

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

Samsung Electronics Co., Ltd., Samsung Electronics
America, Inc., and LG Electronics, Inc.
Petitioners,

v.

Papst Licensing GmbH & Co. KG.,
Patent Owner

IPR2016-01733
U.S. Patent No. 9,189,437

Patent Owner Papst's Demonstratives
Hearing Date: November 1, 2017

Overview

- Petitioners Fail To Meet Their Burden To Establish Unpatentability
 - Independent Claims 1, 39, 41, 43
 - Automatic File Transfer Process
 - “without requiring any user-loaded file transfer enable software to be loaded on or installed in the computer time” (Claim 1)
 - “using customary device driver present in the BIOS” (Claim 41)
 - “by a hard disk driver program which is matched to the host computer and part of a manufacturer installed BIOS on the host computer.” (Dependent Claim 8)
 - A/D converter “configured to acquire analog data from each respective analog acquisition channel” (Claim 39)
 - A/D converter “configured to *simultaneously* acquire analog data from each respective analog source” (Claim 41)
 - Testimony of Expert Gafford not disputed

Automatic File Transfer Process . . .without requiring any user-loaded file transfer enabling software to be . . .installed in the computer at a time” (Claim 1)

- Petition never addresses Aytac’s specialized software (Pet. at 43-44)
- Petitioners’ Reply arguments:
 - CATSYNC’s synchronization and cache clearing functions are not explicitly claimed, therefore CATSYNC’s presence on host computer irrelevant (Reply at 4)
 - CATSYNC not required to transfer a file (Reply at 13-14)
- Papst’s Response:
 - CATSYNC’s functions enable transfer of the correct file requested (Response at 48-54)
 - CATCAS needed for enabling acquisition and transfer of faxes (Response at 45-47, 60; Ex. 2006 at ¶ 43)
 - CATSYNC is required for file transfer- Aytac discloses CATSYNC is every single time a file is transferred (Response at 40-41, 60)
 - To meet negative limitations, Aytac must be modified to remove CATSYNC (Response at 45-47)
 - CaTbox would be inoperable without CATSYNC – CATSYNC is file

The '437 Patent Teaches a Device That Does Not Rely on Specialized Software

“The *user* is no longer responsible for installing the interface device 10 on the host device by means of specific drivers which must also be loaded; instead the interface device is automatically readied for operation when the host system is booted”

(‘437 patent at 7:22-26, Responses)

“The interface device according to the present invention therefore no longer communicates with the host device or computer by means of a specially designed driver but the means of communication is a program which is present in the BIOS system ...”

(‘437 patent at 4:23-27; Responses)

“Using a standard interface of a host device, the interface device according to the present invention permits communication with any host device. By simulating an input/output device to the host device and, in a preferred embodiment, by simulating a virtual mass storage device, the interface device is automatically supported by all known host systems without the need for additional sophisticated driver software.”

Automatic File Transfer Process

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to the host computer. If however the virtual hard disk wishes to write data actively to, for example, a hard disk of the host computer or wishes to initiate communication with the processor of the host computer, the host computer must recognize the request of the virtual hard disk and tolerate a further issuer of instructions on its bus. If the interface device behaves solely like a virtual hard disk, it would always receive and never issue commands. The BIOS has no objections to an additional issuer of commands that actively wishes to place data on the bus of the host device but the BIOS does not support the host device in recognizing corresponding requests of the interface device or in granting the interface device permission to access the bus.

Using the ACPI manager the interface device according to the present invention can now obtain active access to an SCSI hard disk of the host device connected to the same SCSI bus which, in contrast to the interface device, cannot be a virtual but a real SCSI mass storage device or also a further interface device according to the present invention. Thereupon, the interface device according to the present invention can write the desired data to the SCSI hard disk of the host computer totally independently of the host computer or can communicate with the same in some other manner. The interface device according to the present invention therefore initially behaves passively as a virtual hard disk and then, as required and using the driver software for the multi-purpose interface, actively on the same SCSI bus. This means however that the interface device according to the present invention, using a driver software for the multi-purpose interface which comprises the BIOS routines customary in host devices and simultaneously provides the option of active participation, can, regardless of the type of the data transmit/receive device attached to the second connecting device, behave initially as a virtual and at the same time passive hard disk but can, as required, participate actively on the bus so as to be able to initiate communication directly with other SCSI hard disks of the host device by bypassing the processor of the host device.

