

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,806,072
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	<p>The instruction set stored in the processor and memory is adapted to utilize a FAT file system serial driver associated with the PC to communicate with the PC. <i>E.g.</i> Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. Images are stored as files organized by a directory or subdirectory supported by DOS, making it possible to store the image data in a hierarchical structure. Figs. 4-7; col. 7, lines 47-55; col. 14, line 53 – col. 16, line 15.</p>
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	<p>See '399 claim 3, row E*.</p>

Exhibit A19

PRIOR ART CLAIM CHART
U.S. Patent No. 5,812,879

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,812,879
A	Independent Claim 1: 1. An interface device for communication between	Adapter 1
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Host computer 2, including host serial port 4, and a hard disk driver, which was customary on a host device in the relevant time period.
C	a data transmit/receive device,	Multiple devices can be connected to ports 25, 30, 32, and 33 and to PWM signal generator 31
C1	the data transmit/receive device being arranged for providing analog data, comprising:	RC measurement port 33 receives analog data from a device
D	a processor;	Adapter CPU 23
E	a memory;	RAM 27, Program ROM 26
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Adapter serial port 24
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Ports 25, 30, 32, and 33 and PWM signal generator 31
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Since adapter 1 can include an ADC, adapter 1 includes a sampling circuit (see col. 7, lines 6-14).
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Adapter 1 can include an ADC (see col. 7, lines 6-14)
H	wherein the interface device is configured by the processor and the memory	ROM 26 stores an operating program for the adapter 1 (see col. 6, lines 63-67; col. 8, lines 39-44))
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,812,879
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	Host computer 2, including host serial port 4
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,812,879
K1	which signals to the host device that it is an input/output device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Adapter 1 translates commands received from the host computer 2 to actions with the adapter 1 and translates data read from the peripheral ports to messages for transmission to the host computer 2 (col. 8, lines 60-67)
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K1	in such a way that it is an input/output device customary in a host device,	

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,812,879
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
Z*	Dependent Claim 4: 4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,812,879

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 812,879
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	The non-volatile memory (MNV) contains a structure of organization of files exactly as if "this electronic card were nothing but a flexible magnetic disk or a hard disk." (col. 4, lines 1-3). The data relating to the organization of memory includes a root directory. (col. 4, lines 24-29). The files are virtual in that they convey real-time data from the fax, modem, etc.

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U.S. Patent No. 5,812,879

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 812,879
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,812,879

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,812,879
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	

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Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,812,879
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	

Exhibit A21

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
A	Independent Claim 1: 1. An interface device for communication between	The "interface device" of the camera 100 comprises at least a microprocessor 50 inside CPU 23 and a memory (control program storing area 51, FIFO circuit or memory 13, and memory card 16). See FIG. 8.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Hashimoto '604 Patent discloses a digital camera 100 that can be connected to a computer (host device) through an external communication interface 180 to transfer image and/or audio data to and from the computer. See Abstract and col. 4, lines 48-56.
C	a data transmit/receive device,	The "data transmit/receive device" of the camera can be the image photographing section 6, which further includes a photographing lens 7, a lens opening 8, and an image photographing element 9 such as a CCD. See FIG. 8.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	At least the CCD is arranged for providing analog image data.
D	a processor;	The CPU 23 contains a microprocessor 50 and RAM 52. See col. 8, lines 48-52.
E	a memory;	The digital camera 100 has a control program storing area 51, a built-in memory, in the CPU 23 to store an operating system for the microprocessor in the system. In addition, the digital camera 100 has the FIFO circuit or memory 13, and memory card 16 to store the digital pixel signals. See col. 8, lines 37-62.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The digital camera 100 can connect to an RS-232 or RS-422 interface of a computer through an external communication interface 180 to transfer image and/or audio data to and from the computer. See col. 8, lines 4-7. FIG. 8 shows that the digital camera 100 can communicate with a communication device, such as a computer, via the interface circuit 27 and the signal level conversion circuit 28. The signal level conversion circuit 28 can be disposed on the external communication interface 180. Thus, a first connecting device comprises at least the interface circuit 27 and the signal level conversion circuit 28. Either an RS-232 or an RS-422 interface is a multi-purpose interface.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	The digital camera 100 comprises a sampler CDS and a A/D converter for sampling and converting the analog image data output by the CCD to digital data. See col. 6, lines 45-55 and FIG. 8.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Same as above
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Same as above.
H	wherein the interface device is configured by the processor and the memory	The CPU 23 contains a microprocessor 50 and RAM 52, as well as memory 55 for storing BIOS routines and other routine used by the camera. See col. 8, lines 48-58.
H1	to include a first command interpreter and a second command interpreter,	The routines stored in memory 51 comprise a first and second command interpreter.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	After the camera 100 is connected to a computer via the RS-232 standard interface, it monitors the DTR signal from the computer to determine if it is ready for data communication. See col. 10, line 41-col. 11, line 1. Thus, the camera 100 has a first command interpreter that responds to the computer's inquiry that it is an input/output device that the computer can communicate with, i.e. an input/output device that is customary in a computer.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	The signals sent to the host computer are independent of the attached data transmit/receive device.
K1	which signals to the host device that it is an input/output device customary in a host device	The signals sent to the host are indicative of a device capable of communicating in a customary manner over the RS-232 interface.
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The computer uses the standard RS-232 drivers to communicate with the camera 100.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	The camera 100 can transmit data to the computer, thus it contains a second command interpreter that is configured to interpret a data request command from the computer to the camera as a data transfer command for initiating a transfer of the digital data to the computer. See col. 11, lines 13-33.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	The computer uses the standard RS-232 drivers to communicate with the camera 100.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	The computer uses the standard RS-232 drivers to communicate with the camera 100.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	FIFO circuit 13 and memory card 16.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
Z*	Dependent Claim 4: 4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	The CPU 23 is communicate with a Digital Signal Processing Circuit. See FIG. 8. Thus the CPU 23 is a digital signal processor.
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	
A	[Start of '449 Patent] Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
K2*	Dependent Claim 15: 15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A22

PRIOR ART CLAIM CHART

U.S. Patent No. 5,841,471

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,841,471
A	Independent Claim 1: 1. An interface device for communication between	Digital Camera 10
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Host computer 12
C	a data transmit/receive device,	Lens 18 and Imager 20
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The output of imager 20 is an analog image signal
D	a processor;	Microprocessor 38
E	a memory;	SRAM 34
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	USB device I/F 40
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Gain & CDS 24 and ADC 26
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Gain & CDS 24
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	ADC 26
H	wherein the interface device is configured by the processor and the memory	
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Images are transferred from SRAM 34 to the host computer 12 via the USB interface 40 (see col. 3, line 37 – col. 4, line 59)

PRIOR ART CLAIM CHART
U.S. Patent No. 5,841,471

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,841,471
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	
K1	which signals to the host device that it is an input/output device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Images are transferred from SRAM 34 to the host computer 12 via the USB interface 40 (see col. 3, line 37 – col. 4, line 59) See also '399 claim 1, row M.

