



United States Patent [19]
Touboul

[11] **Patent Number:** **6,092,194**
[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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[73] Assignee: **Finjan Software, Ltd.**, Netanya, Israel
[*] 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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[21] Appl. No.: **08/964,388**
[22] Filed: **Nov. 6, 1997**

Related U.S. Application Data

[60] Provisional application No. 60/030,639, Nov. 8, 1996.

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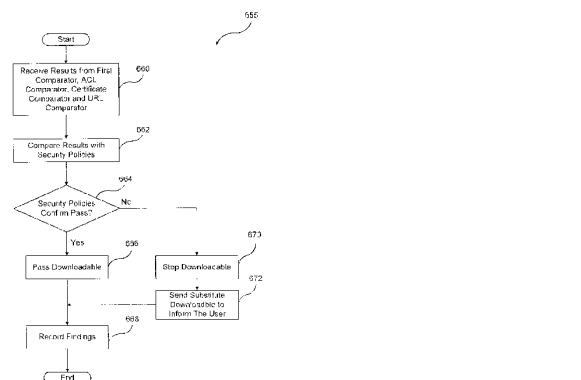
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Assistant Examiner—Christopher Revak
Attorney, Agent, or Firm—Graham & James LLP

[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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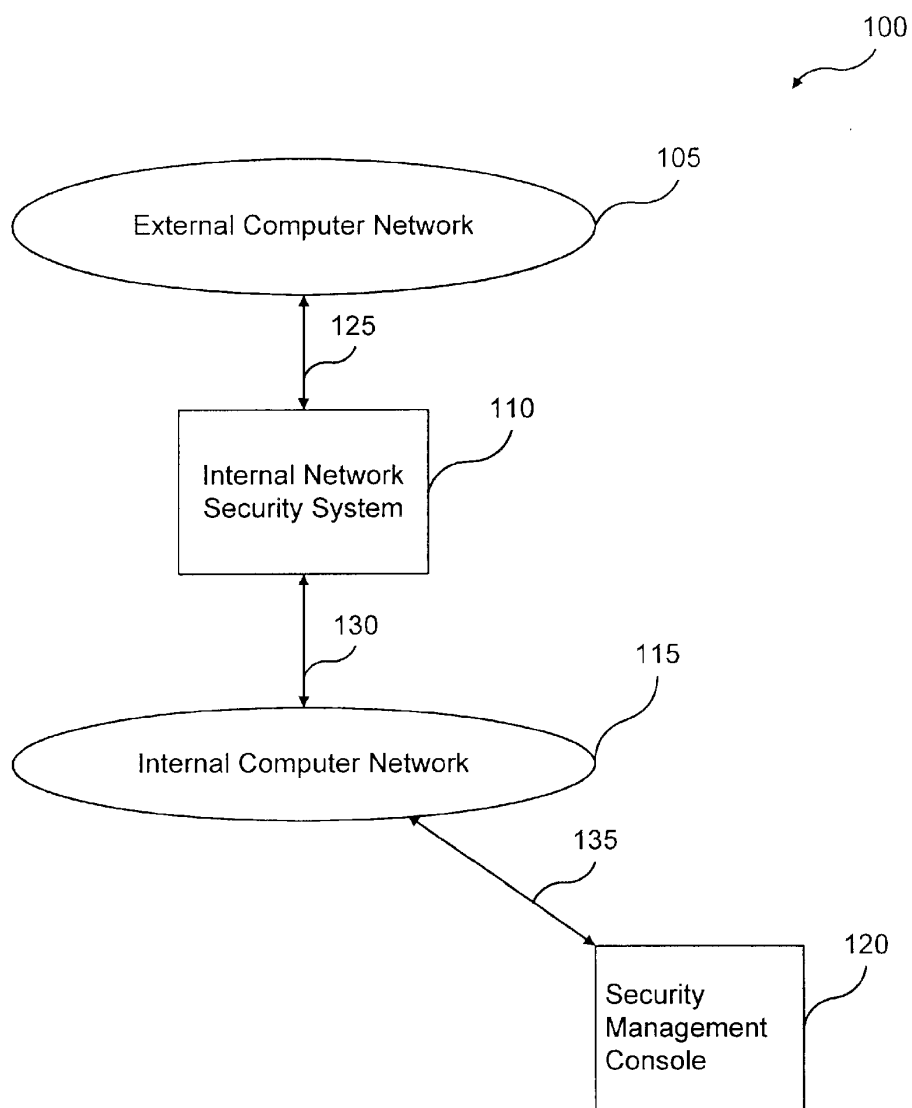


