



US005978484A

United States Patent [19]

[11] **Patent Number:** **5,978,484**

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/>.

[75] Inventors: **Norman Apperson**, Bellevue; **Brian C. Beckman**, Renton, both of Wash.

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

[73] Assignee: **Microsoft Corporation**, Redmond, Wash.

[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

[56] **References Cited**

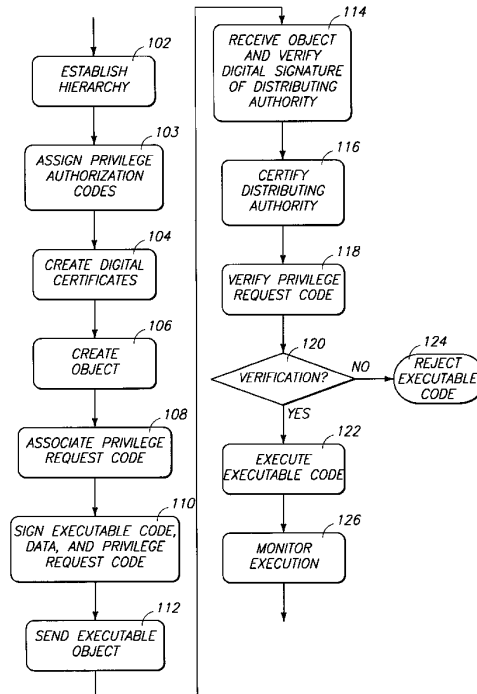
U.S. PATENT DOCUMENTS

4,868,877	9/1989	Fischer	380/25
5,005,200	4/1991	Fischer	380/25
5,214,702	5/1993	Fischer	380/25
5,311,591	5/1994	Fischer	380/4
5,412,717	5/1995	Fischer	380/25
5,412,774	5/1995	Agrawal	395/157
5,692,047	11/1997	McManis	380/4
5,745,574	4/1998	Muftic	380/25
5,825,877	10/1998	Dan et al.	380/25

