



US006934945B1

(12) **United States Patent**
Ogilvy

(10) **Patent No.:** **US 6,934,945 B1**
(45) **Date of Patent:** **Aug. 23, 2005**

(54) **METHOD AND APPARATUS FOR CONTROLLING COMMUNICATIONS**

6,308,317 B1 * 10/2001 Wilkinson et al. 717/139

FOREIGN PATENT DOCUMENTS

- (75) Inventor: **Ian Charles Ogilvy**, Manly (AU)
- (73) Assignee: **Cardsoft, Inc.**, San Mateo, CA (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

AU	2200088	9/1988
EP	0456249	11/1991
EP	0634718	1/1995
WO	9212480	7/1992
WO	9305599	3/1993
WO	9410628	5/1994

OTHER PUBLICATIONS

- (21) Appl. No.: **09/381,143**
- (22) PCT Filed: **Mar. 16, 1998**
- (86) PCT No.: **PCT/AU98/00173**
§ 371 (c)(1),
(2), (4) Date: **Oct. 22, 1999**
- (87) PCT Pub. No.: **WO98/41918**
PCT Pub. Date: **Sep. 24, 1998**

Kiran Kumar Toutireddy, "A Testbed for Fault Tolerant Real-Time Systems", Sep. 1996, pp. 1-120.*
 Ray Hookway, "Digital FX!32", Feb. 1997, IEEE, pp. 37-42.*
 Hamilton, "Java and the Shift to Net-Centric Computing", P-31-39; Aug. 1996, Computer.

* cited by examiner

Primary Examiner—David Wiley
Assistant Examiner—Phuoc Nguyen

(74) *Attorney, Agent, or Firm*—Fleshner & Kim, LLP

(30) **Foreign Application Priority Data**

Mar. 19, 1997 (AU) PO9896

(51) **Int. Cl.** **G06F 17/00**

(52) **U.S. Cl.** **718/1; 719/313; 719/310; 719/315; 719/316**

(58) **Field of Search** **718/1; 719/310, 719/313, 315, 316; 703/23, 26, 27; 709/2, 201, 208, 219, 200; 713/201; 395/500**

(56) **References Cited**

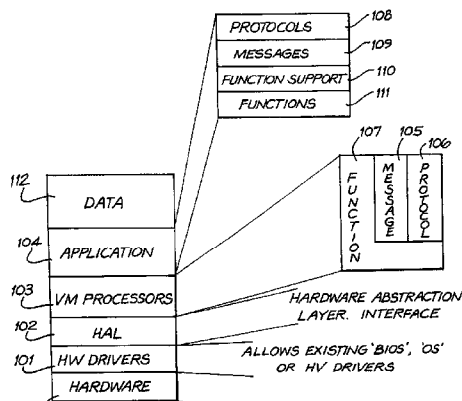
U.S. PATENT DOCUMENTS

5,336,870	A	*	8/1994	Hughes et al.	235/379
5,479,643	A		12/1995	Bhaskar	
5,553,291	A	*	9/1996	Tanaka et al.	718/1
5,590,281	A		12/1996	Stevens	
5,708,838	A	*	1/1998	Robinson	709/202
5,745,886	A	*	4/1998	Rosen	705/39
5,926,631	A	*	7/1999	McGarvey	703/23
5,931,917	A	*	8/1999	Nguyen et al.	709/203
5,935,249	A	*	8/1999	Stern et al.	713/201
6,003,065	A	*	12/1999	Yan et al.	709/201
6,199,160	B1	*	3/2001	Echensperger et al.	713/100

(57) **ABSTRACT**

The present invention relates to preparing and processing information to be communicated via a network or to or from other data carriers. For implementation of a novel "virtual machine" of the present invention, a minimal amount of hardware is required. Prior art virtual machines tend to slow down operation of the device as they interface between an application program and device drivers. The novel virtual machine incorporates a virtual message processing means that is arranged to construct, deconstruct and compare messages and applied in the native code of the processor. The message instruction means directs and controls the message processor. Similarly, a protocol processor means governs and organ communications, under the direction of a protocol instruction means in the application. These elements of the novel virtual machine increase the speed and efficiency and allow implementation of a practical device for use in communications, able to be implemented on different hardware having different BIOS/OS.

