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United States Patent [19]

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Apperson et al.

[45] **Date of Patent:** Nov. 2, 1999

[54] **SYSTEM AND METHOD FOR SAFETY DISTRIBUTING EXECUTABLE OBJECTS**

Bank, Joseph A., "Java Security," (Dec. 8, 1995), found at Internet URL <http://swissnet.ai.mit.edu/~jbank/javapaper/javapaper.html/>.

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[21] Appl. No.: **08/639,290**

[57] **ABSTRACT**

[22] Filed: **Apr. 25, 1996**

The invention includes a method and system for distributing and executing executable code. Before sending executable code to a client, a distributing authority associates a privilege request code with the executable code. The privilege request code indicates a requested set of privileges that the executable code will potentially exercise during execution. The distributing authority digitally signs the executable code and associated privilege request code and then distributes it for eventual execution by clients. Before executing the executable code, a client verifies the digital signature to confirm the authenticity and integrity of the executable code and associated privilege request code. This verification utilizes a hierarchy of certifying authorities. While the code executes, the client monitors it and prevents it from exercising privileges that are not in the requested set of privileges.

[51] **Int. Cl.**⁶ **H04K 1/00**; H04L 9/00

[52] **U.S. Cl.** **380/25**; 380/4

[58] **Field of Search** 380/25, 24, 23, 380/4; 395/157

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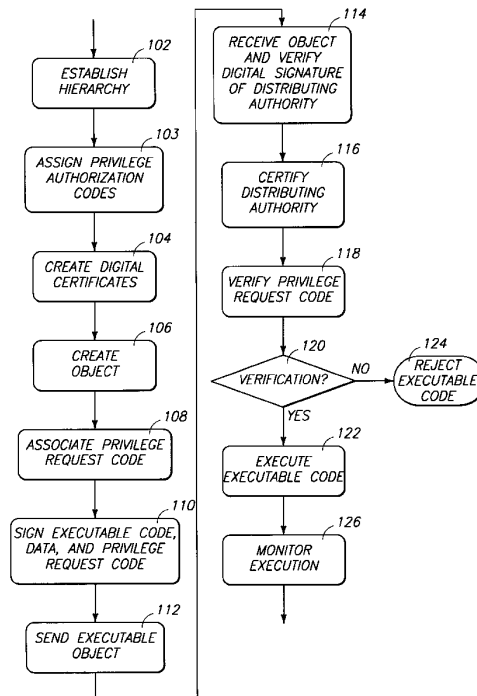
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20 Claims, 4 Drawing Sheets



Symantec 1007

IPR of U.S. Pat. No. 6,154,844

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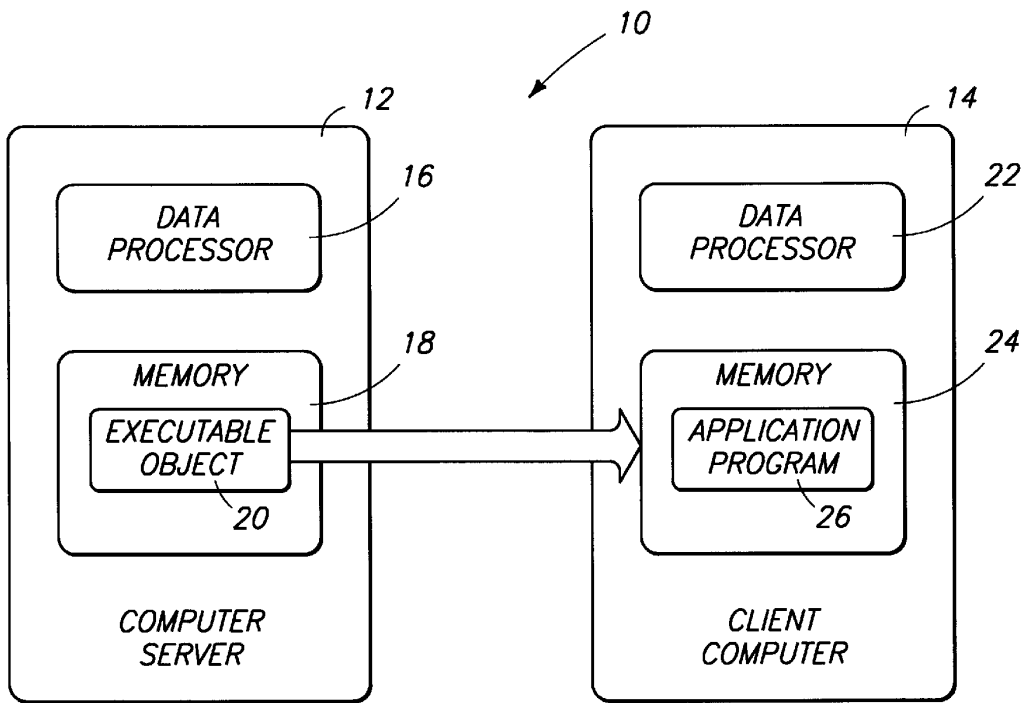


