

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : Divisional Application of 09/974,082
Applicant : Han-gyoo KIM
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PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Please enter the following amendments before calculation of the filing fee and examination of the merits.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims begin on page 3 of this paper.

Remarks begin on page 7 of this paper.

Amendments to the Specification:

Please replace the first paragraph of the current specification, appearing on page 1, with the following:

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a divisional of U.S. Patent Application Ser. No. 09/974,082, filed on October 9, 2001, and claims the benefit of ~~co-pending~~ U.S. Provisional Application Ser. No. 60/240,344, filed Oct. 13, 2000, entitled "Disk System Adapted to Be Directly Attached to Network." the entire disclosures of which are incorporated herein by reference.

Amendments to the Claims:

1. (Currently Amended) A network-attached device disk (NAD) access system wherein a host, having an internal host system bus and running an operating system, controls an external device disk through a front end network connecting the host and other devices for carrying general-purpose network traffic including storage as well as other application traffic using a certain network protocol, the system comprising:

a network interface card (NIC) installed at the host for providing a general purpose network connection between the host and the network and via the network to other devices coupled to the network;

a network-attached device disk (NAD) device having a data storage ~~one or more~~ disks to store data, the NAD ~~device attached~~ coupled to the network~~[[,]]~~ for receiving device level disk access commands from the host in data link frames according to the certain network protocol through the network; and

a device driver, running at the host, for creating a virtual host bus adapter in software controlling the NAD ~~device~~ through the network via the NIC, the device driver enumerating NAD that are available over the network, not directly attached to the host internal system bus, to make the host recognize the NAD as a host local device;

~~wherein~~ the virtual host bus adapter controlling~~ing~~[[s]] the NAD ~~device~~ in a way indistinguishable from the way as a physical host bus adapter device controls ~~the same~~ type of ~~[[a]]~~ device so that the host recognizes the NAD ~~device~~ as if it is a local device connected directly to the system bus of the host.

2. (Original) The NAD system of claim 1, wherein the network is a wired network.

3. (Original) The NAD system of claim 1, wherein the network is a wireless network.
4. (Original) The NAD system of claim 1, wherein the NIC is an Ethernet card.
5. (Original) The NAD system of claim 1, wherein the operating system is the UNIX family of operating systems.
6. (Original) The NAD system of claim 5, wherein the device driver comprises a device file and device driver routines for the device driver to register the device driver to the host.
7. (Original) The NAD system of claim 6, further comprising a device accessing thread for accessing the NAD device.
8. (Original) The NAD system of claim 6, further comprising a device searching thread for searching for a device attached to the network.
9. (Original) The NAD system of claim 6, further comprising a network connection setting thread for making a connection between the device driver and the NAD device.
10. (Original) The NAD system of claim 6, wherein the NAD disk further comprises a plurality of individual disk partitions.

11. (Original) The NAD system of claim 10, wherein the device driver comprises a plurality of individual device drivers, each individual device driver for controlling the individual disk partition whereby each individual disk partition is accessed as an independent local disk.

12. (Original) The NAD system of claim 10, wherein the device driver comprises a plurality of individual partitions, each driver partition for controlling each individual disk partition.

13. (Original) The NAD system of claim 1, further comprising a second NAD device, a second device driver, and a unified device driver combining the device driver and the second device driver so that the NAD device and the second NAD device are recognized as logically a single local device.

14. (Original) The NAD system of claim 1, wherein the driver includes: a bus driver for creating the virtual host adapter to access the NAD device as fit is a local device connected directly to the system bus of the host; and a port driver for communicating the disk access command from the host to the NAD device through a network port.

15. (Original) The NAD system of claim 14, wherein the operating system is the Windows family of operating systems.

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