United States Patent [19]



[19] [11] **Patent Number:** [45] **Date of Patent:**

Apperson et al.

[54] SYSTEM AND METHOD FOR SAFETY DISTRIBUTING EXECUTABLE OBJECTS

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- [73] Assignee: Microsoft Corporation, Redmond, Wash.
- [21] Appl. No.: 08/639,290
- [22] Filed: Apr. 25, 1996
- [51] Int. Cl.⁶ H04K 1/00; H04L 9/00

[56] References Cited

U.S. PATENT DOCUMENTS

| 4,868,877 5,005,200 5,214,702 5,311,591 5,412,717 5,412,774 5,602,047 | 4/1991 5/1993 5/1994 5/1995 5/1995 | Fischer 380/25 Fischer 380/25 Fischer 380/25 Fischer 380/45 Fischer 380/25 Agrawal 395/157 McMaria 380/25 |
|---|--|---|
| 5,692,047 | | McManis |
| 5,745,574 5,825,877 | , | Muftic |
| | | |

OTHER PUBLICATIONS

Schneier, Bruce, "Applied Cryptography, Second Edition: Protocols, Algorigthms, and Source Code in C," (1996), pp. 574–577.

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

5,978,484

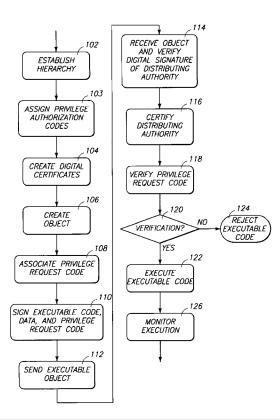
Nov. 2, 1999

Primary Examiner—Benjamin R. Fuller Assistant Examiner—Robin Clark Attorney, Agent, or Firm—Lee & Hayes, PLLC

[57] ABSTRACT

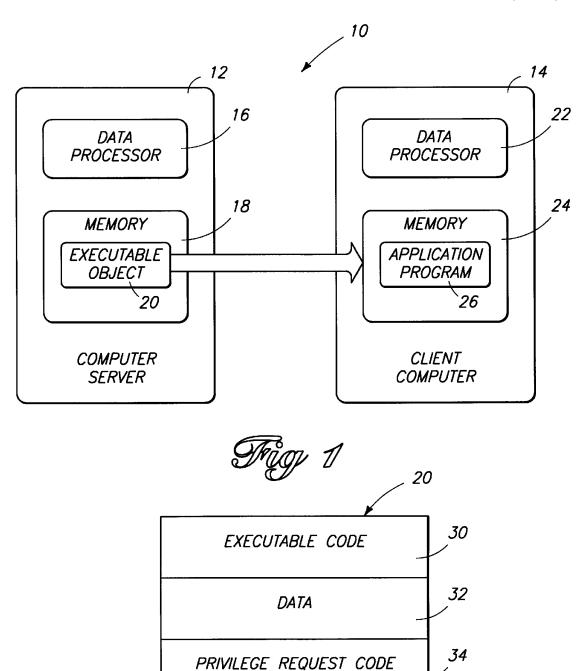
The invention includes a method and system for distributing and executing executable code. Before sending executable code to a client, a distributing authority associates a privilege request code with the executable code. The privilege request code indicates a requested set of privileges that the executable 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.