Fig 1

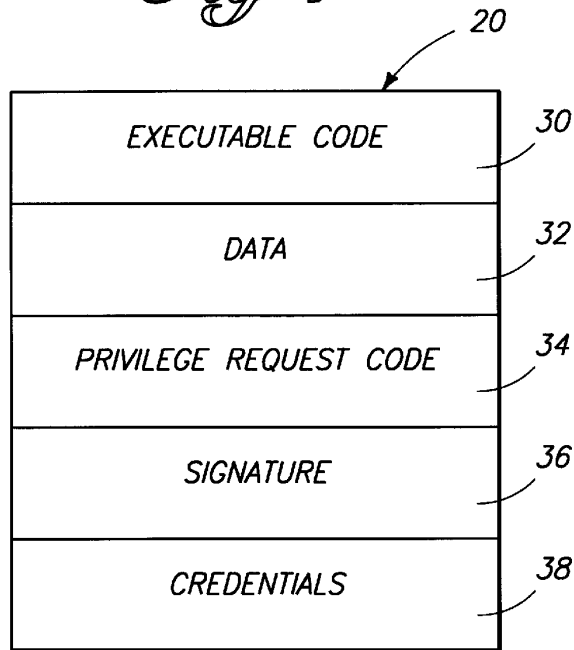


Fig 2

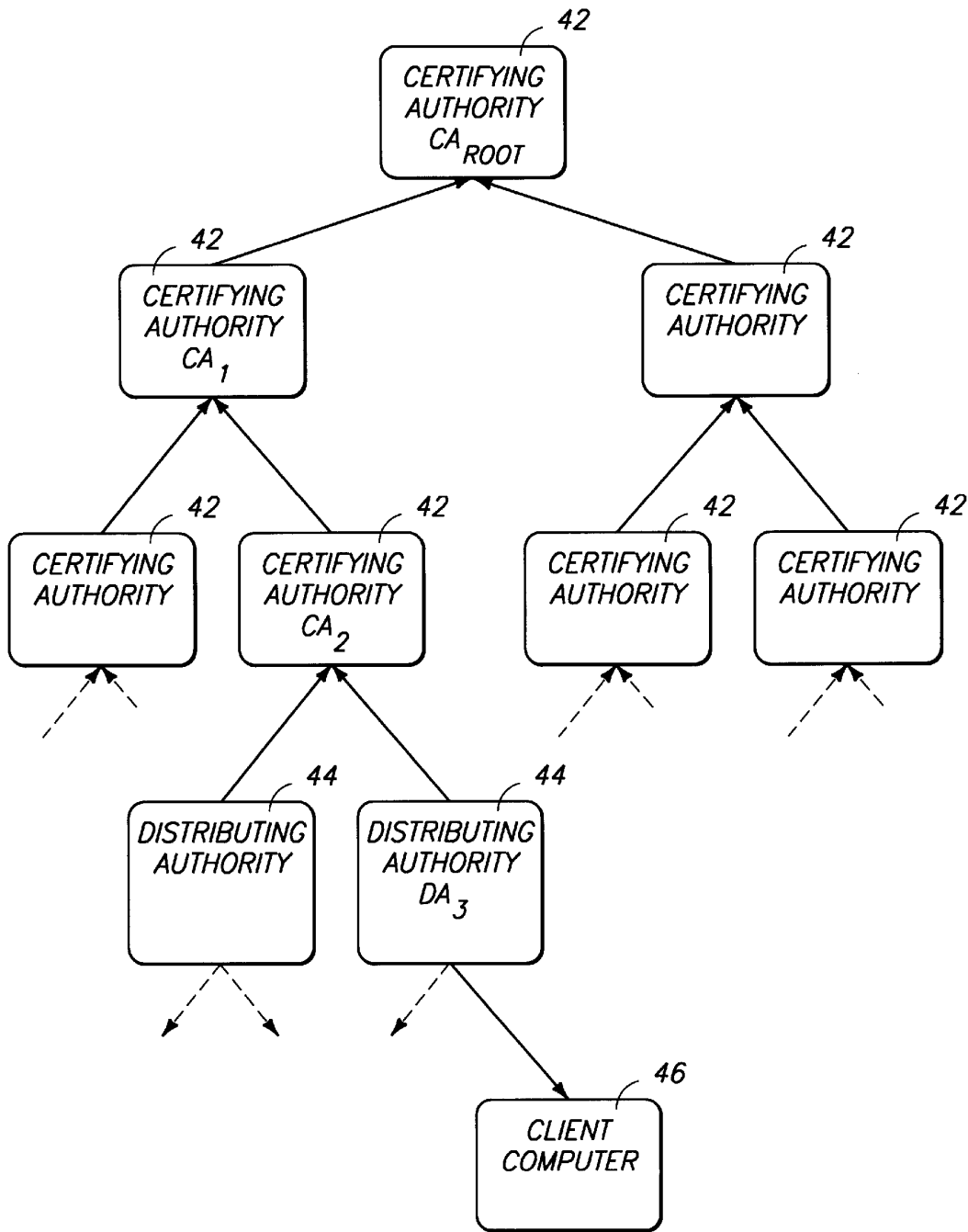


Fig 3

