United States Patent [19]

Touboul

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[45] **Date of Patent:** *Jul. 18, 2000

[54] **SYSTEM AND METHOD FOR PROTECTING A COMPUTER AND A NETWORK FROM HOSTILE DOWNLOADABLES**

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[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

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[22] Filed: **Nov. 6, 1997**

Related U.S. Application Data

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[51] **Int. Cl.**^{7} **H04L 1/00**

[52] **U.S. Cl.** **713/200**

[58] **Field of Search** 395/187.01, 186; 713/200, 201, 202; 714/38, 704; 709/229

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Assistant Examiner—Christopher Revak
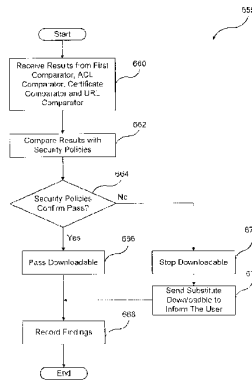*Attorney, Agent, or Firm*—Graham & James LLP

[57] **ABSTRACT**

A system protects a computer from suspicious Downloadables. The system comprises a security policy, an interface for receiving a Downloadable, and a comparator, coupled to the interface, for applying the security policy to the Downloadable to determine if the security policy has been violated. The Downloadable may include a Java™ applet, an ActiveX™ control, a JavaScript™ script, or a Visual Basic script. The security policy may include a default security policy to be applied regardless of the client to whom the Downloadable is addressed, or a specific security policy to be applied based on the client or the group to which the client belongs. The system uses an ID generator to compute a Downloadable ID identifying the Downloadable, preferably, by fetching all components of the Downloadable and performing a hashing function on the Downloadable including the fetched components. Further, the security policy may indicate several tests to perform, including (1) a comparison with known hostile and non-hostile Downloadables; (2) a comparison with Downloadables to be blocked or allowed per administrative override; (3) a comparison of the Downloadable security profile data against access control lists; (4) a comparison of a certificate embodied in the Downloadable against trusted certificates; and (5) a comparison of the URL from which the Downloadable originated against trusted and untrusted URLs. Based on these tests, a logical engine can determine whether to allow or block the Downloadable.

68 Claims, 10 Drawing Sheets

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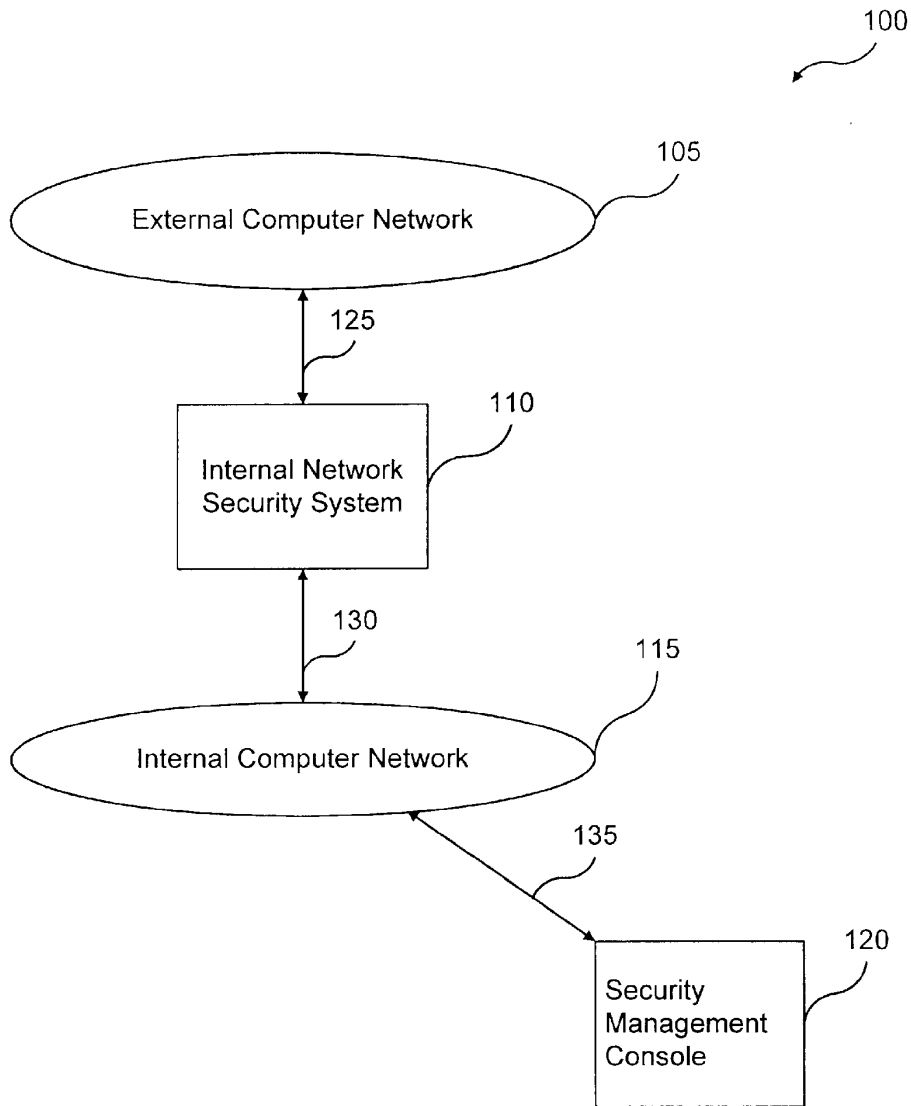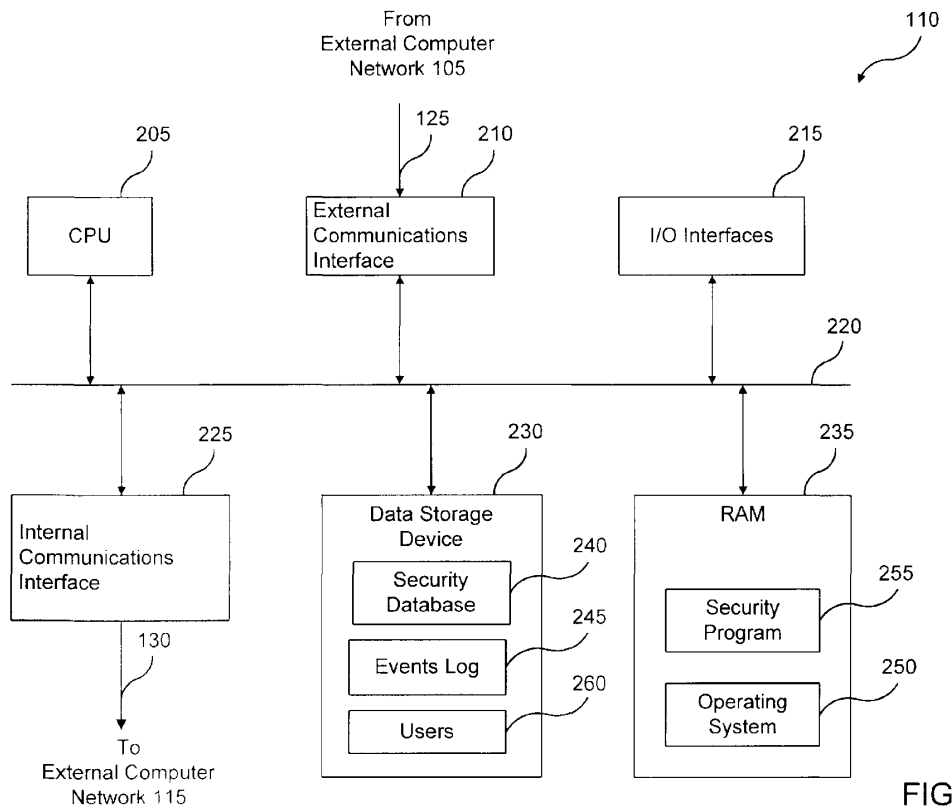Frequently Asked Questions About Authenticode, Microsoft Corporation, Feb. 1997.