20 Claims, 4 Drawing Sheets



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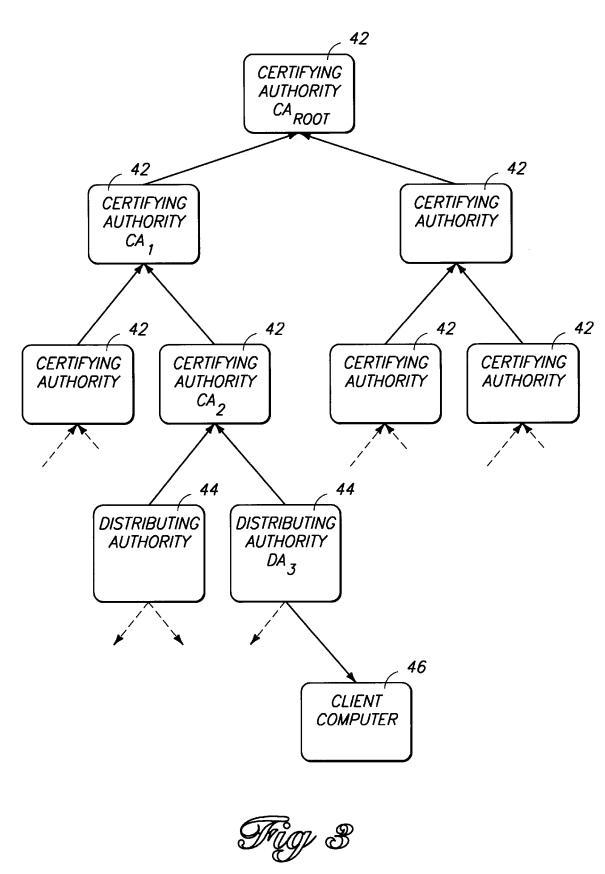
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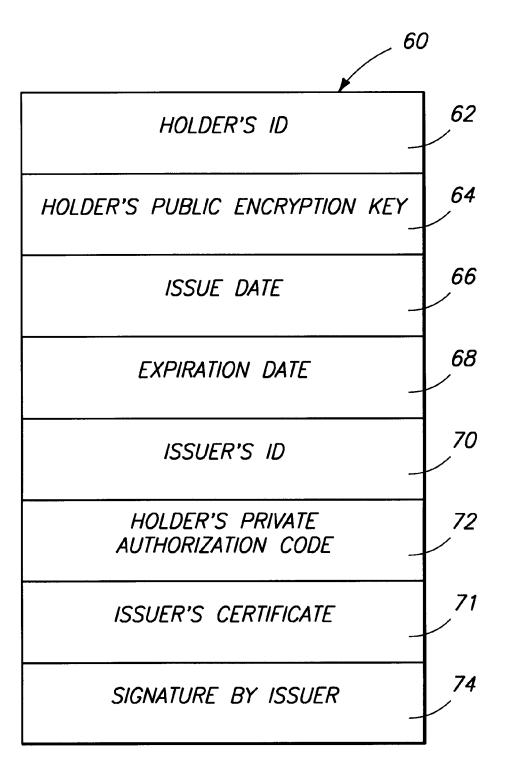
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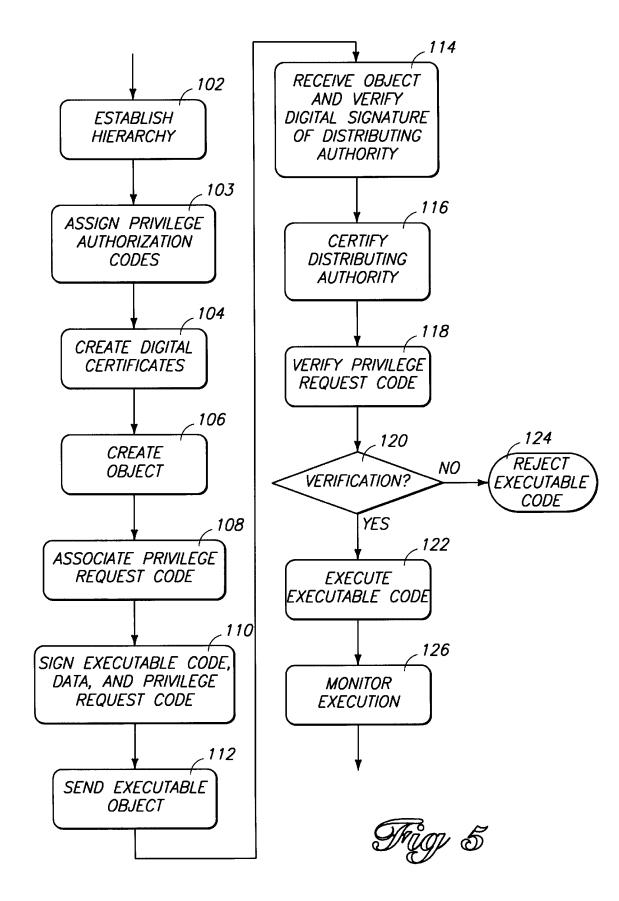


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