



US006219771B1

(12) **United States Patent**
Kikuchi et al.

(10) **Patent No.:** **US 6,219,771 B1**
(45) **Date of Patent:** ***Apr. 17, 2001**

(54) **DATA STORAGE APPARATUS WITH IMPROVED SECURITY PROCESS AND PARTITION ALLOCATION FUNCTIONS**

(75) Inventors: **Yoshihide Kikuchi; Masanobu Akagi**, both of Tokyo (JP)

(73) Assignee: **NEC Corporation**, Tokyo (JP)

(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **08/912,791**

(22) Filed: **Aug. 18, 1997**

(30) **Foreign Application Priority Data**

Aug. 30, 1996 (JP) 8-230895

(51) **Int. Cl.⁷** **G06F 12/00**

(52) **U.S. Cl.** **711/164; 711/173; 714/200; 714/202**

(58) **Field of Search** **711/152, 151, 711/173, 163, 164, 112; 710/261, 264, 36, 28; 709/225; 713/200, 201, 202; 705/18**

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,371,929	*	2/1983	Brann et al.	710/45
5,018,096	*	5/1991	Aoyama	711/164
5,237,658	*	8/1993	Walker et al.	710/38
5,263,158	*	11/1993	Janis	707/1
5,469,564	*	11/1995	Junya	380/4
5,537,543	*	7/1996	Itoh et al.	714/48
5,610,981	*	3/1997	Mooney et al.	380/25
5,659,756	*	8/1997	Hefferon et al.	710/200
5,734,718	*	3/1998	Prafullchandra	380/4
5,745,555	*	4/1998	Mark	379/93.03

5,757,916	*	5/1998	MacDoran et al.	380/25
5,778,068	*	7/1998	Johnson et al.	380/25
5,799,206	*	8/1998	Kitagawa et al.	710/36
5,802,590	*	9/1998	Draves	711/164
5,813,006	*	9/1998	Polnerow et al.	707/10
5,913,025	*	6/1999	Higley et al.	707/9
5,940,589	*	8/1999	Donovan et al.	455/26.1
5,944,794	*	8/1999	Okamoto et al.	709/225
6,070,243	*	5/2000	See et al.	713/201
6,088,451	*	7/2000	He et al.	380/25

FOREIGN PATENT DOCUMENTS

63-112861	5/1988	(JP)	.
64-66729	3/1989	(JP)	.
4-58349	2/1992	(JP)	.
4-64985	2/1992	(JP)	.
4-324542	11/1992	(JP)	.
5-274210	10/1993	(JP)	.
7-44481	2/1995	(JP)	.

* cited by examiner

Primary Examiner—Matthew Kim

Assistant Examiner—Pierre-Michel Bataille

(74) *Attorney, Agent, or Firm*—Sughrue, Mion, Zinn, Macpeak & Seas, PLLC

(57) **ABSTRACT**

The apparatus enables access authorization to be assigned solely to specific host devices. A control device comprises: an address registration unit, in which the host address of each host device has been registered for authorizing access, a command interpretation and execution unit which on receipt of a command from a host device via a host device interface outputs the host address of the host device based on the command, and an address verification unit for verifying the host address output from a command interpretation and execution unit against the host address registered in the address registration unit, as well as determining whether or not the particular host device has access authorization. The command interpretation and execution unit incorporates an authorization pending function, so that on receipt of a command from a host device, the command is interpreted and executed only after access is authorized by the address verification unit.

