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Kikuchi et al.

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

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(*) 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.

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(30) **Foreign Application Priority Data**

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(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

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(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

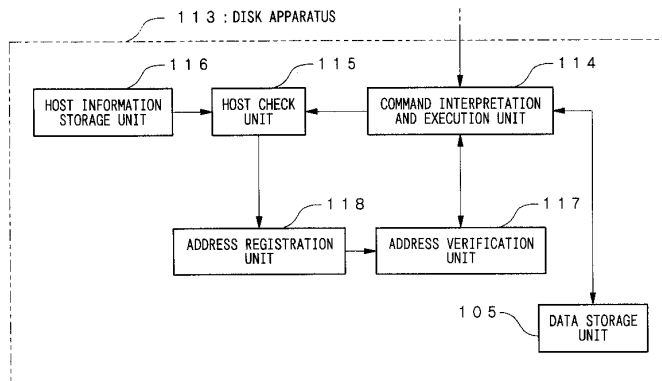


FIG. 1

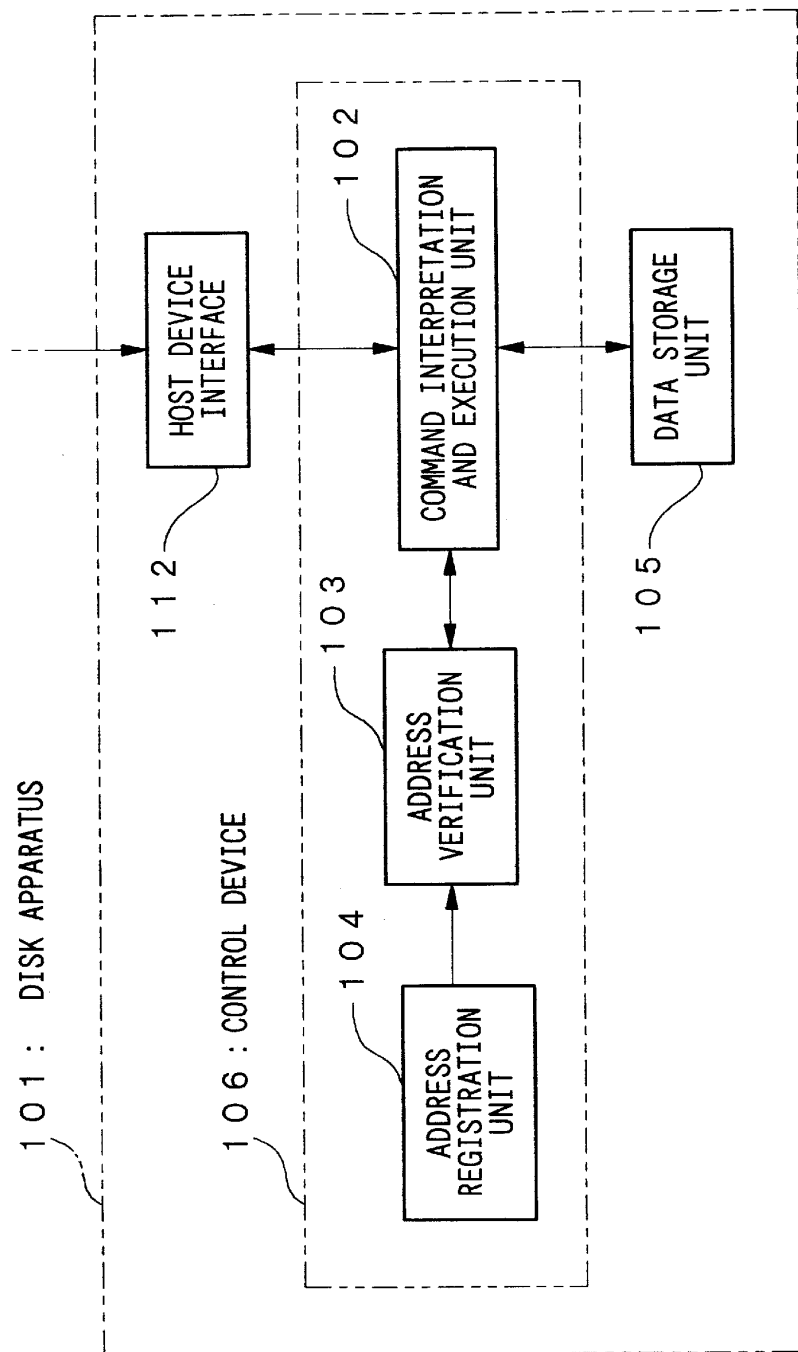


FIG. 2

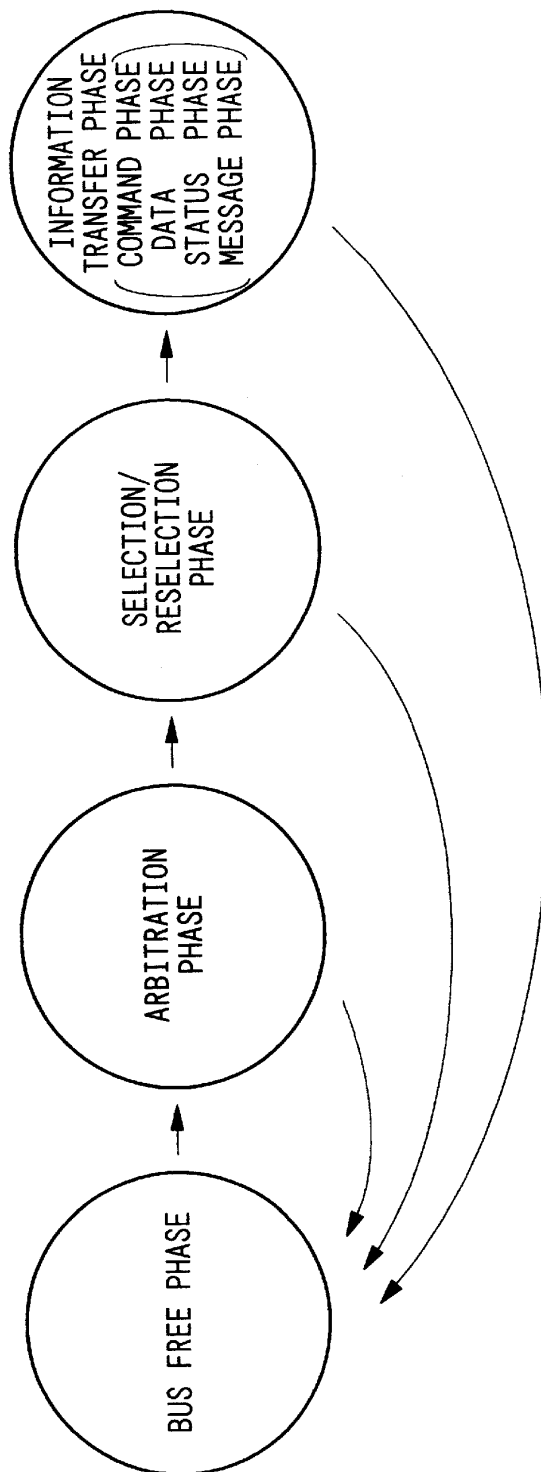


FIG. 3

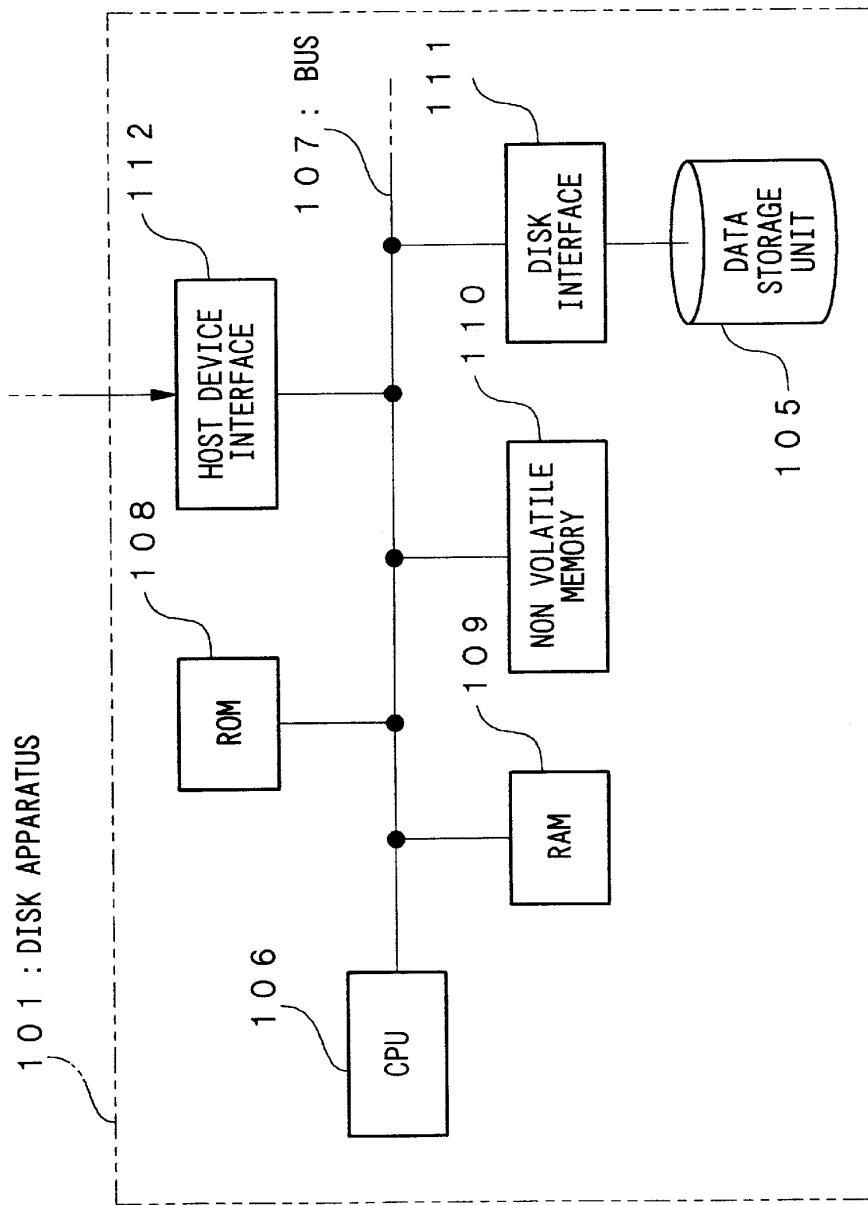
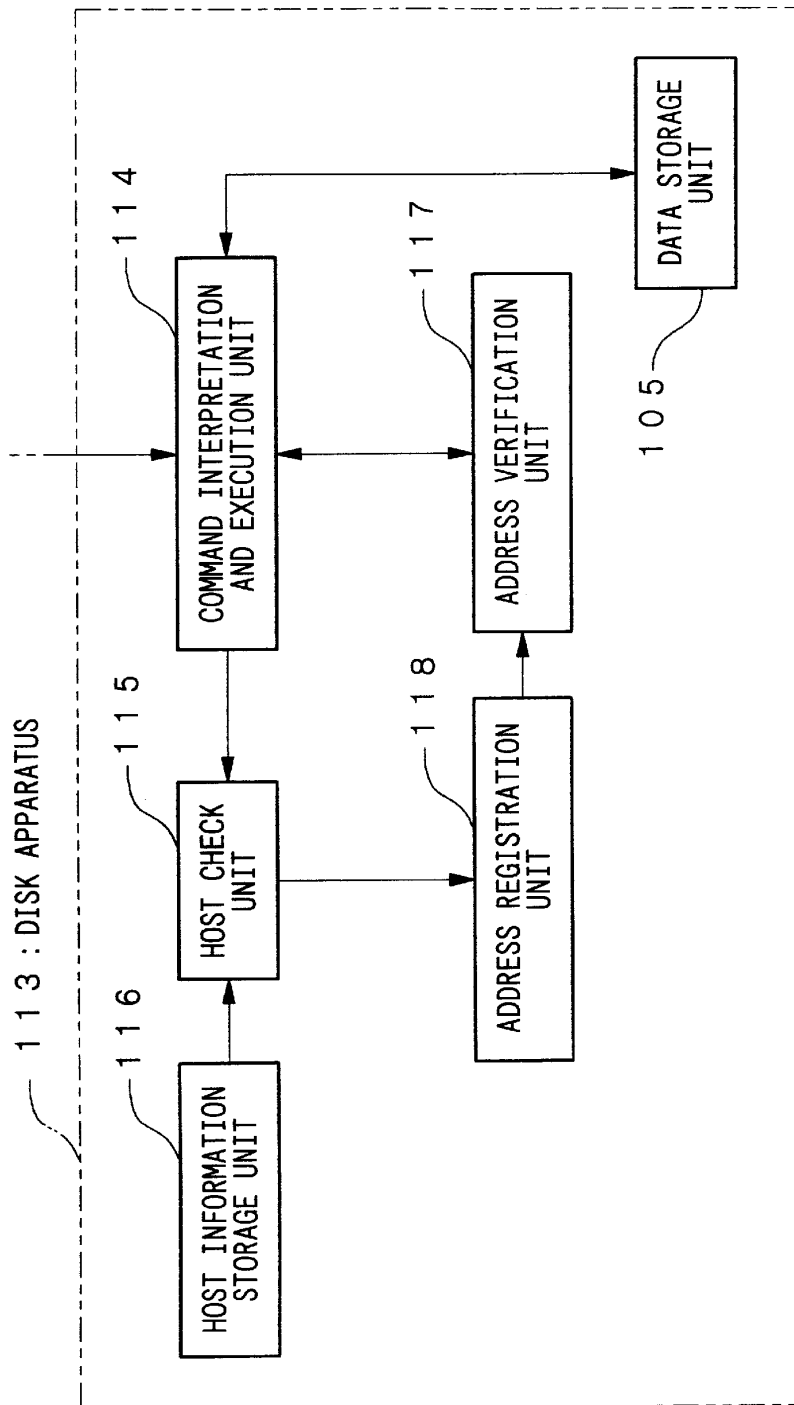


FIG. 4



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