



- [54] **INTERPRETER FOR PERFORMING REMOTE TESTING OF COMPUTER SYSTEMS**
- [75] Inventors: **Jay A. Jessen**, Santa Clara; **Palanivelu Nagarajan**, Campbell; **Sean L. Flynn**, Cupertino; **James A. Schneider**, San Jose, all of Calif.
- [73] Assignee: **Apple Computer, Inc.**, Cupertino, Calif.
- [21] Appl. No.: **284,196**
- [22] Filed: **Aug. 2, 1994**

**Related U.S. Application Data**

- [63] Continuation of Ser. No. 795,913, Nov. 20, 1991, abandoned.
- [51] Int. Cl.<sup>6</sup> ..... **G06F 11/30; G06F 11/32**
- [52] U.S. Cl. .... **395/500; 364/DIG. 1; 364/DIG. 2; 364/234; 364/242.94; 364/264; 364/264.3; 364/266; 364/267; 364/267.2; 364/267.4; 364/267.6; 364/928; 364/943.9; 364/944.9**
- [58] Field of Search ..... **364/DIG. 1 MS File, 364/DIG. 2 MS File; 371/3, 15.1, 16.1, 16.2; 395/500, 575, 118, 155, 156, 157, 162, 163**

**References Cited**

**U.S. PATENT DOCUMENTS**

4,051,326	9/1977	Badagnani et al.	364/DIG. 1
4,710,869	12/1987	Enokizono	364/DIG. 1
4,882,674	11/1989	Quint et al.	364/DIG. 1
4,899,306	2/1990	Greer	364/900
4,907,146	3/1990	Caporali	364/132
4,920,481	4/1990	Binkley et al.	364/200
5,036,315	7/1991	Gurley	340/721
5,045,994	9/1991	Belfer et al.	364/200
5,107,497	4/1992	Lirov et al.	371/15.1
5,153,886	10/1992	Tuttle	371/67.1
5,157,782	10/1992	Tuttle et al.	395/575
5,185,857	2/1993	Rozmanith et al.	395/148
5,214,785	5/1993	Fairweather	395/800
5,233,611	8/1993	Triantafyllos et al.	371/16.1

**OTHER PUBLICATIONS**

Rose, Caroline, Hacker, Bradley, Anders, Robert, Withey, Katie, Metzler, Mark, Chernicoff, Steve, Espinosa, Chris, A Verill, Andy, Davis, Brent and Howard, Brian, Titled "Inside Macintosh Volume I", Publisher Addison-Wesley Publishing Company, Inc., Apr.

1987, United States and Canada, pp. I-276, I-311 to I-334.

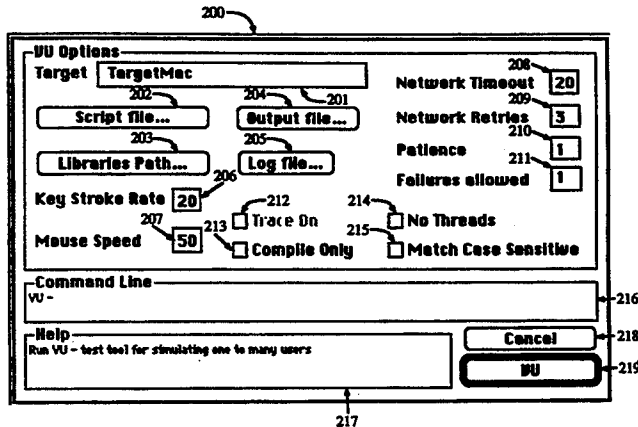
Rose, Caroline, Hacker, Bradley, Anders, Robert, Withey, Katie, Metzler, Mark, Chernicoff, Steve, Espinoza, Chris, Averill, Andy Davis, Brent and Howard, Brian, Titled "Apple Inside Macintosh Volume V", Publisher Addison Wesley Publishing Company, Inc., pp. V-29 to V-30, V-225 to V-258, V-297-298. Sidhu, Gursharan S., Andrews, Richard F. and Oppenheimer, Alan B., Titled "Inside Apple Talk", Publisher Addison-Wesley Publishing Company, Inc., United States and Canada, Mar. 1989, pp. 9-1 to 9-28.