100

105

External Computer Network

125

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Internal Network
Security System

130

115

Internal Computer Network

135

120

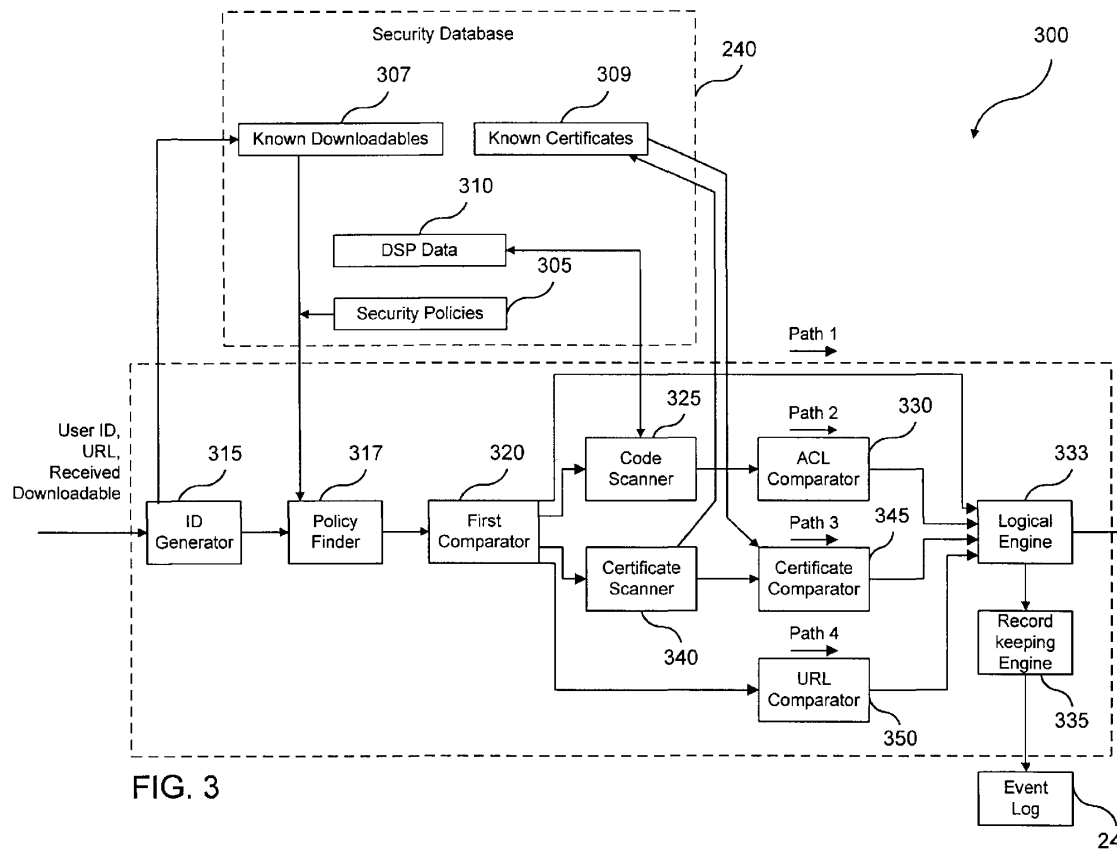Security
Management
Console

FIG. 1

FIG. 2

FIG. 3

DOCKET ALARM

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