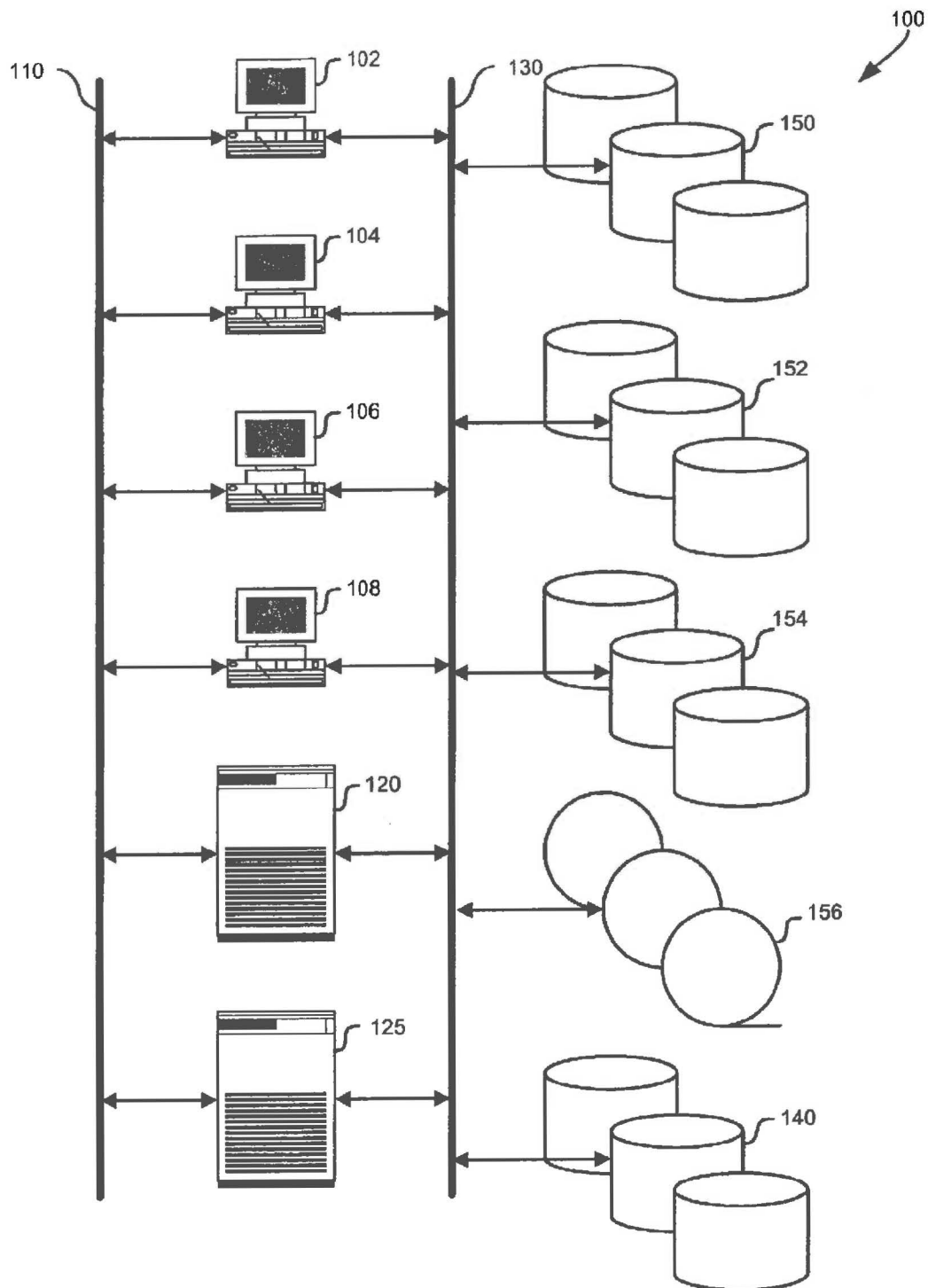


Fig. 1

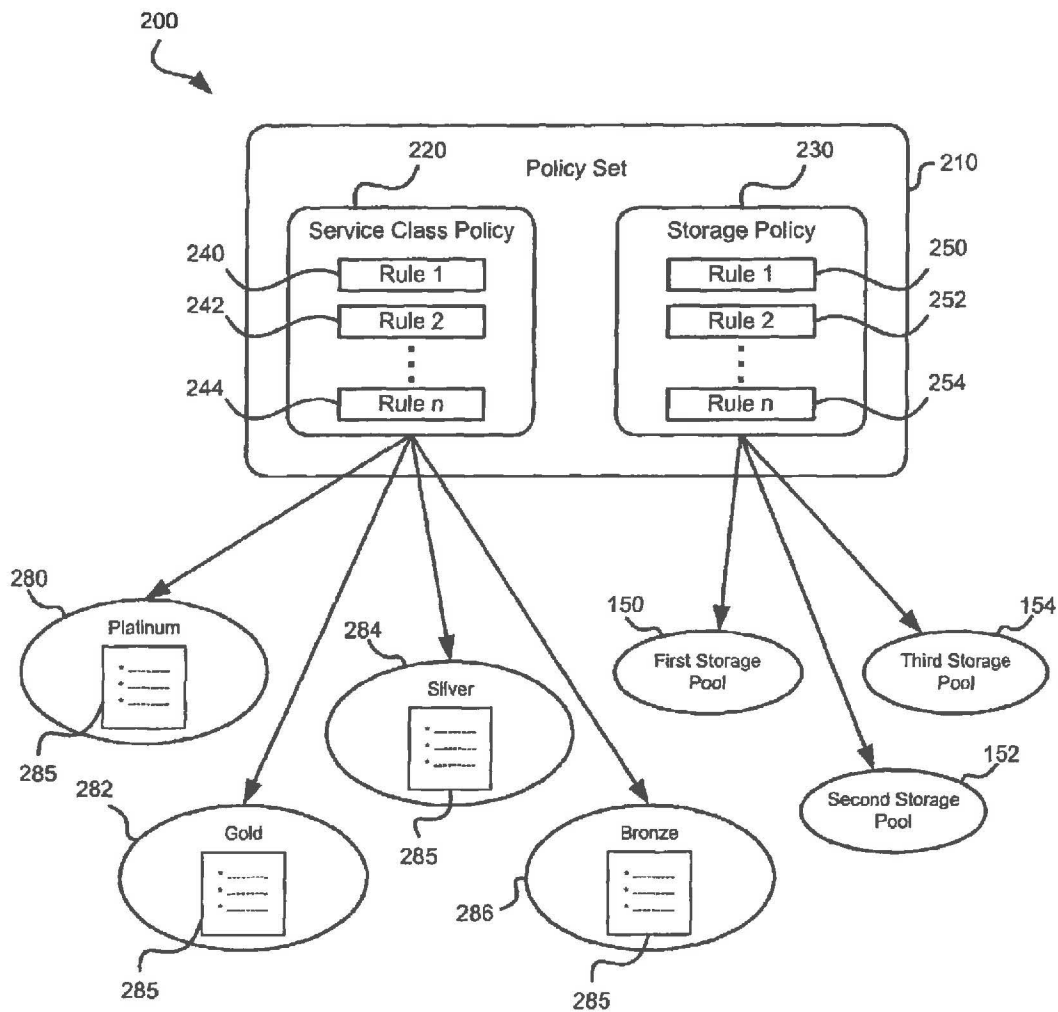


Fig. 2