*Primary Examiner*—Robert B. Harrell  
*Attorney, Agent, or Firm*—Blakely, Sokoloff, Taylor & Zafman

**ABSTRACT**

[57] An interpretive language comprises instructions making up part of the first sequence of instructions (a test "script"). The first language comprises a first set of instructions, the first set of instructions causes a first computer system (a "host" in a preferred embodiment) to issue a series of commands to a second computer system (a "target") in order to cause the second computer system to emulate user activity on the second computer system. User activity includes emulating typing text and/or moving a mouse cursor position. The language further comprises a second set of instructions which cause the first computer system to issue a series of commands to the second computer system in order to cause the second computer system to respond to the first computer system with its state. This state includes user interface objects, and applications running in the target, etc. The language further comprises a third set of instructions, the third set of instructions causing the first computer system to issue a sequence of commands to the second computer system to respond in a predefined manner. These instructions indicate that the target computer system is to respond in within a given period of time, listen for further commands, etc. This is useful for repeatable and systematic testing of computer systems having a variety of hardware and software combinations for compatibility testing. Multitasking using "threads" for control of different targets using different test routines is also provided.

**18 Claims, 11 Drawing Sheets**



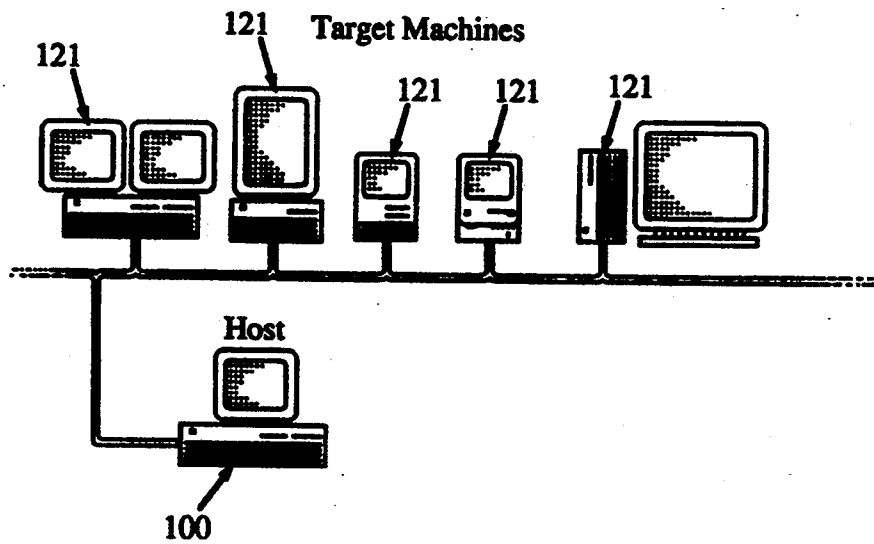


Figure 1

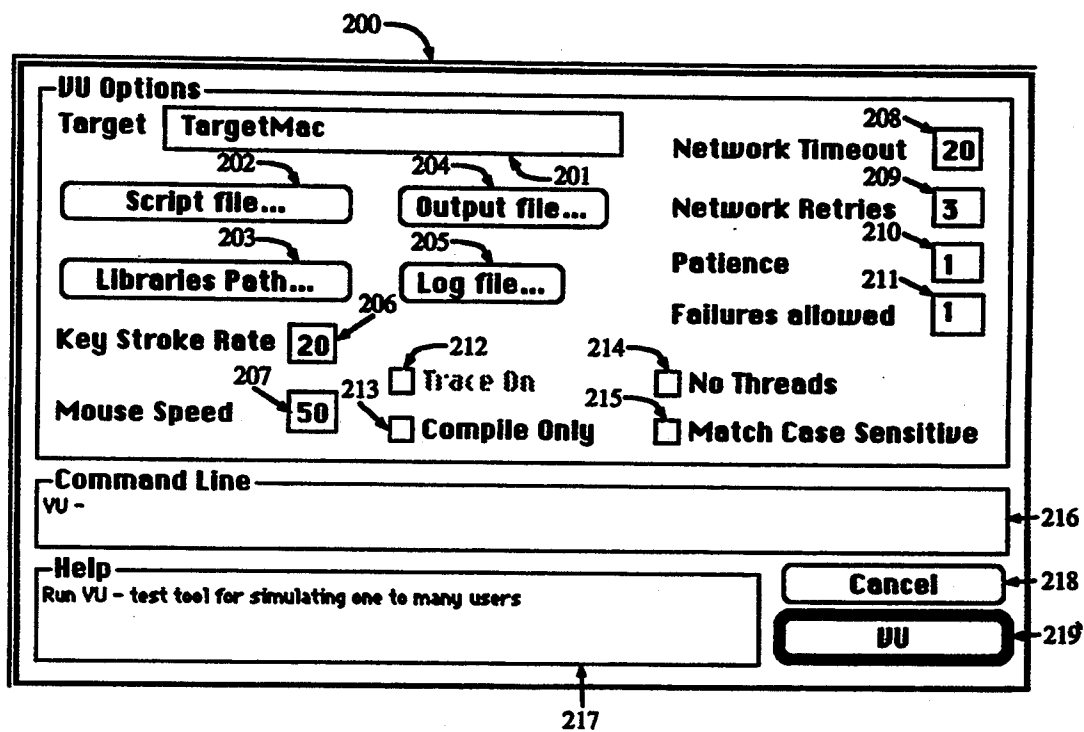


Figure 2

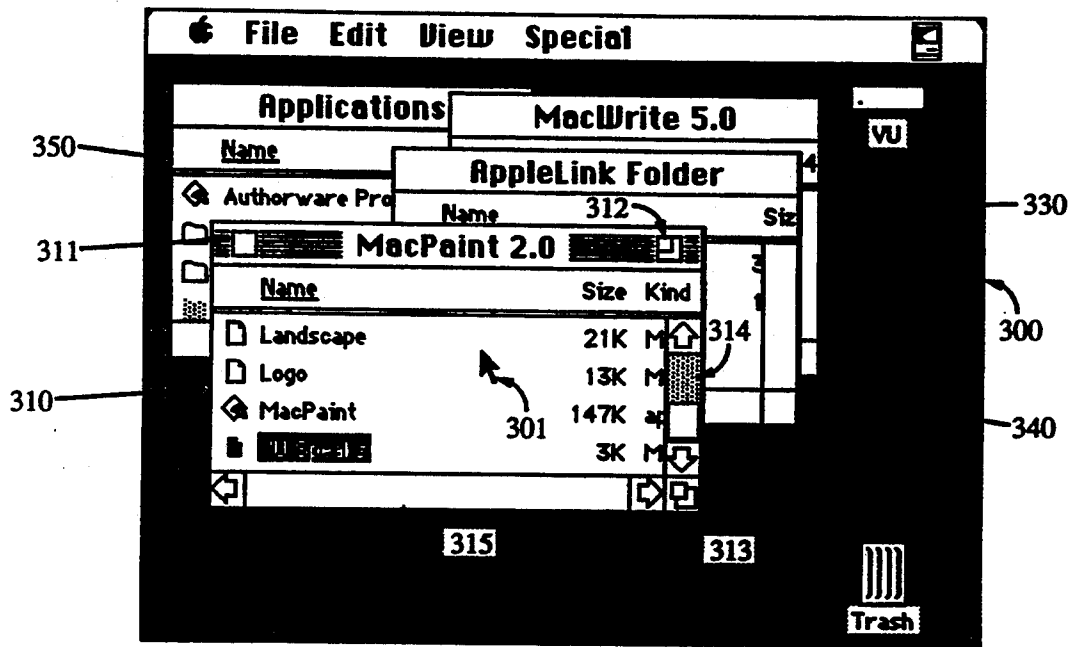


Figure 3

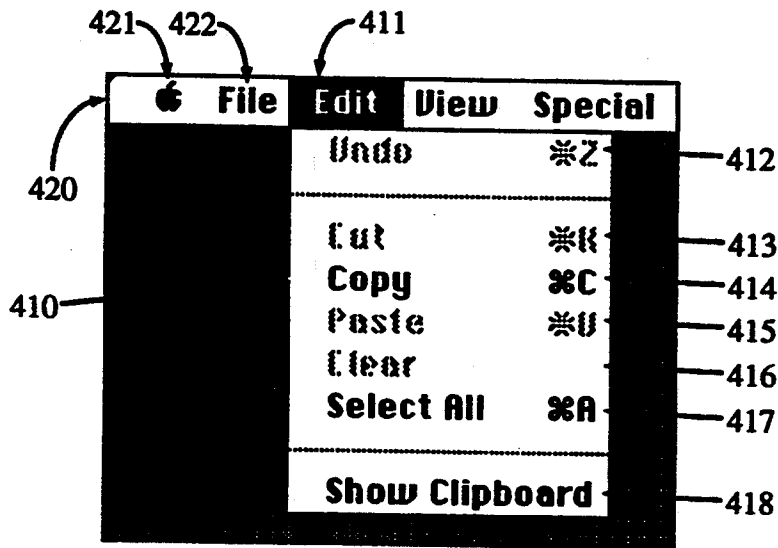


Figure 4

# 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.