PRIOR ART CLAIM CHART

U.S. Patent No. 5,841,471

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,841,471
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K1	in such a way that it is an input/output device customary in a host device,	
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,841,471

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,841,471
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,841,471

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 841,471
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.

PRIOR ART CLAIM CHART

U.S. Patent No. 5,841,471

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 841,471
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,841,471

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 841,471
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,841,471

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 841,471
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,841,471

Exhibit A23

PRIOR ART CLAIM CHART

U.S. Patent No. 5,844,961

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,844,961
A	Independent Claim 1: 1. An interface device for communication between	Digital cassette 200
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Computer 220, which includes various drivers, such as a hard disk driver.
C	a data transmit/receive device,	Imaging array system 450
C1	the data transmit/receive device being arranged for providing analog data, comprising:	Imaging array system captures the X-ray image as analog data (see col. 8, lines 38-45)
D	a processor;	CPU 2050 (see Fig. 20)
E	a memory;	RAM 2030, ROM 2035 (see col. 15, lines 10-35 and Fig. 20)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	I/O 2060 (see Fig. 20)
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Readout electronics 2012, frame buffer 2014 (see Fig. 20)
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Sample and hold 2160 (see col. 18, lines 4-9)
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	The captured light is converted into a digital image. (see col. 8, lines 38-45 and col. 17, lines 59-51)
H	wherein the interface device is configured by the processor and the memory	ROM 2035 includes the software necessary to run the digital cassette 200 (see col. 15, lines 31-35 and Fig. 20)
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,844,961

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,844,961
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Images are transferred from the RAM 203 via the communications link 210 to the computer 220 (see col. 26, lines 13-17)
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	

PRIOR ART CLAIM CHART

U.S. Patent No. 5,844,961

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,844,961
K1	which signals to the host device that it is an input/output device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Images are transferred from the RAM 203 via the communications link 210 to the computer 220 (see col. 26, lines 13-17)
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K1	in such a way that it is an input/output device customary in a host device,	
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,844,961

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,844,961
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
Z*	Dependent Claim 4: 4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,844,961

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,844,961
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,844,961

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 844,961
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,844,961

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,844,961
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	

PRIOR ART CLAIM CHART
U.S. Patent No. 5,844,961

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,844,961
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>16. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	

Exhibit A24

PRIOR ART CLAIM CHART

U.S. Patent No. 5,848,420

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,848,420
A	Independent Claim 1: 1. An interface device for communication between	Components of camera 70 interfacing the CCD 80 with the microprocessor-based unit 20 via the cable 76
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Microprocessor-based unit 20 uses a Windows-based operating system and has a Serial port 75
C	a data transmit/receive device,	CCD 80
C1	the data transmit/receive device being arranged for providing analog data, comprising:	CCD 80 generates an analog signal representative of a captured image.
D	a processor;	Camera 70 includes a processor for controlling the operation of the camera.
E	a memory;	Memory 62
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Cable 76 connects camera 70 with serial port 75 of microprocessor-based unit 20.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Camera 70 includes circuitry for connecting the CCD 80 with the other components of the camera 70.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Camera 70 includes a sampler as part of the process of converting the analog signal from the CCD 80 into a digital image signal. See also HP PhotoSmart.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Camera 70 includes an ADC as part of the process of converting the analog signal from the CCD 80 into a digital image signal. See also HP PhotoSmart.
H	wherein the interface device is configured by the processor and the memory	Camera 70 includes a processor that operates in accordance with programming stored in a memory in the camera 70.
H1	to include a first command interpreter and a second command interpreter,	See column 4, lines 4-45
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	

PRIOR ART CLAIM CHART

U.S. Patent No. 5,848,420

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,848,420
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	Microprocessor-based unit 20 communicates with camera 70 using a software program configured as a disk device driver. (see col. 4, lines 4-45) A hard disk driver was customary in a host device in the relevant time period.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	After mounting the camera 70 as a disk drive and verifying the camera 70 is connected, each image is downloaded from the memory 62 of the camera 70 to memory 92 in microprocessor-based unit 20. (see col. 4, lines 32-45)
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	Serial port 75 is a multi-purpose interface. The software program is configured as a disk device driver to enable communication between the camera 70 and the microprocessor-based unit 20 via the serial port 75. (see col. 4, lines 4-45) The disk driver is a specific driver for the interface.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.

PRIOR ART CLAIM CHART

U.S. Patent No. 5,848,420

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,848,420
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	.
K1	which signals to the host device that it is an input/output device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	Microprocessor-based unit 20 communicates with camera 70 using a software program configured as a disk device driver (see col. 4, lines 4-45)
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.

PRIOR ART CLAIM CHART
U.S. Patent No. 5,848,420

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,848,420
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	.
K1	in such a way that it is an input/output device customary in a host device,	.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	The Windows operating system includes a hard disk driver. When using the hard disk driver, the signals sent from the camera to the host must indicate that the host is communicating with a hard disk. See <i>DOS Manual</i> .
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	Camera 70 includes a DSP as part of the digital image processing of the captured image before storing in memory 62
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	A virtual file allocation table is calculated for the image files stored in the memory 62 of camera 70 (see col. 4, line 45 – col. 5, line 47).
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	The Windows operating system includes a hard disk driver.

PRIOR ART CLAIM CHART
U.S. Patent No. 5,848,420

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,848,420
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	Microprocessor-based unit 20 communicates with camera 70 using a software program configured as a disk device driver (see col. 4, lines 4-45)
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	A virtual file allocation table is calculated for the image files stored in the memory 62 of camera 70 (see col. 4, line 45 – col. 5, line 47)

PRIOR ART CLAIM CHART
U.S. Patent No. 5,848,420

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,848,420
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	A virtual file allocation table is calculated for the image files stored in the memory 62 of camera 70 (see col. 4, line 45 – col. 5, line 47)

PRIOR ART CLAIM CHART
U.S. Patent No. 5,848,420

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,848,420
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*15	Dependent Claim 13: 13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.	See col. 4, line 45 – col. 5, line 47.
K2*	Dependent Claim 15: 15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.	The software program is configured as a disk device driver to enable communication between the camera 70 and the microprocessor-based unit 20 via the serial port 75 (see col. 4, lines 4-45)

PRIOR ART CLAIM CHART
U.S. Patent No. 5,848,420

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,848,420
E*	Dependent Claim 16: 16. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.	

Exhibit A25

PRIOR ART CLAIM CHART

0Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,914,748
A	Independent Claim 1: 1. An interface device for communication between	Camera 40
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Host computer 44
C	a data transmit/receive device,	Lens 50, CCD 52
C1	the data transmit/receive device being arranged for providing analog data, comprising:	CCD 52 generates an analog digital image
D	a processor;	Control electronics 58
E	a memory;	Memory card 98
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Interface 56
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	ADC 54 interfacing to the CCD 52
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Inherent in the process of converting the analog image signal into a digital signal
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	ADC 54
H	wherein the interface device is configured by the processor and the memory	
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	

PRIOR ART CLAIM CHART

0Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,914,748
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Images are transferred to the computer 44 from the camera 40 via the USB interface cable 46
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.