5 Claims, 5 Drawing Sheets

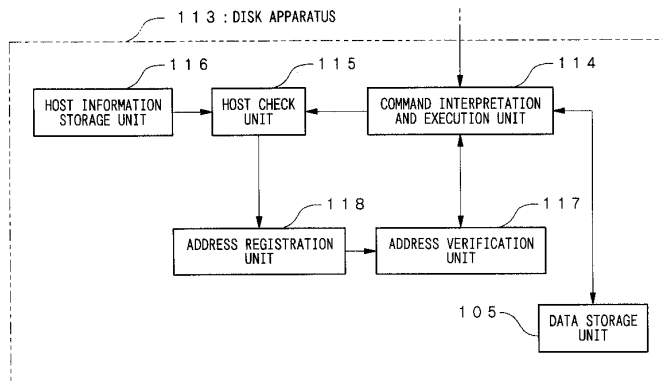


FIG. 1

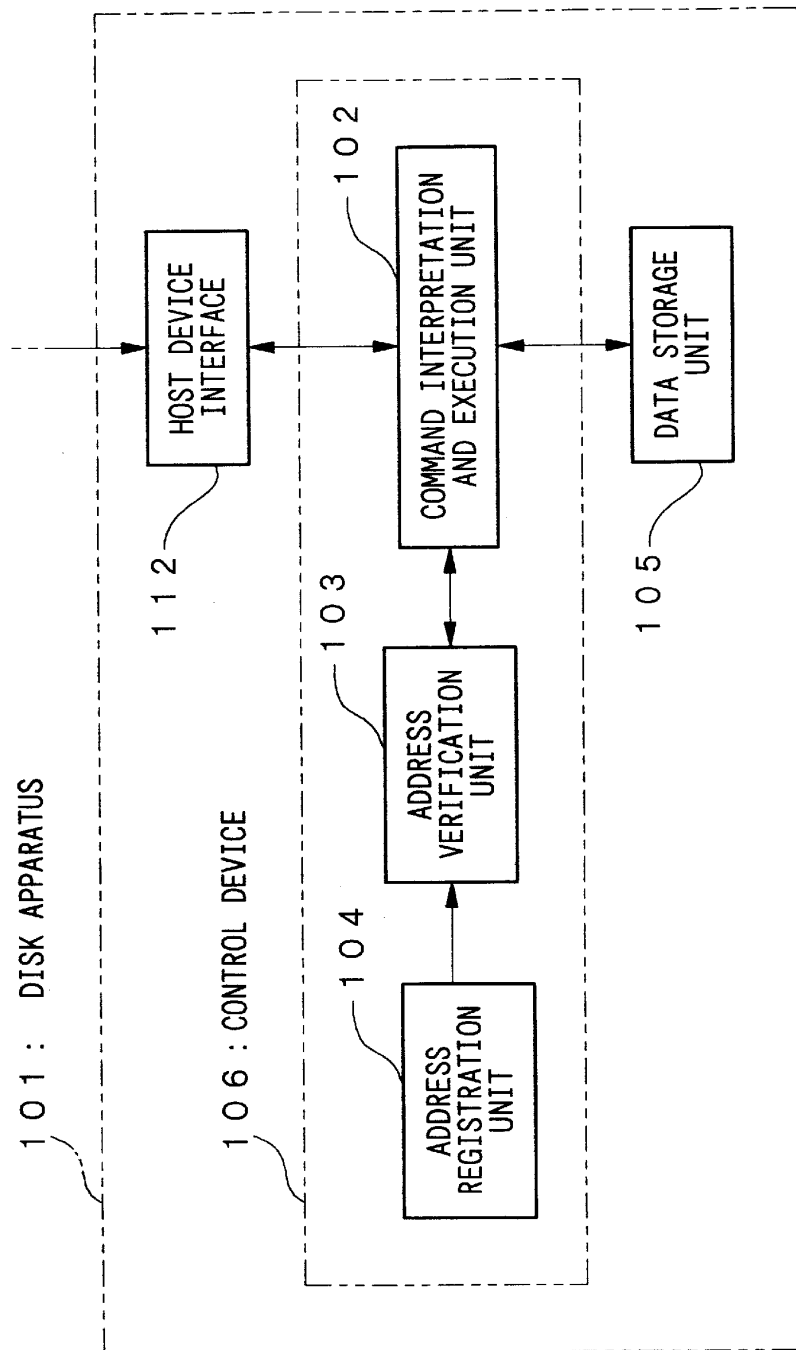