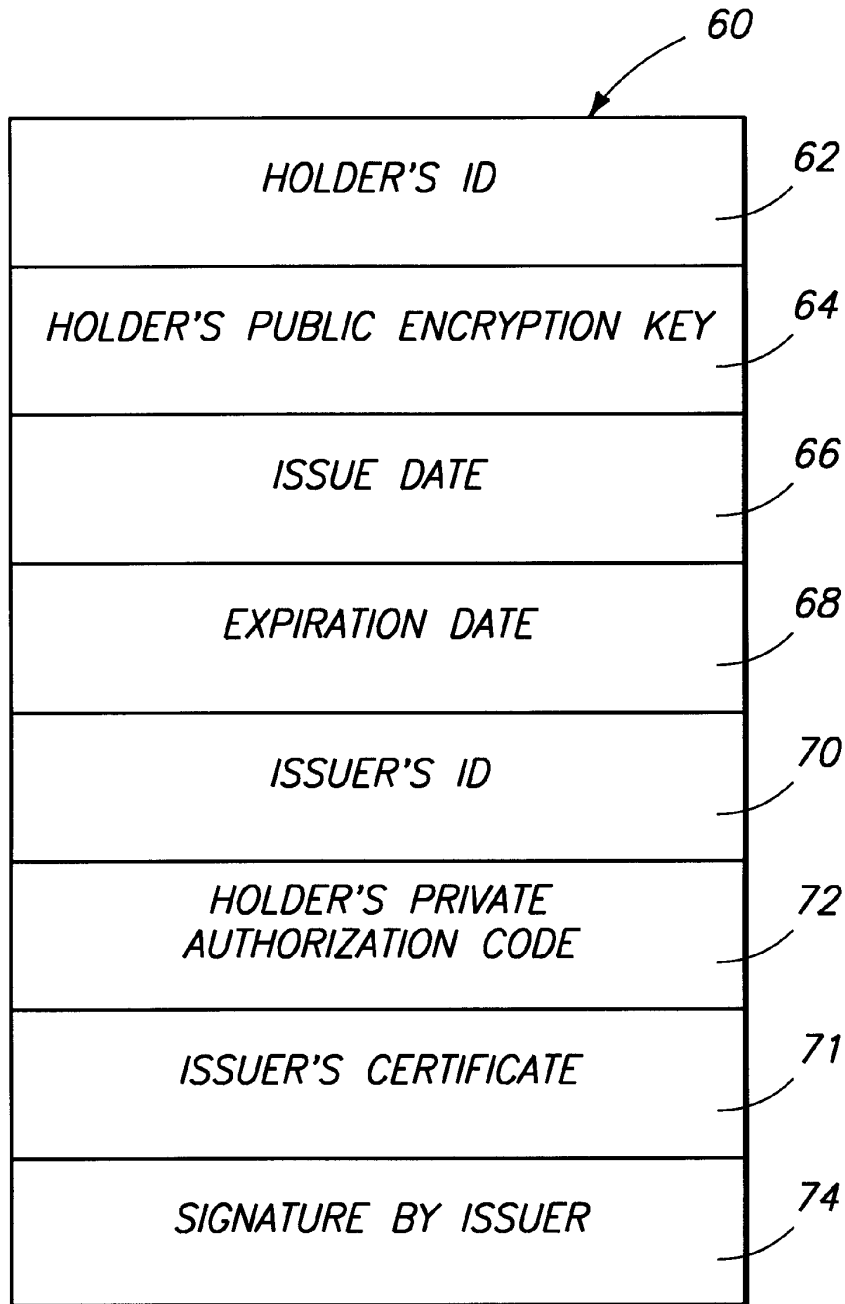


Fig 4

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