PRIOR ART CLAIM CHART

0Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,914,748
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Images are transferred to the computer 44 from the camera 40 via the USB interface cable 46
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.

PRIOR ART CLAIM CHART

0Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,914,748
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	DSP 88 (see col. 4, lines 31-37)
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 914,748
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 914,748
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 914,748
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 914,748
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 914,748
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A26

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,915,106
A	Independent Claim 1: 1. An interface device for communication between	Scanner 6.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	General purpose computer 2 having a standardized operating system (see col. 5, lines 32-35) that inherently includes drivers for I/O devices and having a SCSI card 17 as a multi-purpose interface (see Fig. 3)
C	a data transmit/receive device,	Scanner optics 45 of scanner 6 that includes a CCD
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The CCD of the scanner optics 45 produces an analog signal representative of the image scanned by the scanner 6
D	a processor;	Scanner control block 43
E	a memory;	Memory 47
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Electronics in scanner 6 coupling the scanner 6 to the SCSI bus
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Electronics in scanner 6 coupling the CCD of the scanner optics 45 to the rest of the scanner 6
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Inherent in the scanner 6 for processing the analog signal generated by the CCD of the scanner optics 45
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Inherent in the scanner 6 for generating a digital signal from the analog signal generated by the CCD of the scanner optics 45
H	wherein the interface device is configured by the processor and the memory	The scanner control block 43 is a programmable device operating based on a set of firmware instructions stored in the memory 47 (see col. 6, lines 7-19)
H1	to include a first command interpreter and a second command interpreter,	Memory 47 includes a setup program storage area 47A and a firmware storage area 47b (see col. 5, line 54 – col. 6, line 40)

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,915,106
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62)
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62)
K1	which signals to the host device that it is an input/output device customary in a host device	When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62)
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The disk drive emulator 41 enables the computer 2 to interact with the scanner 6 as if it is a disk drive, and because a disk drive is a standard device, all operating systems are able to perform basic disk drive functions such as opening and closing a file (see col. 2, lines 57-67; col. 6, lines 30-59; col. 8, lines 63-67; col. 9, lines 1-12)
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	In response to a File Open command, the scanner 6 performs a scan and transfers image data to the computer 2 (see col. 6, lines 42-59)
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	Prior art systems uses a specific driver for the interface (see col. 1, line 25 – col. 2, line 38)
C	a data transmit/receive device	See '399 claim 1, row C.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,915,106
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	Prior art systems uses a specific driver for the interface (see col. 1, line 25 – col. 2, line 38)
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,915,106
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62)

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,915,106
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>Image data is stored in memory 47 as a file accessible to computer 2 (see col. 7, lines 40-44)</p>
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	<p>It is inherent that the scanner 6 includes a digital signal processor to process the image data detected by the scanner optics 45</p>
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	<p>Computer 2 communicates with scanner 6 using a standard disk drive device driver (see col. 2, lines 57-67)</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,915,106
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62)
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	The disk drive emulator 41 enables the computer 2 to interact with the scanner 6 as if it is a disk drive, and because a disk drive is a standard device, all operating systems are able to perform basic disk drive functions such as opening and closing a file (see col. 2, lines 57-67; col. 6, lines 30-59; col. 8, lines 63-67; col. 9, lines 1-12)

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,915,106
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,915,106
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,915,106
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,915,106
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,915,106
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	<p>The disk drive emulator 41 enables the computer 2 to interact with the scanner 6 as if it is a disk drive, and because a disk drive is a standard device, all operating systems are able to perform basic disk drive functions such as opening and closing a file (see col. 2, lines 57-67; col. 6, lines 30-59; col. 8, lines 63-67; col. 9, lines 1-12)</p>
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	<p>See '399 claim 3, row E*.</p>

Exhibit A27

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
A	Independent Claim 1: 1. An interface device for communication between	Nest 30. See, e.g., Figs. 1 and 2, plus accompanying specification description.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Computer system 20. See, e.g., Fig. 1.
C	a data transmit/receive device,	Device 40, i.e., a storage device such as a tape drive, hard drive or removable disk. See, e.g., Fig. 1. See also, e.g., col. 3, lines 23-28: "Device 40 can be any storage device, such as a tape drive, a hard drive, or a removable disk, for example. In the embodiment of FIG. 3, device 40 is shown as being a tape drive (shown as receiving a tape cartridge 56 in FIG. 1), although it is reiterated that other types of devices can instead be utilized."
C1	the data transmit/receive device being arranged for providing analog data, comprising:	It is inherent that some of the data/transmit receive devices discussed above (e.g. tape drive) would magnetically read data in analog form, before converting to digital.
D	a processor;	DI machine 100 and EPRAN machine 102 (see col. 4, lines 60-67); and/or Microprocessor 1000 (see col. 16, lines 31-40 and Fig. 13).
E	a memory;	Inherently included with the DI machine 100 and EPRAN machine 102 in order to perform their disclosed functions. (See, e.g., col. 4, lines 60-67; col. 16, lines 31-40 and Fig. 13).
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Nest to host connector 52 (see, e.g., col. 4, lines 11-16).
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	Nest to device connector 50 (see, e.g., col. 4, lines 11-16).