17 Claims, 12 Drawing Sheets



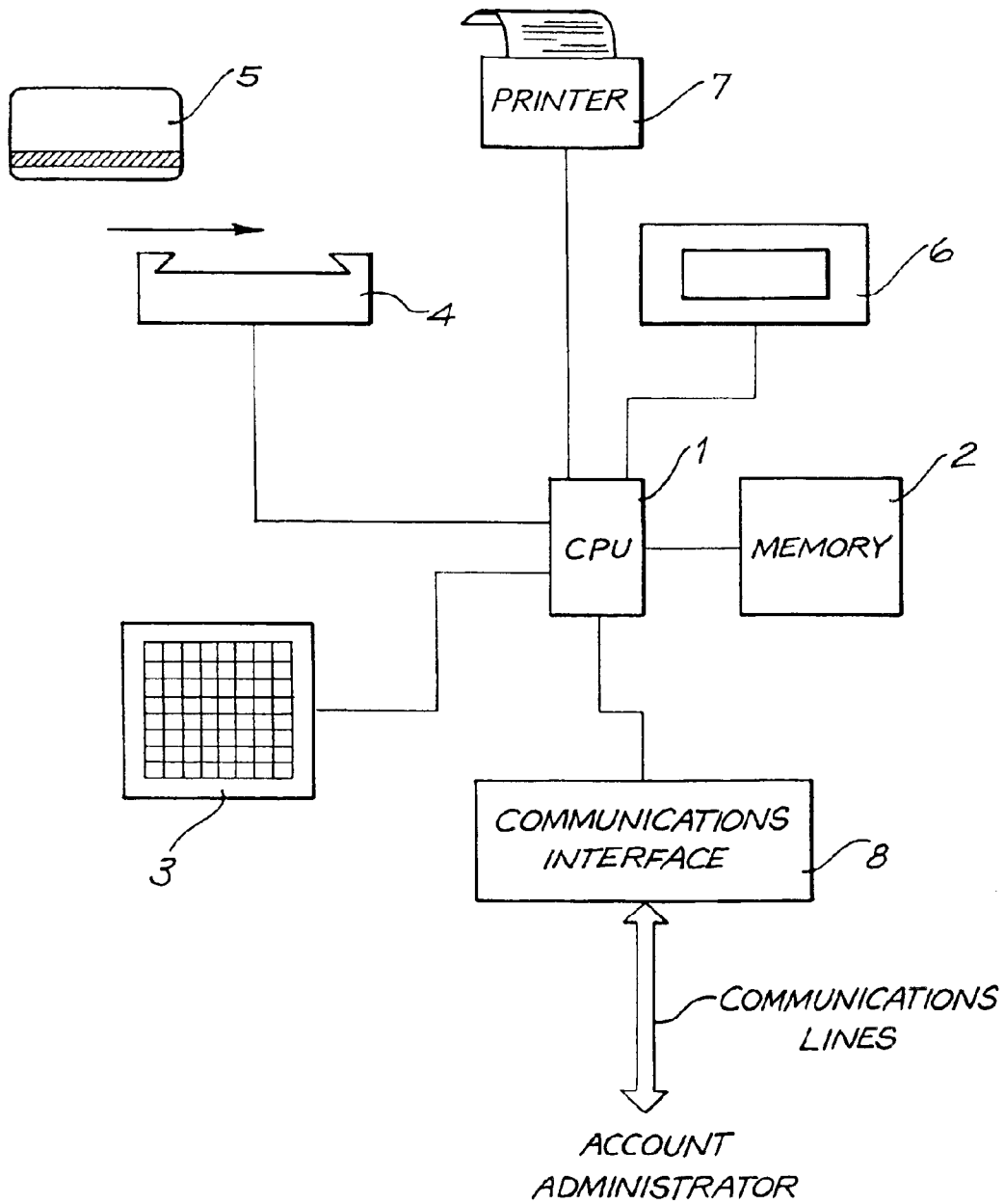


FIG. 1

