

### US005983270A

## United States Patent [19]

### Abraham et al.

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METHOD AND APPARATUS FOR MANAGING INTERNETWORK AND INTRANETWORK ACTIVITY

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Related U.S. Application Data

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[51]

**U.S. Cl.** ...... **709/224**; 709/225; 709/250

[58] 395/200.55, 200.59, 200.62, 200.8

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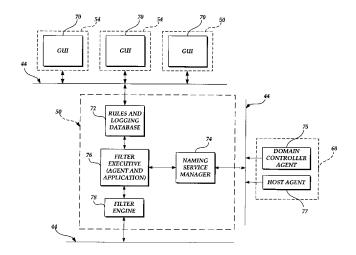
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#### **ABSTRACT** [57]

In accordance with the present invention, a network management program (80) is provided that manages the communication of data packets between an intranetwork (44) and an internetwork (40). An operator of a computer connected to the intranetwork (44) inputs vital information regarding users of computers connected to the intranetwork (44), mapping information regarding computers connected to the intranetwork (44), and policies to be applied against those users and computers, using a graphical user interface (GUI 70). The GUI (70) communicates the vital user information, mapping information and policies to a database (72) which stores and organizes the vital user information, mapping information and policies. A filter executive (76) optimizes the policies stored in the database (72) into a set of rules for each user and passes the rules to a filter engine (78). The filter engine (78) filters all outbound data packets transmitted from the intranetwork (44) to the internetwork (40) and verifies all inbound data packets from the internetwork (40) according to the rules provided by the filter executive (76). The filter executive (76) also communicates the mapping information stored in the database (72) to a naming service manager (74) which further updates the mapping information and returns the updated mapping information to the filter executive (76). Consequently, the filter executive (78) filters the data packets according to the most recent mapping information.

### 72 Claims, 70 Drawing Sheets





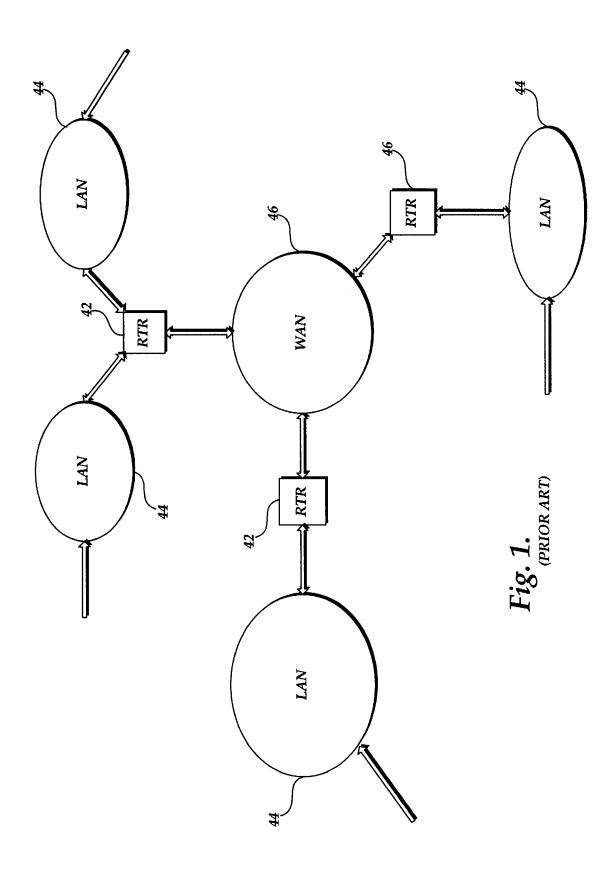
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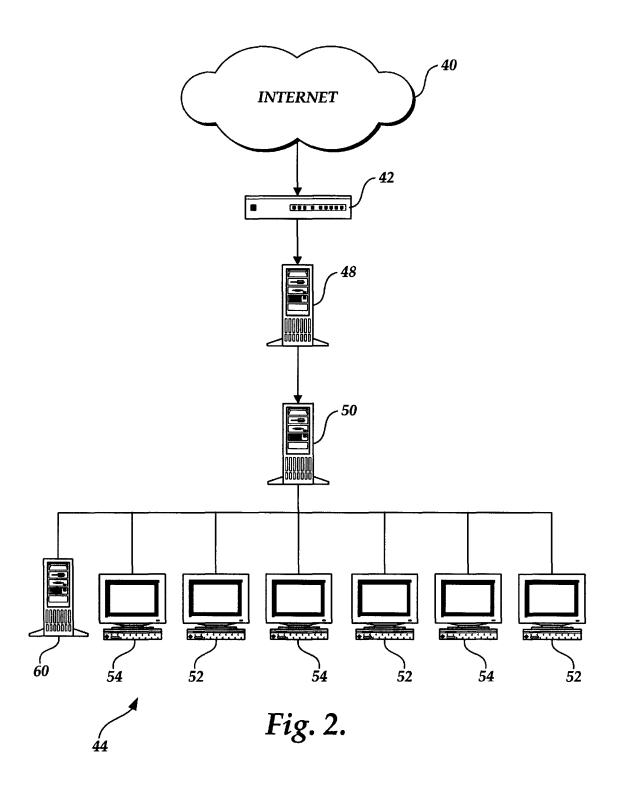
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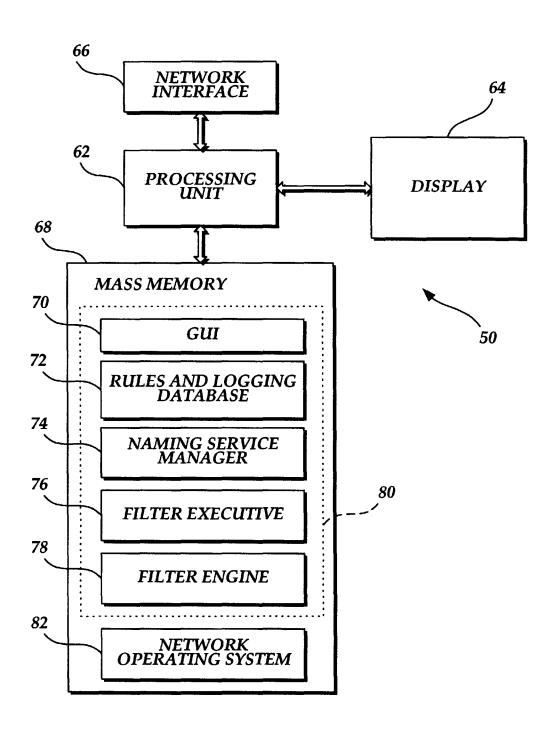


Fig. 3A.



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