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
	the second connecting device including	
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	It is inherent that some of the disclosed data/transmit receive devices discussed above (e.g. tape drive) would magnetically read data in analog form, before converting to digital.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	It is inherent that some of the disclosed data/transmit receive devices discussed above (e.g. tape drive) would magnetically read data in analog form, before converting to digital.
H	wherein the interface device is configured by the processor and the memory	<p>Nest 30 operates in accordance with the functioning of the DI machine 200, which responds to commands issued from device 40, and EPRAN machine, which responds to commands issued from host computer 20</p> <p>See, e.g., col. 4, lines 17-59: "In the particular embodiment illustrated in FIG. 2, Nest 30 includes two machines--a device initialization (DI) machine 100 and an enhanced phantom response and negotiation (EPRAN) machine 102. DI machine 100 is connected to MUX 90 via DI bus 104; EPRAN machine 102 is connected to MUX 92 via EPRAN bus 106. In the illustrated embodiment, DI machine 100 and EPRAN machine 102 are both state machines which communicate with each other via machine communication bus 108.</p> <p>As a rule, DI machine 100 responds to commands issued from drive 40, while EPRAN machine 102 responds to commands issued from host</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
		<p>system 20. DI machine 100 includes a insertion/removal detection section 110 and a device master/slave initializer section 112. EPRAN machine 102 includes a reset, diagnostic command detection section 120; a host bus master/slave initialize section 122; and, a phantom or mirrored task file 124. As explained herein, phantom task file 124 is used to mirror device file 80 in device 40. Registers included in phantom task file 124 include the following: Alternate Status; Device Control; DataReg; Error; Status; Command; among other registers including those corresponding to registers in device task file 80."</p>
<p>H1</p>	<p>to include a first command interpreter and a second command interpreter,</p>	<p>Nest 30 operates in accordance with the functioning of the DI machine 200, which responds to commands issued from device 40, and EPRAN machine, which responds to commands issued from host computer 20</p> <p>See, e.g., col. 4, lines 17-59: "In the particular embodiment illustrated in FIG. 2, Nest 30 includes two machines--a device initialization (DI) machine 100 and an enhanced phantom response and negotiation (EPRAN) machine 102. DI machine 100 is connected to MUX 90 via DI bus 104; EPRAN machine 102 is connected to MUX 92 via EPRAN bus 106. In the illustrated embodiment, DI machine 100 and EPRAN machine 102 are both state machines which communicate with each other via machine</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
		<p>communication bus 108.</p> <p>As a rule, DI machine 100 responds to commands issued from drive 40, while EPRAN machine 102 responds to commands issued from host system 20. DI machine 100 includes a insertion/removal detection section 110 and a device master/slave initializer section 112. EPRAN machine 102 includes a reset, diagnostic command detection section 120; a host bus master/slave initialize section 122; and, a phantom or mirrored task file 124. As explained herein, phantom task file 124 is used to mirror device file 80 in device 40. Registers included in phantom task file 124 include the following: Alternate Status; Device Control; DataReg; Error; Status; Command; among other registers including those corresponding to registers in device task file 80."</p>
<p>I</p>	<p>wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device</p>	<p>Nest 30 operates in accordance with the functioning of the DI machine 200, which responds to commands issued from device 40, and EPRAN machine, which responds to commands issued from host computer 20 (see col. 4, lines 17-59).</p> <p>See also, col. 15, ll. 40-51: "Returning now to the steps of FIG. 9, after reenumeration step 916 the nest driver 230 checks (at step 918) whether a Nest is detected. The check of step 918 involves the periodic issuance of the IDE "Identify Device" command discussed above. If a device remains inserted in the</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
		<p>Nest 30 (such as device 40C in Nest 30C in FIG. 6), nest driver 230 should not detect a nest but instead the device. That is, as long as a device is inserted in Nest 30, Nest 30 is transparent to the operating system and the device is seen instead. Thus, if a device is installed in Nest 30, at step 918 the response to the IDE "Identify Device" command should be an IDE-device-indicative value other than the signature of the Nest 30."</p>
J	<p>sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device</p>	<p>When host computer system 20 sends a command, Nest responds in a manner consistent with the ATA or ATAPI protocols. (See, e.g., col. 5, lines 25-47).</p> <p>During initialization, nest 30 performs a standard ATA initialization. (See, e.g., col. 7, lines 11-15).</p> <p>If a device 40 is installed in nest 30, the response to the "identify device" command is an IDE-device indicative value> (See, e.g., col. 15, lines 40-51).</p> <p>See also, col. 15, ll. 40-51: "Returning now to the steps of FIG. 9, after reenumeration step 916 the nest driver 230 checks (at step 918) whether a Nest is detected. The check of step 918 involves the periodic issuance of the IDE "Identify Device" command discussed above. If a device remains inserted in the Nest 30 (such as device 40C in Nest 30C in FIG. 6), nest driver 230 should not detect a nest but instead the device. That is, as long as a device is inserted in</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
		<p>Nest 30, Nest 30 is transparent to the operating system and the device is seen instead. Thus, if a device is installed in Nest 30, at step 918 the response to the IDE "Identify Device" command should be an IDE-device-indicative value other than the signature of the Nest 30."</p> <p>Col. 4, ll. 26-30: "As a rule, DI machine 100 responds to commands issued from drive 40, while EPRAN machine 102 responds to commands issued from host system 20."</p>
<p>K1</p>	<p>which signals to the host device that it is an input/output device customary in a host device</p>	<p>If a device 40 is installed in nest 30, the response to the "identify device" command is an IDE-device indicative value (see col. 15, lines 40-51).</p> <p>See also, col. 15, ll. 40-51: "Returning now to the steps of FIG. 9, after reenumeration step 916 the nest driver 230 checks (at step 918) whether a Nest is detected. The check of step 918 involves the periodic issuance of the IDE "Identify Device" command discussed above. If a device remains inserted in the Nest 30 (such as device 40C in Nest 30C in FIG. 6), nest driver 230 should not detect a nest but instead the device. That is, as long as a device is inserted in Nest 30, Nest 30 is transparent to the operating system and the device is seen instead. Thus, if a device is installed in Nest 30, at step 918 the response to the IDE "Identify Device" command should be an IDE-device-indicative value other than the</p>

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		signature of the Nest 30." Col. 4, ll. 26-30: "As a rule, DI machine 100 responds to commands issued from drive 40, while EPRAN machine 102 responds to commands issued from host system 20."
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, a library of such device drivers being provided in the operating system and being standardized (see col. 15, lines 30-39)
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	It is disclosed that after a device 40 has been initialized that requests from host computer 20 for data are received by nest 30 and processed so that the requested data is provided from the device 40 to the host computer 20 via the nest 30. See, e.g., col. 15, ll. 40-51: "Returning now to the steps of FIG. 9, after reenumeration step 916 the nest driver 230 checks (at step 918) whether a Nest is detected. The check of step 918 involves the periodic issuance of the IDE "Identify Device" command discussed above. If a device remains inserted in the Nest 30 (such as device 40C in Nest 30C in FIG. 6), nest driver 230 should not detect a nest but instead the device. That is, as long as a device is inserted in Nest 30, Nest 30 is transparent to the operating system and the device is seen instead. Thus, if a

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		<p>device is installed in Nest 30, at step 918 the response to the IDE "Identify Device" command should be an IDE-device-indicative value other than the signature of the Nest 30."</p> <p>Col. 4, ll. 26-30: "As a rule, DI machine 100 responds to commands issued from drive 40, while EPRAN machine 102 responds to commands issued from host system 20."</p>
A	<p>Independent claim 11: 11. An interface device for communication between</p>	See '399 claim 1, row A.
B2	<p>a host device, which comprises a multi-purpose interface and a specific driver for this interface, and</p>	<p>Nest driver 230 accommodates nest 30 in a type of operating system in computer system 200, and is shown as being included in disk I/O subsystem 221 (see Fig. 7 and col. 11, lines 13-21).</p> <p>Nest driver 230 is a file of executable instructions that can automatically be included in disk I/O subsystem object 221 by providing nest driver 230 with a proper file extension so that, upon booting up, the nest driver 230 is loaded into a vendor specific driver (VSD) layer of disk I/O subsystem 221, such as one of layers 8-10, 12-17 of the IOS hierarchy levels (see col. 11, lines 21-26).</p> <p>See also, e.g., col. 15, ll. 40-51: "Returning now to the steps of FIG. 9, after reenumeration step 916 the nest driver 230 checks (at step 918) whether a Nest is detected. The check of step 918 involves the periodic issuance of the IDE "Identify Device" command discussed above. If a</p>