OTHER PUBLICATIONS

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

20 Claims, 4 Drawing Sheets



Symantec 1007

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

000001



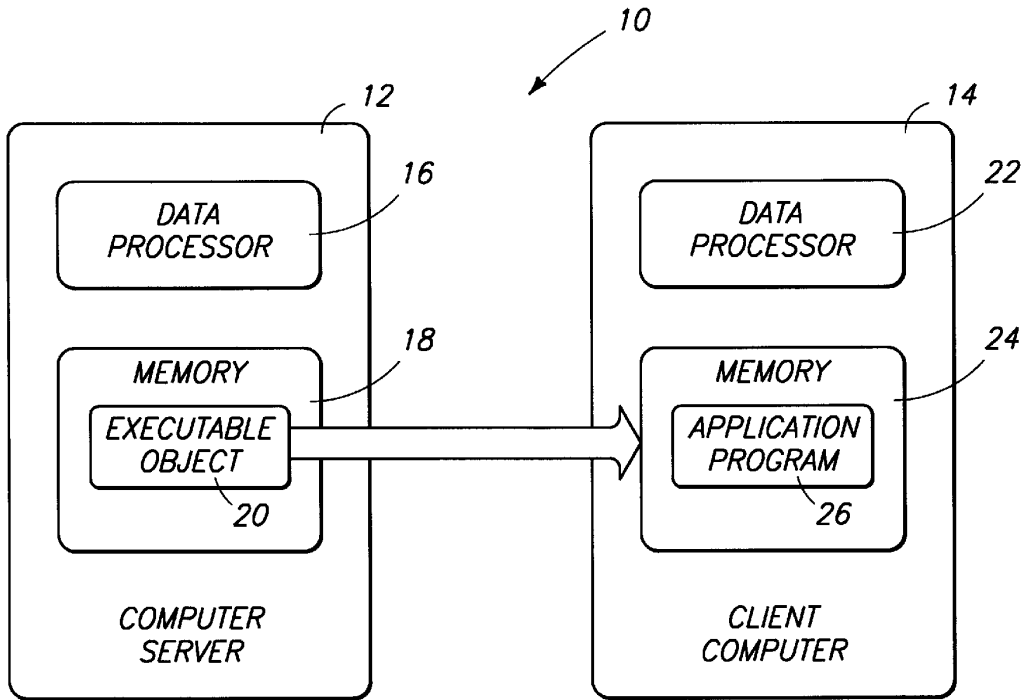


Fig 1

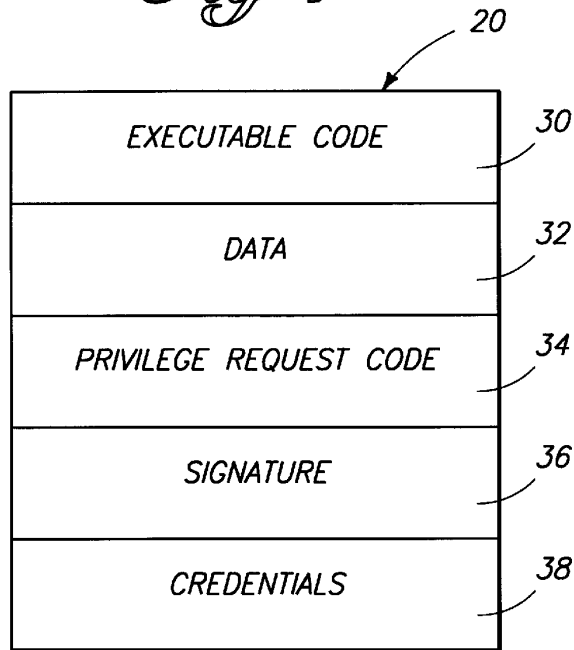


Fig 2

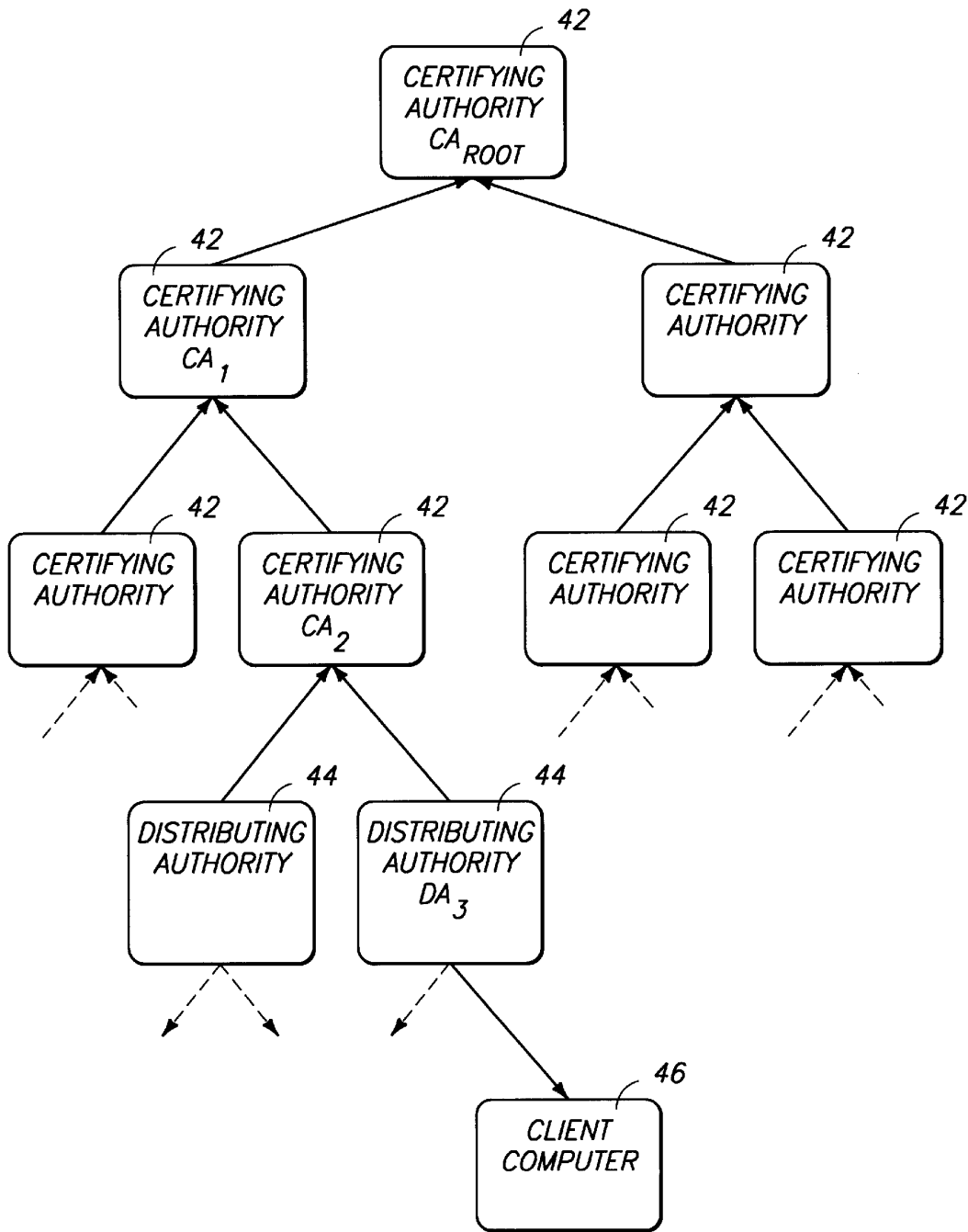