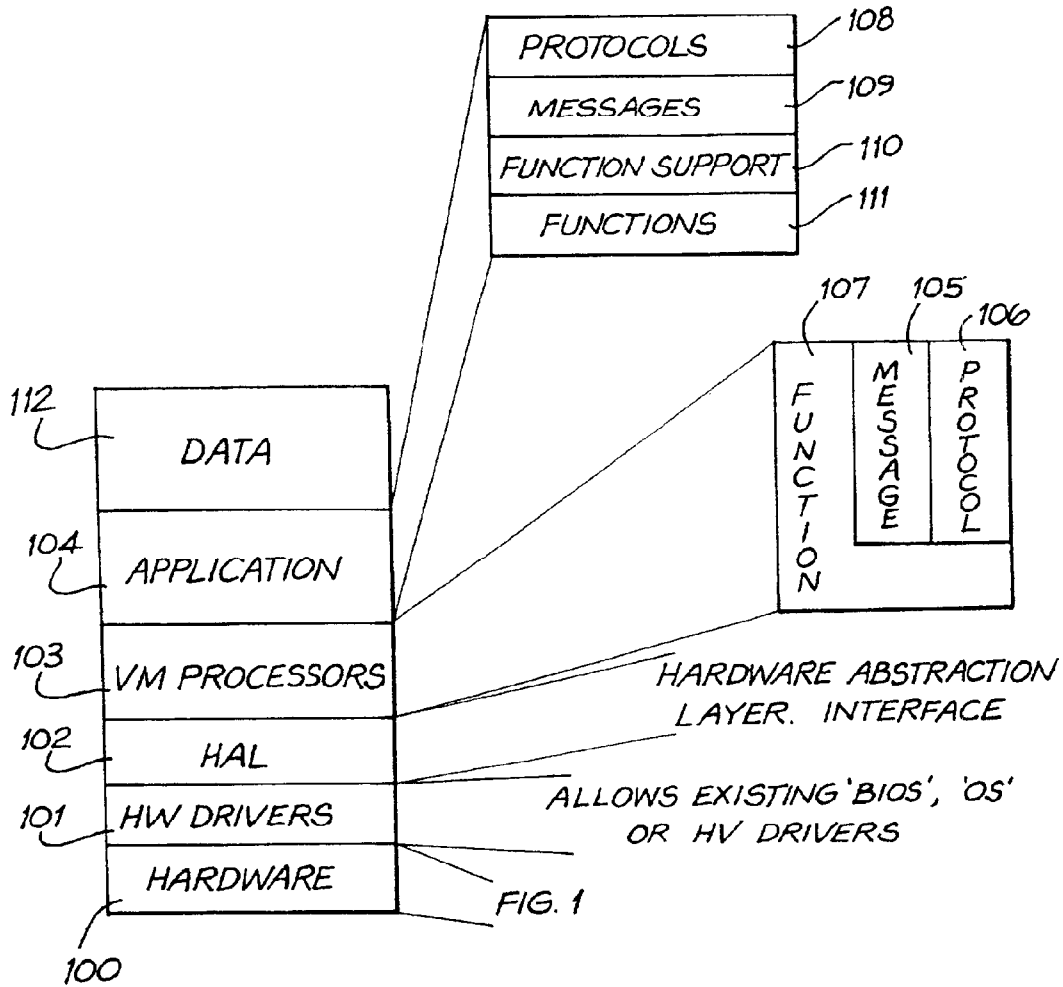


FIG. 2

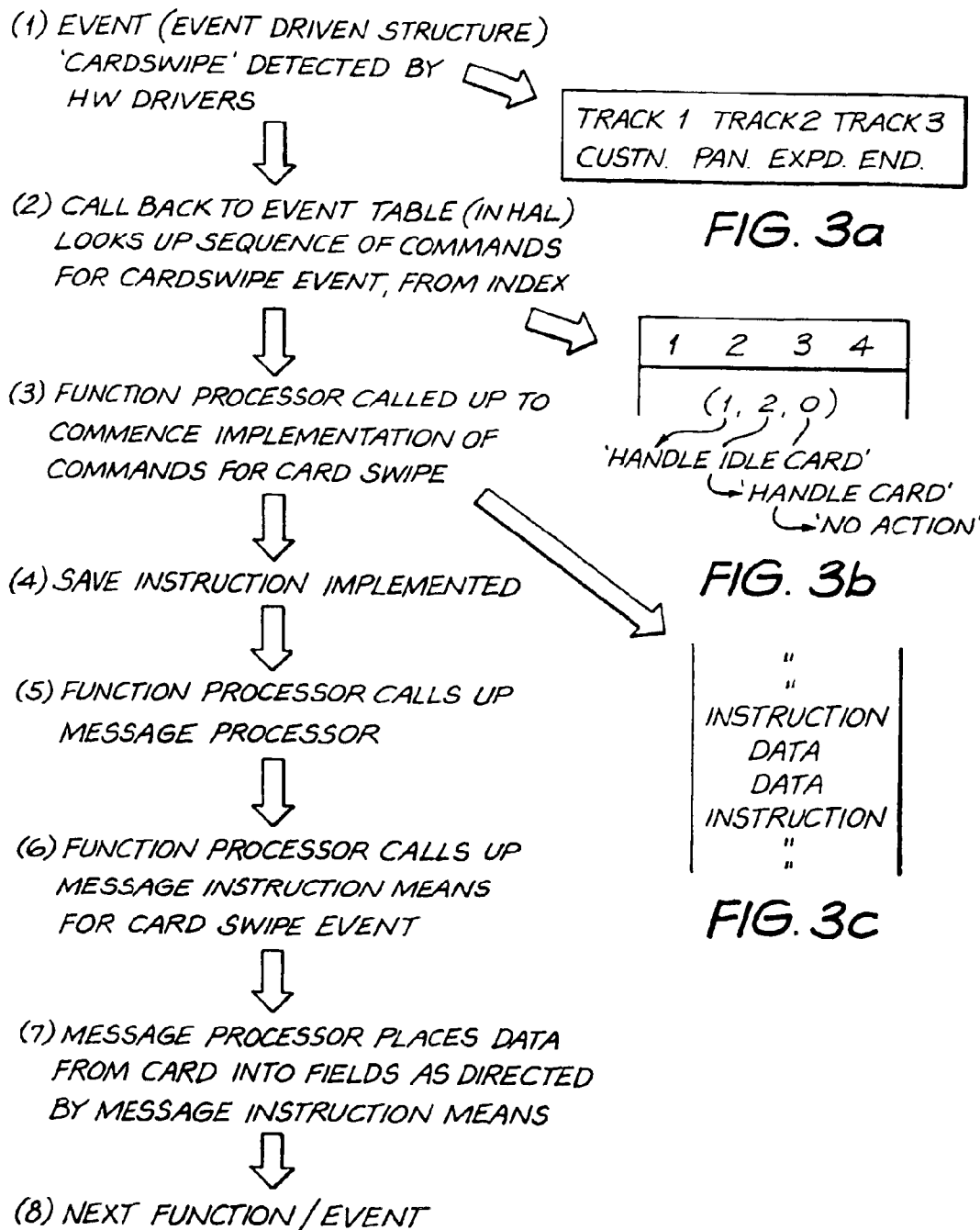


FIG. 3