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
		<p>device remains inserted in the Nest 30 (such as device 40C in Nest 30C in FIG. 6), nest driver 230 should not detect a nest but instead the device. That is, as long as a device is inserted in Nest 30, Nest 30 is transparent to the operating system and the device is seen instead. Thus, if a device is installed in Nest 30, at step 918 the response to the IDE "Identify Device" command should be an IDE-device-indicative value other than the signature of the Nest 30."</p> <p>Col. 4, ll. 26-30: "As a rule, DI machine 100 responds to commands issued from drive 40, while EPRAN machine 102 responds to commands issued from host system 20."</p>
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	Nest driver 230 discriminates for the presence of nest 30 by issuing a standard IDE "Identify Device" command to the IDE host adapters 63, and the nest driver 230 receives back status information that is loaded into the StatusReg register 78I. (See, e.g, col. 11, lines 55-67 and Fig. 6). By examining the content of the StatusReg register 78I, nest driver 230 knows when it can go and pick up further data being automatically transmitted by the IDE device on bus 60 following the status information and in response to the IDE "Identify Device" command. (See, e.g., col. 11, line 67 – col. 12, line 5).
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	It is inherent that after a device 40 has been initialized that requests from host computer 20 for data are received by nest 30 and processed so that the requested data is provided from the device 40 to the host computer 20 via the nest 30.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, e.g., a hard drive, a library of such device drivers being provided in the operating system and being standardized. (See, e.g., col. 3, lines 22-27 and col. 15, lines 30-39).
E*	Dependent Claim 3: 3. An interface device according to claim 1,	Inherently disclosed since the interface has memory which

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,920,709
	wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	would act as a buffer when transferring the data from the data transmit/receive device to the host.
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	See '399 claim 1, row D.
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, a library of such device drivers being provided in the operating system and being standardized. (See, e.g., col. 15, lines 30-39).

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 920,709
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	If a device 40 is installed in nest 30, the response to the "identify device" command is an IDE-device indicative value. (See, e.g., col. 15, lines 40-51).
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, a library of such device drivers being provided in the operating system and being standardized. (See, e.g., col. 15, lines 30-39).
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 920,709
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 920,709
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 920,709
	claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	

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Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 920,709
E*	Dependent Claim 16: 6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.	See '399 claim 3, row E*.

Exhibit A28

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,926,208
A	Independent Claim 1: 1. An interface device for communication between	Video camera 1000
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Computer 1002
C	a data transmit/receive device,	Video source 1030 of video camera 1000
C1	the data transmit/receive device being arranged for providing analog data, comprising:	Video source 1030 generates an analog image signal
D	a processor;	MEP 1024
E	a memory;	SRAM 1033, DRAM 1027, second memory 1031
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Interface link device 1022
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Electronics in video source 1030 that receive and transform the capture image into a digital signal (see col. 5, lines 35-37)
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Inherently includes sampling as part of process for converting the analog image signal into a digital image signal
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Video source 103 receives a video image and digitizes it (see col. 5, lines 35-37)
H	wherein the interface device is configured by the processor and the memory	MEP 1024 operates in accordance with the routines stored in memory (see col. 5, line 45 – col. 6, line 34)
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,926,208
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Image data is sent through the interface link device 1022 across the USB bus 1006 to the computer 1002 (see col. 10, lines 52-67)
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,926,208
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Image data is sent through the interface link device 1022 across the USB bus 1006 to the computer 1002 (see col. 10, lines 52-67)
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.

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Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,926,208
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	Video processor 1036 (see col. 8, lines 23-35)
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
Z*	Dependent Claim 13: 13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface,	See '399 claim 4, row Z1.
B*3	and wherein the specific driver for the multi-purpose interface is an ASPI manager.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,926,208
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 926,208
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 926,208
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 926,208
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 926,208
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5, 926,208
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A29

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,928,347
A	Independent Claim 1: 1. An interface device for communication between	Memory card player/recorder 10
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	According to another aspect of the invention, the interface apparatus supports a host mode operation, in which one of the peripheral ports, such as the parallel port, is connectable to a host computer. Included are drivers for the SCSI, USB, or parallel port (which include drivers for input/output devices, such as hard disks, that were customary in a host device).
C	a data transmit/receive device,	A memory card 52
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	Microprocessor 32
E	a memory;	ROM 32 and RAM 36
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	One of interfaces including TV/Audio interface 114, Infrared interface 124, Host IDE/SCSI interface 134, USB interface 144, and EPP/ECP port 154.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Memory ATA interface
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	Microprocessor 32. ROM 32 and RAM 36
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,928,347
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	It can be drivers for the SCSI, USB, or parallel port.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,928,347
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,928,347
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,928,347
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*2	Dependent Claim 3: 3. An interface device in accordance with claim 2 wherein the configuration file is a text file.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,928,347
N*7	<p>Dependent Claim 5:</p> <p>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*13	<p>Dependent Claim 11:</p> <p>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period.</p>	
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	

Exhibit A30

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
A	Independent Claim 1: 1. An interface device for communication between	See, e.g., Fig. 5, interface device 110.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See, e.g., Fig. 5, host device 120. “(2) Because the housing 156 need not be opened to install the camera 110, a novice user can easily install the camera 110 by simply plugging cable 119 into a standard connector 154. Using an auto-recognition process native to the USB standard, the camera 110 is automatically recognized and <u>appropriate driver</u> software for using the camera 110 can automatically be selected.” Col. 10, ll. 11-18 (emphasis added). “The present invention relates to video. In particular, the present invention pertains to “plug and play” cameras that can be connected to, for example, a personal computer via a standard bus.” Col. 1, ll. 5-8. The input/output device customary in a host device are USB standard i/o devices customary in a host device, e.g., USB Mass Storage device. See also, e.g., disclosures for row L1.
C	a data transmit/receive device,	See, e.g., Fig. 5, data transmit/receive device (microphone 162).
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See, e.g., Fig. 5, microphone 162 is arranged to provide analog data.
D	a processor;	See, e.g., Fig. 5. The interface device is shown to include processing elements, including data processing elements, 164, 166, 113 and 115.
E	a memory;	“According to another

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		illustrative embodiment, the camera contains at least one register or memory which contains information on the bit rate varying capabilities of the camera. Such information can be downloaded via the interfaces and communications medium to the processor in the first housing."
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See, e.g., Fig. 5, connecting device components 152 and 154.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See, e.g., Fig. 5, connecting device components 117 and 200.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See, e.g., Fig. 5, microphone 162 leads to ADC 164. Inherently disclosed that there is a sampling circuit for sampling the analog data provided by the microphone 162.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See, e.g., Fig. 5, A/D converters 113 and 164.
H	wherein the interface device is configured by the processor and the memory	See, e.g., Fig. 5. Inherently disclosed that the interface 110 is configured by its processor and memory.
H1	to include a first command interpreter and a second command interpreter,	See, e.g., Fig. 5. Inherently disclosed that the interface 110 is configured by its processor and memory to include a first command interpreter and a second command interpreter.
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	See, e.g., Fig. 5 , host device 120. “(2) Because the housing 156 need not be opened to install the camera 110, a novice user can easily install the camera 110 by simply plugging cable 119 into a standard connector 154. Using an auto-recognition process native to the USB standard, the camera 110 is automatically recognized