Fig 3

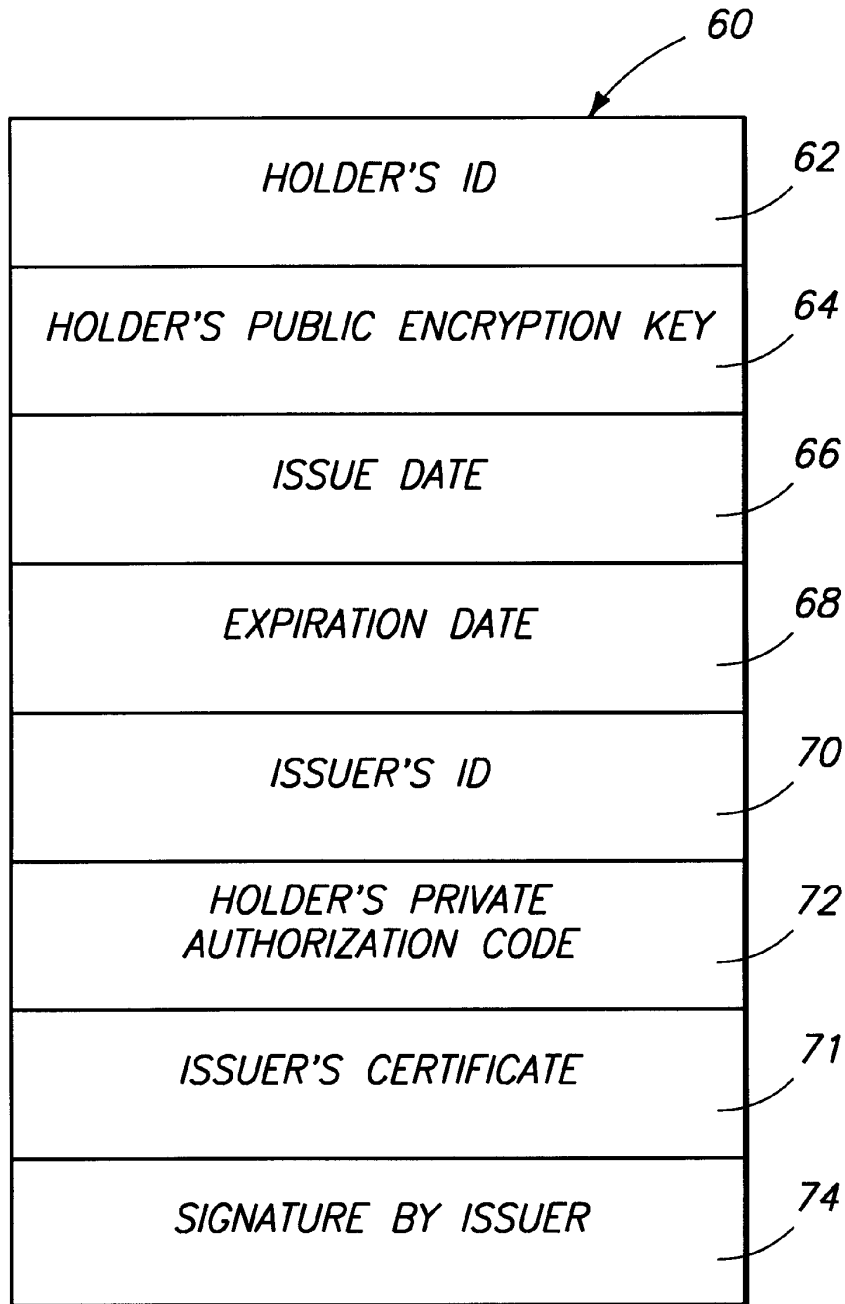


Fig. 4

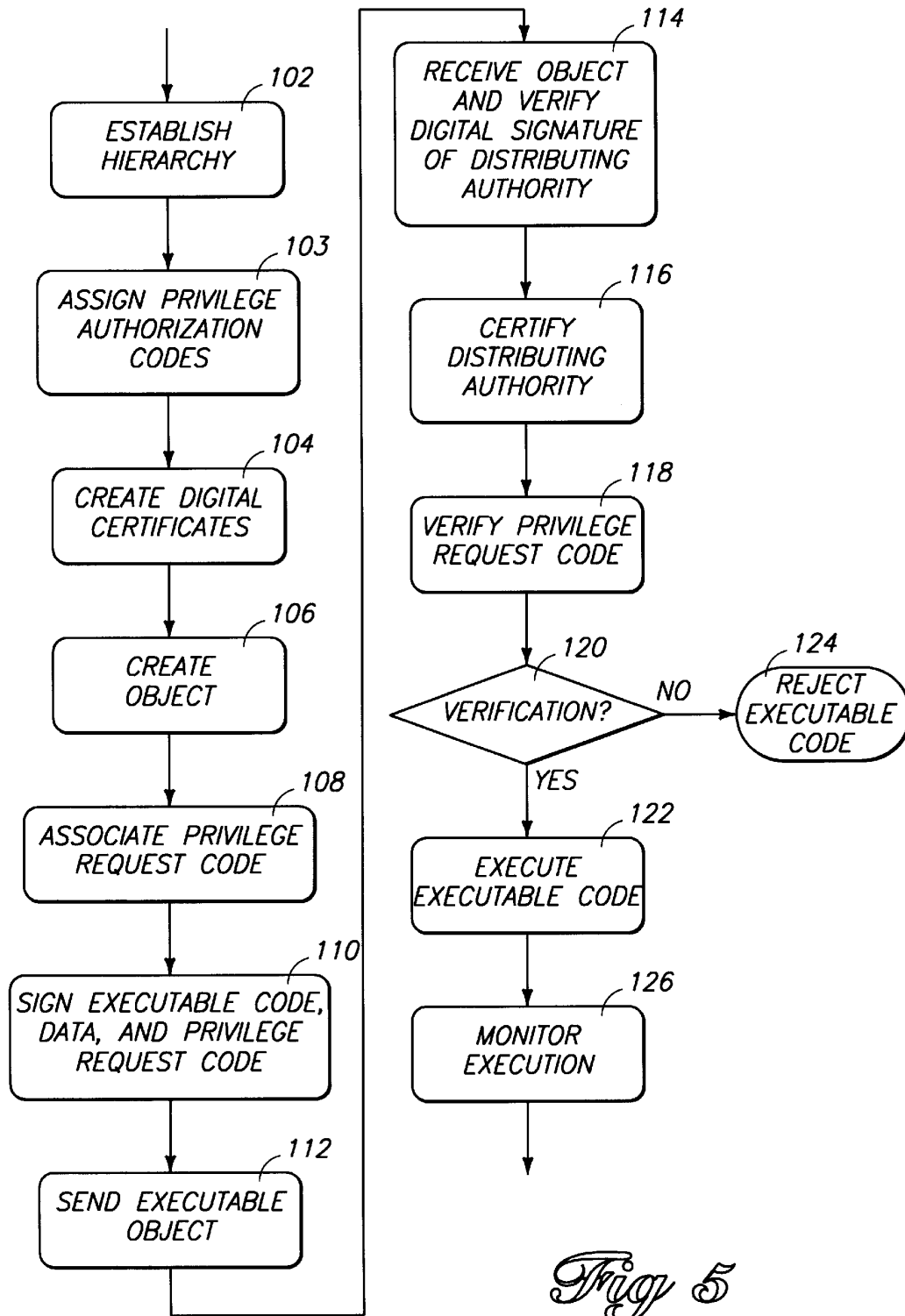


Fig 5

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.