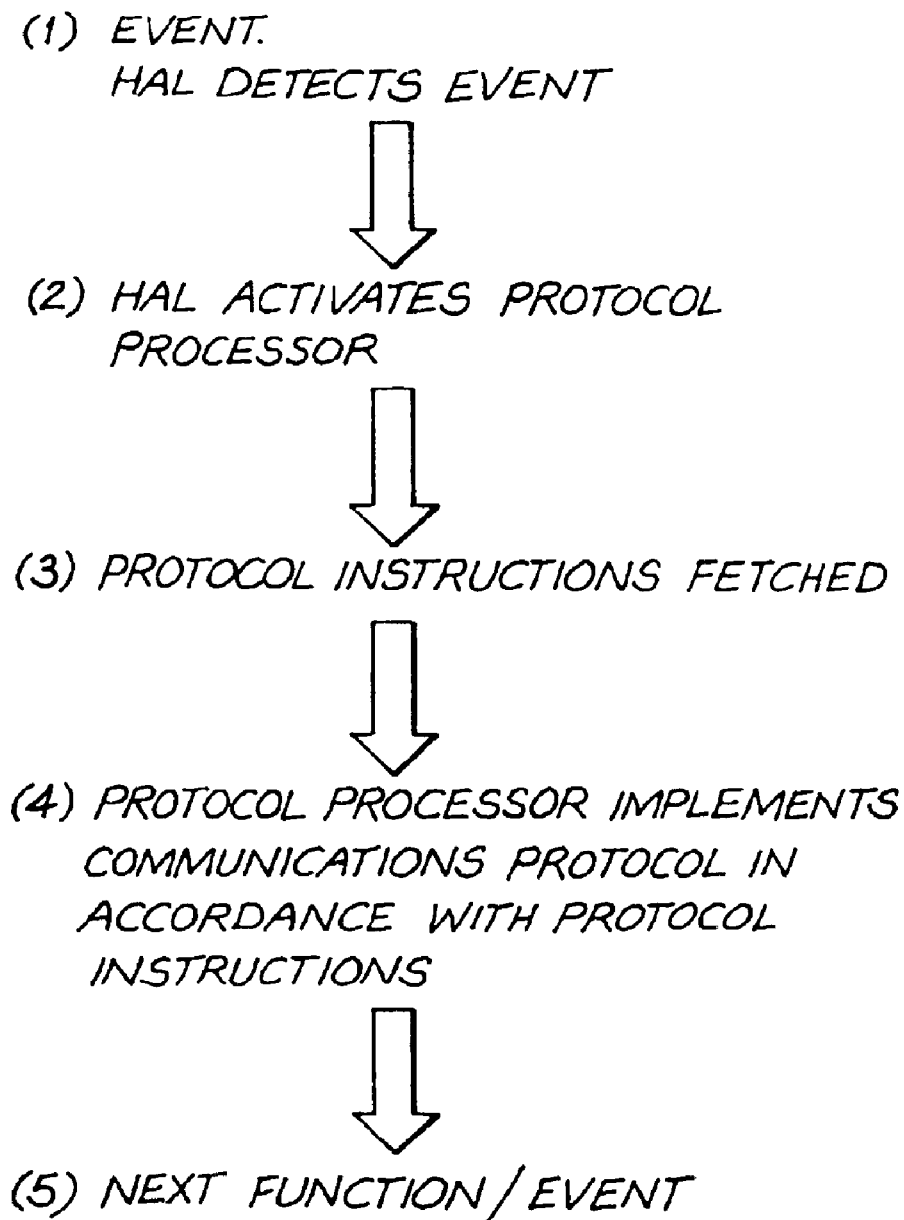


FIG. 4

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.