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		<p>and appropriate driver software for using the camera 110 can automatically be selected." Col. 10, ll. 11-18.</p> <p>"The present invention relates to video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus." Col. 1, ll. 5-8.</p> <p>"The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 43-55.</p>
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	"Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications,

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		<p>i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 50-55.</p> <p>"The present invention relates to video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus." Col. 1, ll. 5-8.</p> <p>"The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 43-55.</p>
K1	which signals to the host device that it is an input/output device customary in a host device	<p>"Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		<p>recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 50-55.</p> <p>"The present invention relates to video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus." Col. 1, ll. 5-8.</p> <p>"The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 43-55.</p>
L1	<p>whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and</p>	<p>"Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration,</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		<p>are frequently said to be "plug and play." Col. 5, ll. 50-55.</p> <p>"The present invention relates to video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus." Col. 1, ll. 5-8.</p> <p>"The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 43-55.</p>
M	<p>wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.</p>	<p>"Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		<p>and play." Col. 5, ll. 50-55.</p> <p>"(2) Because the housing 156 need not be opened to install the camera 110, a novice user can easily install the camera 110 by simply plugging cable 119 into a standard connector 154. Using an auto-recognition process native to the USB standard, the camera 110 is automatically recognized and appropriate driver software for using the camera 110 can automatically be selected." Col. 10, ll. 11-18.</p> <p>"The present invention relates to video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus." Col. 1, ll. 5-8.</p> <p>"The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		said to be "plug and play." Col. 5, ll. 43-55.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	See, e.g., Fig. 5 , host device 120. “(2) Because the housing 156 need not be opened to install the camera 110, a novice user can easily install the camera 110 by simply plugging cable 119 into a standard connector 154. Using an auto-recognition process native to the USB standard, the camera 110 is automatically recognized and appropriate driver software for using the camera 110 can automatically be selected.” Col. 10, ll. 11-18. “The present invention relates to video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus.” Col. 1, ll. 5-8. “The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 43-55.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See, e.g., Fig. 5, host device 120. “(2) Because the housing 156 need not be opened to install the camera 110, a novice user can

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
		<p>easily install the camera 110 by simply plugging cable 119 into a standard connector 154. Using an auto-recognition process native to the USB standard, the camera 110 is automatically recognized and appropriate driver software for using the camera 110 can automatically be selected." Col. 10, ll. 11-18.</p> <p>"The present invention relates to video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus." Col. 1, ll. 5-8.</p> <p>"The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play.'" Col. 5, ll. 43-55.</p>
M	wherein the second command interpreter is configured to interpret a data request command	See '399 claim 1, row M.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
	from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2:	"The present invention relates to

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
	<p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	<p>video. In particular, the present invention pertains to "plug and play" cameras that can be connected to, for example, a personal computer via a standard bus." Col. 1, ll. 5-8.</p> <p>"The USB standard, in addition to specifying a protocol for communication on the serial bus, also specifies a standard connector. The manufacturers which have adopted the USB standard will deliver future computers and peripherals with such standard connectors located externally to the housing of the computer systems and peripherals. Thus, all monitors, keyboards, microphones, etc, will be easily connected using standard cabling. Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 43-55.</p>
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>"The I/O expansion card 19 has a buffer for receiving frames of the digital video signals for communication via I/O expansion bus 22 to an I/O bridge 24." Col. 1, ll. 25-29.</p>
Z*	<p>Dependent Claim 4:</p> <p>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.</p>	
D*	<p>Dependent Claim 5:</p>	<p>See '399 claim 1, row D.</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,969,750
	5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
Z*	Dependent Claim 13: 13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface,	See '399 claim 4, row Z1.
B*3	and wherein the specific driver for the multi-purpose interface is an ASPI manager.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,969,750
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,969,750
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,969,750
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,969,750
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,969,750
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A31