Using a standard interface of a host device, the interface device according to the present invention permits communication with any host device. By simulating an input/output device to the host device and, in a preferred embodiment, by simulating a virtual mass storage device, the interface device 10 is automatically supported by all known host systems without any additional sophisticated driver software. The simulation of a freely definable file structure on the "virtual" hard disk provides simple operation and expansion options and, through the implementation of any programs, independence from special software implemented on the host device. Help files included on the interface device 10 and plug-and-play support ensure ease of use even in portable, flexible host devices. Despite the very simple user interface, experienced users are free at any time to intervene in the functions of the interface device 10 on system level. The interface device 10 thus provides a universal solution which can cover the entire spectrum of possible data transmit/receive devices.

What is claimed is:

1. An analog data generating and processing device (ADGPD), comprising:

an input/output (i/o) port;
a program memory;

a data storage memory;

a processor operatively interfaced with the i/o port, the program memory and the data storage memory;

wherein the processor is adapted to implement a data generation process by which analog data is acquired from each respective analog acquisition channel of a plurality of independent analog acquisition channels, the analog

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data from each respective channel is digitized, coupled into the processor, and is processed by the processor, and the processed and digitized analog data is stored in the data storage memory as at least one file of digitized analog data;

wherein the processor also is adapted to be involved in an automatic recognition process of a host computer in which, when the i/o port is operatively interfaced with a multi-purpose interface of the host computer, the processor executes at least one instruction set stored in the program memory and thereby causes at least one parameter identifying the analog data generating and processing device, independent of analog data source, as a digital storage device instead of as an analog data generating and processing device to be automatically sent through the i/o port and to the multi-purpose interface of the computer (a) without requiring any end user to load any software onto the computer at any time and (b) without requiring any end user to interact with the computer to set up a file system in the ADGPD at any time, wherein the at least one parameter is consistent with the ADGPD being responsive to commands issued from a customary device driver;

wherein the at least one parameter provides information to the computer about file transfer characteristics of the ADGPD; and

wherein the processor is further adapted to be involved in an automatic file transfer process in which, when the i/o port is operatively interfaced with the multi-purpose interface of the computer, and after the at least one parameter has been sent from the i/o port to the multi-purpose interface of the computer, the processor executes at least one other instruction set stored in the program memory to thereby cause the at least one file of digitized analog data acquired from at least one of the plurality of analog acquisition channels to be transferred to the computer using the customary device driver for the digital storage device while causing the analog data generating and processing device to appear to the computer as if it were the digital storage device without requiring any user-loaded file transfer enabling software to be loaded on or installed in the computer at any time.

2. The analog data generating and processing device of claim 1 wherein the processor is configured to transmit to the computer active commands through the multi-purpose interface to access a system bus of the computer to enable communication directly with other devices of the computer while bypassing the computer processor.

3. The analog data generating and processing device of claim 2 wherein the active commands initiate active access to write data directly to a hard drive in the host computer independent of the host computer central processor.

4. The analog data generating and processing device of claim 1 is configured to allow at least one analog source to be attached thereto and detached therefrom.

5. The analog data generating and processing device of claim 1, wherein the analog data generating and processing device is attached directly to at least one analog source.

6. The analog data generating and processing device of claim 1, wherein the analog data generating and processing device is a stand alone device.

7. The analog data generating and processing device of claim 1, wherein the input/output port further comprises a SCSI interface circuit.

8. The analog data generating and processing device of claim 1 wherein the at least one parameter identifies the analog data generating and processing device as a hard disk

“wherein the processor is to be involved in an automatic file transfer process in which the i/o port is operatively interfaced with the multi-purpose interface of the host computer, and after the at least one parameter identifying the analog data generating and processing device has been sent from the i/o port to the multi-purpose interface of the host computer, the processor executes at least one other instruction set stored in the program memory to thereby cause the at least one file of digitized analog data acquired from at least one of the plurality of analog acquisition channels to be transferred to the computer using the customary device driver for the digital storage device while causing the analog data generating and processing device to appear to the computer as if it were the digital storage device without requiring any user-loaded file transfer enabling software to be loaded on or installed in the computer at any time..”

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