FIG. 1

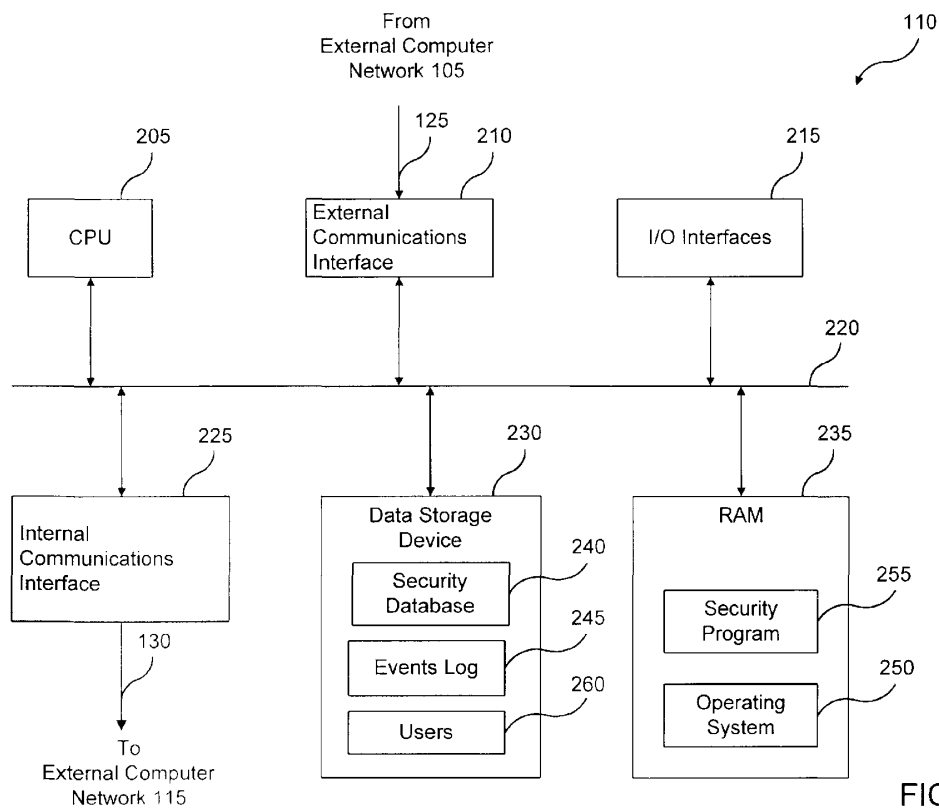


FIG. 2

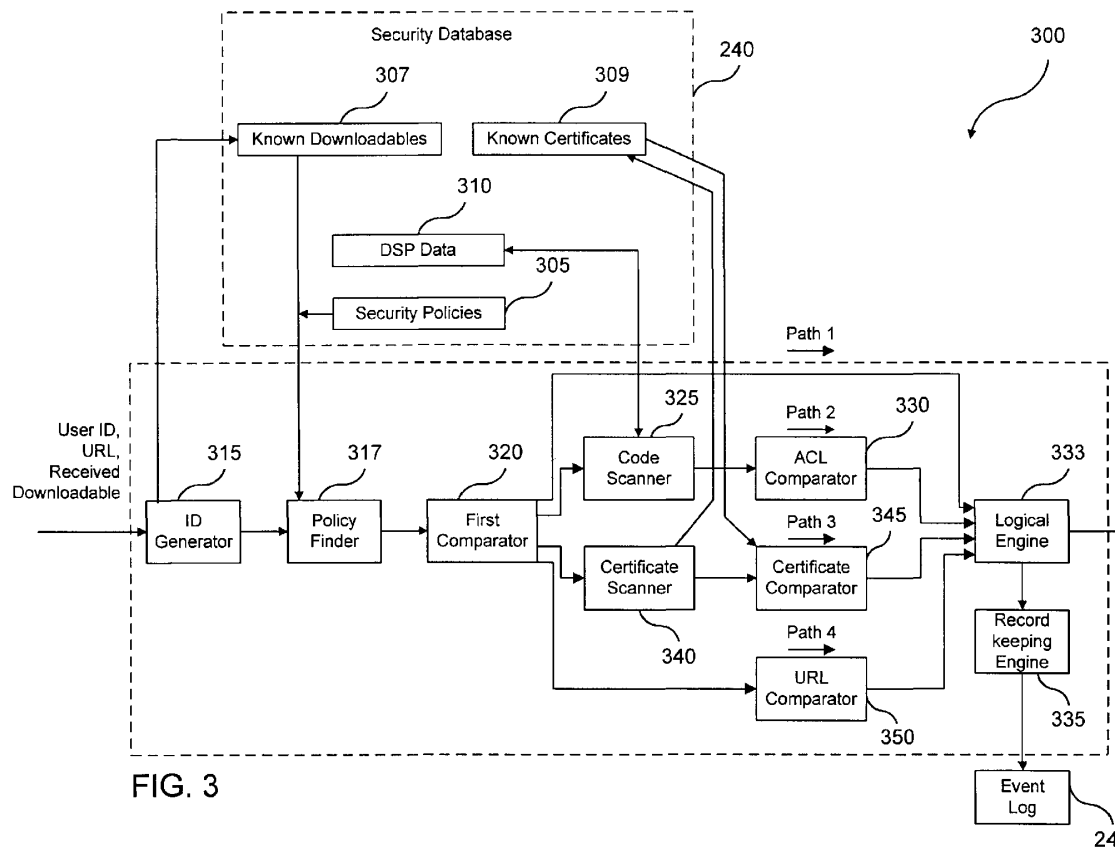


FIG. 3

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