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,974,161
A	Independent Claim 1: 1. An interface device for communication between	The "ATA PCMCIA controller 14 provides an interface between PCMCIA card 12 and the host computer." Fig. 5; Col. 4, ll. 1-7.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	The host computer, such as portable computer 31. Fig. 4; Col. 1, ll. 32-46; Col. 3, ll. 14-22; Col. 4, ll. 1-39. The handwritten input "files are stored within memory 43 using a standard disk operating system (OS) pointer or a file allocation table (FAT) system. This allows the host system . . . to access the handwritten inputs stored within the PCMCIA card 12 without special drivers of any kind." Fig. 5; Col. 3, l. 23 – col. 4, l. 7. The "PCMCIA controller 44 communicates with the host computer through a standard PCMCIA bus 46." Figs. 4, 5; Col. 1, ll. 58-67; Col. 4, ll. 1-7.
C	a data transmit/receive device,	The write-on pad 13 is capable of transmitting and receiving data. Figs. 1-3, 5, 6; Col. 2, l. 31 – col. 3, l. 22.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The detachable card captures "graphics such as, for example a handwritten signature." Col. 1, ll. 5-8. The card "uses a stylus to write a signature or some other handwritten information on write-on pad 13." Figs. 1-3, 5; Col. 1, ll. 32-41; Col. 2, l. 31 – col. 3, l. 22.
D	a processor;	The detachable card contains an ATA PCMCIA controller 44. Fig. 5; Col. 3, ll. 34-37; Col. 4, ll. 1-7. The detachable card contains a microcontroller 42. Figs. 5, 6; Col. 3, ll. 23-33; Col. 4, ll. 8-26.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,974,161
E	a memory;	The detachable card contains memory for storing graphics files and other information. Figs. 5-7; Col. 3, ll. 34-67; Col. 4, ll. 27-39. The microcontroller 42 has random-access memory and read-only memory. Figs. 5, 6; Col. 3, ll. 23-33; Col. 4, ll. 8-39.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The PCMCIA controller 44 connects to the host system through a standard PCMCIA bus 46. Fig. 4, 5; Col. 1, ll. 58-67; Col. 4, ll. 1-7.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	The write-on pad 13 connects to the microcontroller. Fig. 5.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	The write-on pad 13, which digitizes the strokes of the pen, necessarily contains a sampling circuit. Col. 2, ll. 36-37.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	The write-on pad 13 is "used to digitize the strokes of the pen or stylus." Figs. 1-3, 5; Col. 2, l. 31- col. 3, l. 38.
H	wherein the interface device is configured by the processor and the memory	The ATA PCMCIA controller 44 provides an interface between the detachable card and the host computer. The PCMCIA controller communicates with the host computer through a standard PCMCIA bus. The ATA PCMCIA controller and memory configured as an ATA-style mass storage memory allow the host to recognize the detachable card as a standard disk drive without special drivers. Fig. 5; Col. 3, l. 23 – col. 4, l. 7.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,974,161
H1	to include a first command interpreter and a second command interpreter,	The ATA PCMCIA controller 44 provides an interface between the detachable card and the host computer. The PCMCIA controller communicates with the host computer through a standard PCMCIA bus. The ATA PCMCIA controller and memory configured as an ATA-style mass storage memory allow the host to recognize the detachable card as a standard disk drive without special drivers. Fig. 5; Col. 3, l. 23 – col. 4, l. 7.
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	The ATA PCMCIA controller 44 provides an interface between the detachable card and the host computer. The PCMCIA controller communicates with the host computer through a standard PCMCIA bus. The ATA PCMCIA controller and memory configured as an ATA-style mass storage memory allow the host to recognize the detachable card as a standard disk drive without special drivers. Fig. 5; Col. 3, l. 23 – col. 4, l. 7.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	The ATA PCMCIA controller 44 provides an interface between the detachable card and the host computer. The PCMCIA controller communicates with the host computer through a standard PCMCIA bus. The ATA PCMCIA controller and memory configured as an ATA-style mass storage memory allow the host to recognize the detachable card as a standard disk drive without special drivers. Fig. 5; Col. 3, l. 23 – col. 4, l. 7.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,974,161
K1	which signals to the host device that it is an input/output device customary in a host device	The ATA PCMCIA controller 44 provides an interface between the detachable card and the host computer. The PCMCIA controller communicates with the host computer through a standard PCMCIA bus. The ATA PCMCIA controller and memory configured as an ATA-style mass storage memory allow the host to recognize the detachable card as a standard disk drive without special drivers. Fig. 5; Col. 3, l. 23 – col. 4, l. 7.
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The host computer can access the files on the detachable cards using the host's standard OS software. Fig. 5; Col. 3, l. 23 – col. 4, l. 7.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,974,161
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,974,161
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	The graphics "files are stored within memory 43 using a standard disk operating system (OS) pointer or a file allocation table (FAT) system. This allows the host system . . . to access the handwritten inputs stored within the PCMCIA card 12 without special drivers of any kind." Fig. 5; Col. 3, l. 23 – col. 4, l. 7.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,974,161
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>The graphics files are stored within memory of the detachable card and not necessarily transferred immediately to the host device. Because the detachable card has its own power system, it can capture graphics and store them in its memory even when it is separated from the host computer. Thus, the memory acts as a buffer. See Col. 6, ll. 16-30.</p>
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	<p>See '399 claim 2, row B*1.</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,974,161
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,974,161
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,974,161
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,974,161
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 5,974,161
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A32

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,991,530
A	Independent Claim 1: 1. An interface device for communication between	Interface device 60.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Host system 10. "An FD [Floppy disk] BIOS be previously provided in the host system 10." Col. 6, ll. 64-65.
C	a data transmit/receive device,	E.g., floppy disk drive 70.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	See, e.g., Fig. 1, PCMCIA I/O controller 62.
E	a memory;	"To this end, the card device 60 is provided with the attribute memory (ROM) 64 in which the aforesaid CIS and CCR information is stored, so that such information can be supplied to the PCMCIA I/O controller 62." Col 6, ll. 57-60.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See, e.g., Fig. 4, showing connecting device between elements 18 and 62.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See, e.g., Fig. 4, connecting device between interface device 60 and floppy disk drive 70.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,991,530
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Interface device 60 interprets a data request from host as to the IC card so as to transfer data from floppy disk drive 70. See, e.g., Columns 5 and 6.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,991,530
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,991,530
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
Z*	Dependent Claim 13: 13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface,	See '399 claim 4, row Z1.
B*3	and wherein the specific driver for the multi-purpose interface is an ASPI manager.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 5,991,530
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,991,530
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,991,530
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,991,530
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,991,530
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 5,991,530
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A - Part 3

Exhibit A33

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,005,613
A	Independent Claim 1: 1. An interface device for communication between	The "interface device" of the camera 10 comprises at least a microprocessor 38 and a memory (a built-in memory for the microprocessor and a static RAM memory 34). Endsley '613 Patent discloses a digital camera 10 that can be connected to a host computer 12 via the USB interface 14 in the host computer to transfer image and/or audio data to the computer.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	A host computer 12. Computers of the type that implement the USB standard were known to include drivers for the input/output devices customary in such computers.
C	a data transmit/receive device,	The "data transmit/receive device" of the camera can include the lens 18 and the electronic image sensor 20, such as a CCD.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	the electronic image sensor 20, such as a CCD generates analog signals.
D	a processor;	microprocessor 38
E	a memory;	a memory (a built-in memory for the microprocessor and a static RAM memory 34).
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The computer has drivers to communicate with the camera 10 through a USB interface, which is a multi-purpose interface.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Circuits including A/D converter 26.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Inherent and/or obvious from use of A/D converter. See also 3:31-42.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	A/D converter 26.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,005,613
H	wherein the interface device is configured by the processor and the memory	microprocessor 38 and a memory (a built-in memory for the microprocessor and a static RAM memory 34).
H1	to include a first command interpreter and a second command interpreter,	See I and M
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	"The camera 10 is connected to a host computer 12 via a USB (universal serial bus) digital host interface 14, which also provides power to the camera 10. USB is a well-known shared bus that can be connected to other devices, such as keyboards, printers, etc.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	"The camera 10 is connected to a host computer 12 via a USB (universal serial bus) digital host interface 14, which also provides power to the camera 10. USB is a well-known shared bus that can be connected to other devices, such as keyboards, printers, etc.
K1	which signals to the host device that it is an input/output device customary in a host device	Utilizes USB Standard. See 3:7-23 and 43-65.
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The computer has drivers to communicate with the camera 10 through a USB interface, which is a multi-purpose interface.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Utilizes USB Standard. See 3:7-23 and 43-65.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,005,613
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,005,613
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,005,613
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
Z*	<p>Dependent Claim 13:</p> <p>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface,</p>	See '399 claim 4, row Z1.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,005,613
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,005,613
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,005,613
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,005,613
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,005,613
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A34

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,081,856
A	Independent Claim 1: 1. An interface device for communication between	See, e.g., Fig. 2, labeled component "Adapter."
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Fig. 2, computer 12.
C	a data transmit/receive device,	Fig. 2, external device 44.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	Peripheral device can be "any device functionally connected to the CPU of a computer, such as a keyboard, video monitor, mouse, or printer." Col. 2, ll. 27-30.
D	a processor;	Fig. 3, controller 60.
E	a memory;	Fig. 3, adapter memory 62.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	E.g, Fig 2, interface 22.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	E.g, Fig 2, interface 30 and connection thereto.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Within controller 60.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	See, e.g., Fig. 2 processor/controller 60 and memory 62.
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	See col. 5, ll. 40-50.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See col. 5, ll. 40-50, in addition to disclosures of prior art emulation devices in "background of invention" section.
K1	which signals to the host device that it is an input/output device customary in a host device	See col. 5, ll. 40-50, in addition to disclosures of prior art emulation devices in "background of invention" section.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,081,856
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	See col. 5, ll. 40-50.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See col. 5, ll. 40-50, in addition to disclosures of prior art emulation devices in "background of invention" section.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,081,856
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,081,856
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,081,856
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,081,856
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,081,856
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,081,856
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,081,856
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A35