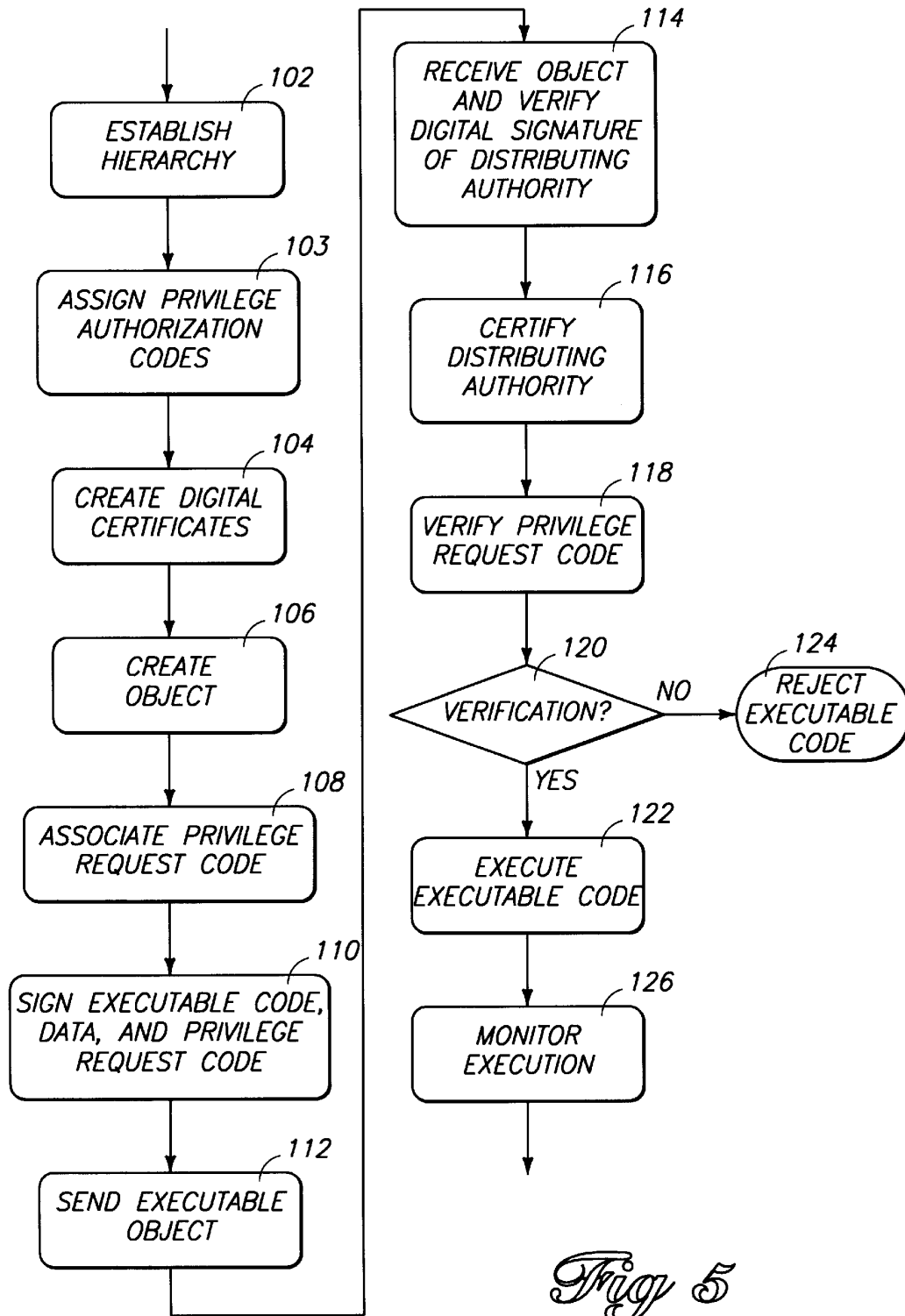


Fig 5

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