FIG. 2

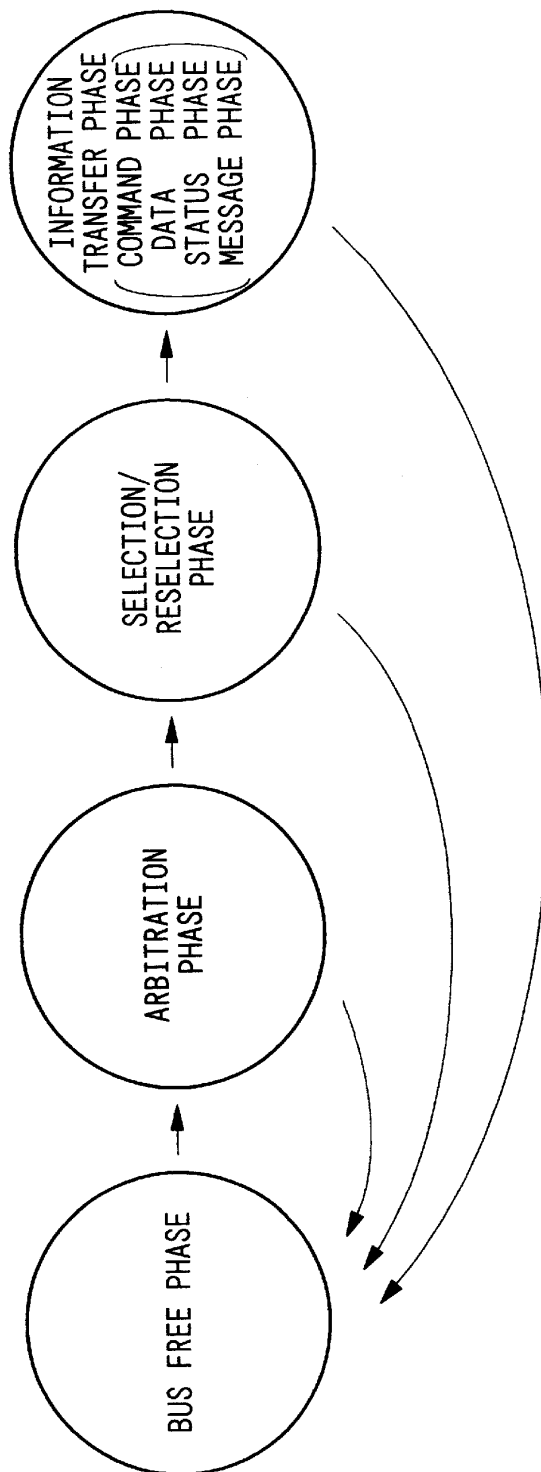


FIG. 3

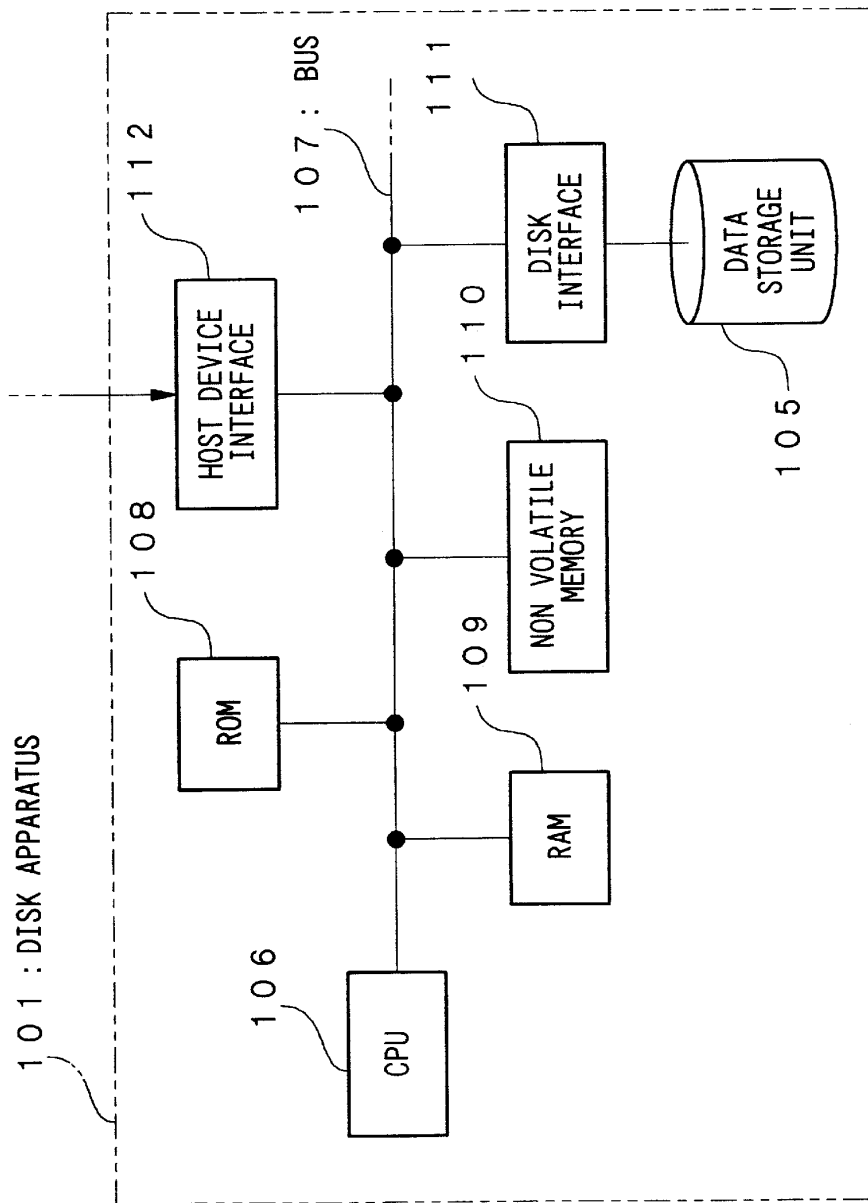