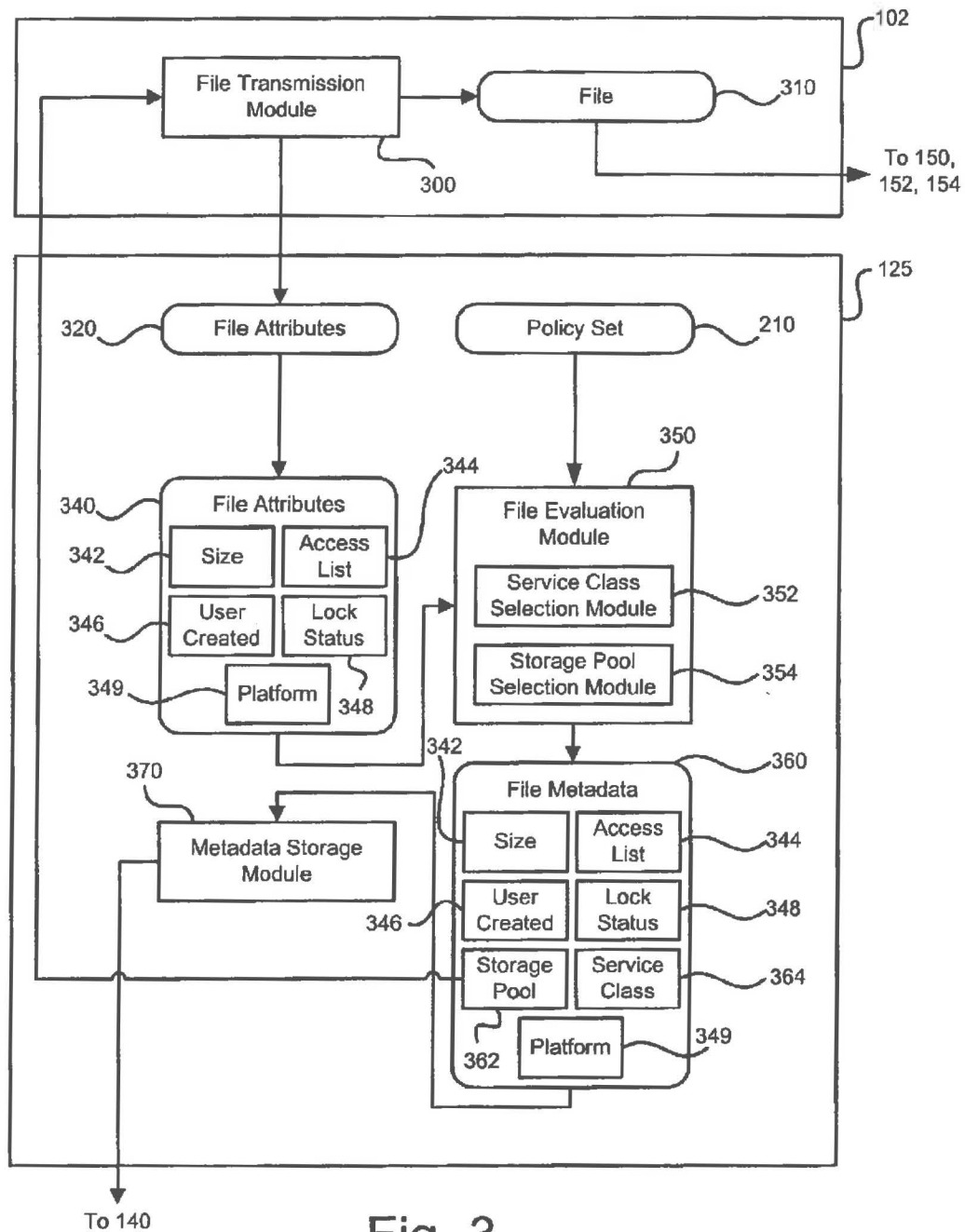


Fig. 3

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