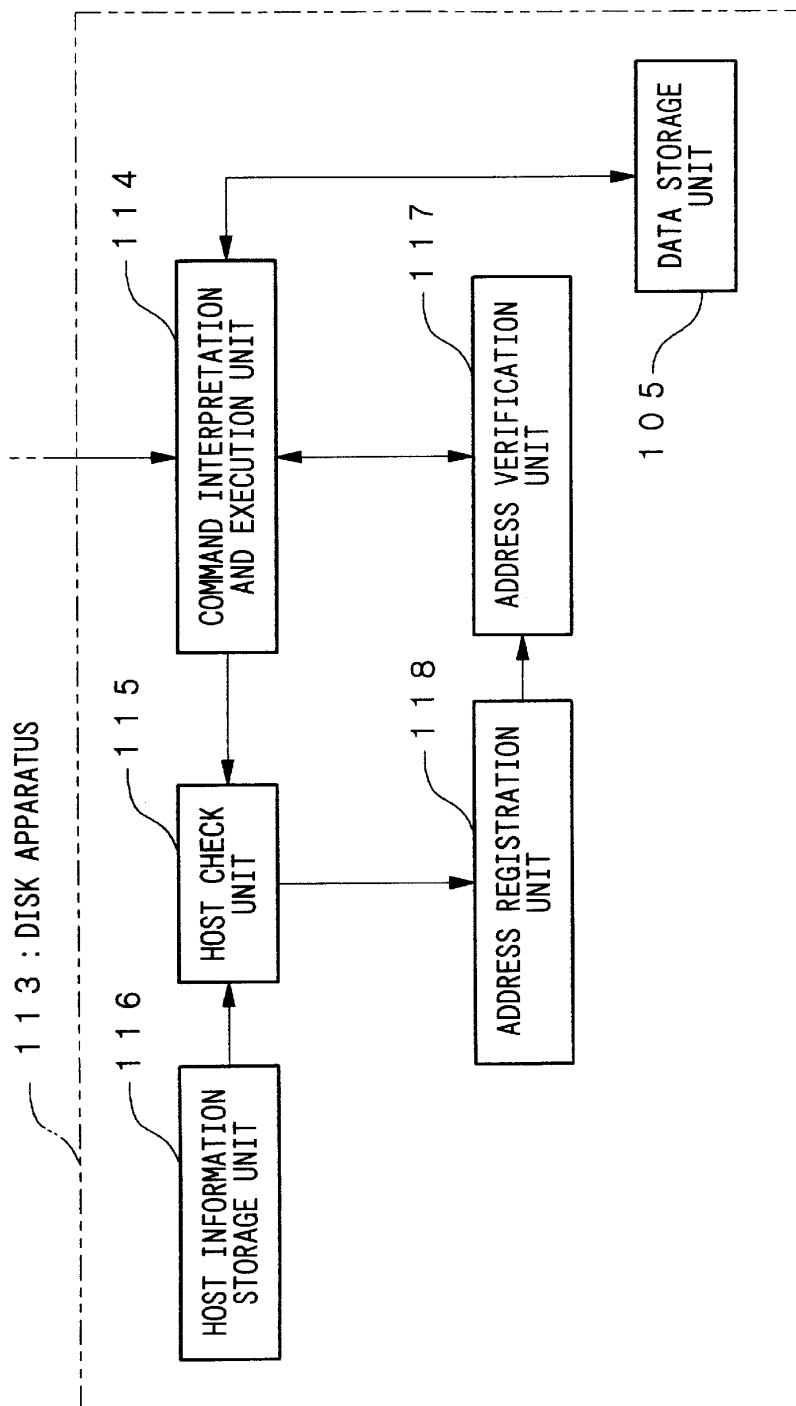


FIG. 4



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.