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,088,532
A	Independent Claim 1: 1. An interface device for communication between	The "interface device" of the camera comprises at least a microprocessor and a memory. Yamamoto '532 Patent discloses a still video camera 11 that can be connected to a computer through an output terminal 17 to transfer image data to the computer.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	A computer.
C	a data transmit/receive device,	The "data transmit/receive device" of the camera includes a photographing optical system 12, an electro-developing recording medium 30, and a scanning mechanism 50 to provide analog data.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The "data transmit/receive device" of the camera includes a photographing optical system 12, an electro-developing recording medium 30, and a scanning mechanism 50 to provide analog data.
D	a processor;	"FIG. 2 is a block diagram of the still video camera, in which a system control circuit 20 including a micro-computer or micro-processor is mounted to control the still video camera as a whole." (FIG. 2 and col. 6, lines 7-10.)
E	a memory;	The still video camera has a memory to store an operating system for the microprocessor in the system control circuit and at least a memory 64 to store the digital pixel signals.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,088,532
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The still video camera has the output terminal 17 to connect with the SCSI interface of a computer. A first connecting device comprises at least the output terminal 17. The SCSI interface of a computer is a multi-purpose interface.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	The still video camera has a line sensor 44, which can comprise a one-dimensional CCD sensor. The line sensor 44 forms at least a portion of the "data transmit/receive device." Pixel signals generated by the line sensor 44 are sampled and converted to digital signals by an A/D converter 62. The A/D converter forms at least a portion of the "second connecting device."
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Inherent and/or obvious from use of A/D converter 62.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	A/D converter 62.
H	wherein the interface device is configured by the processor and the memory	The still video camera which has a microprocessor and a memory storing its operating system is adapted to include a first command interpreter and a second command interpreter, both of which are used for communication between the still video camera and the computer.
H1	to include a first command interpreter and a second command interpreter,	Same as above.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,088,532
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	<p>With a microprocessor and a memory storing its operating system, the still video camera is adapted to include a first command interpreter which receives an "inquiry" command signal from the SCSI interface of a host computer and responds with an signal so that the host computer recognizes that it can communicate with the still video camera by drivers for a hard disk as if it communicates with a real mass storage device.</p> <p>"In Step 106, the first mode, i.e., an external hard disk mode is set. In the external hard disk mode, the still video camera is used as an external memory for the computer. Namely, the computer outputs an "INQUIRY" command signal, for example, to the still video camera, and in accordance with this signal, the still video camera outputs data indicating that the external hard disk mode is set, due to the fact that the mode switch 19 is set to the first mode. Whereby the computer outputs command signals such as "READ CAPACITY" and "FORMAT UNIT" to the still video camera, so that the hard disk 71 is controlled." (col. 23, lines 30-43.)</p>
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	Same as above.
K1	which signals to the host device that it is an input/output device customary in a host device	Same as above.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,088,532
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	The still video camera which has a microprocessor and a memory storing its operating system is adapted to include a first command interpreter and a second command interpreter, both of which are used for communication between the still video camera and the computer.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	It depends on whether SCSI interface has a specific driver.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,088,532
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 6,088,532
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	The host computer can communicate with the still video camera by drivers for a hard disk as if it communicates with a real mass storage device.
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	The still video camera has a memory to store an operating system for the microprocessor in the system control circuit and at least a memory 64 to store the digital pixel signals.
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,088,532
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	With a microprocessor and a memory storing its operating system, the still video camera is adapted to include a first command interpreter which receives an "inquiry" command signal from the SCSI interface of a host computer and responds with a signal so that the host computer recognizes that it can communicate with the still video camera by drivers for a hard disk as if it communicates with a real mass storage device.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,088,532
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11.
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,088,532
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,088,532
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,088,532
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	U.S. Patent No. 6,088,532
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	<p>The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11.</p>
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	<p>See '399 claim 3, row E*.</p>

Exhibit A36

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,098,116
A	Independent Claim 1: 1. An interface device for communication between	See, e.g., Fig. 1B, interface device is local controller 4.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See, e.g., Fig. 1B, host device 2. Customary drivers, such as FieldBus, are included in the host device. See Col. 5, l. 63 – Col. 6, l. 8.
C	a data transmit/receive device,	See, e.g., Fig. 1B, field devices 6 and 12.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See Col. 5, ll. 57-62. The data transmit/receive devices in the field include “pumps, motors, valves, etc.” which would measure and provide analog data in many cases. “A smart device is a field device that is implemented to transmit and receive digital data pertaining to a device, including data relating to device calibration, configuration, diagnostics and maintenance. Typically, the smart device is also adapted to transmit a standard analog signal that is indicative of various information including, for example, a process value measured by a field device.” Col. 15, l. 64 – col. 16, l. 18.
D	a processor;	See, e.g., Fig. 1B, ROMs in local controller 4.
E	a memory;	See, e.g., Fig. 1B, CPU in local controller 4.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Host PC 2 is connected to the LAN via local area network card. Col. 5, ll. 17-18.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Local controller 4 is interfaced with field devices 6-15. See Figs. 1A and 1B; col. 5, ll. 56-62.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,098,116
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	See, e.g., Fig. 1B, local controller 4 having CPU and memory ROM.
H1	to include a first command interpreter and a second command interpreter,	[Within local controller 4.]
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	See col. 6, l. 55 – col. 7, l. 26. Host PC 2 communicates with both the protocol and non-protocol field devices using FieldBus (a customary driver in the host). If the field device is non-protocol, the local controller 4 (i.e., the interface device) will perform the necessary conversion so that the host can communicate by the standard protocol.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See col. 6, l. 55 – col. 7, l. 26. A FieldBus data request command would be converted by the interpreter in the local controller, if necessary, to translate it for a non-protocol field device to initiate transfer of data.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,098,116
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	The multipurpose interface is shown by local controllers 4 and 5. The driver is present as the Main PC is configured to generate various control routines. See 5:45-51
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,098,116
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,098,116
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,098,116
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,098,116
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,098,116
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,098,116
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	US Patent No. 6,098,116
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A37

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
A	Independent Claim 1: 1. An interface device for communication between	The "interface device" of the camera 100 comprises at least a microprocessor 50 inside CPU 23 and a memory (control program storing area 51, FIFO circuit or memory 13, and memory card 16). See FIG. 8.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Hashimoto '604 Patent discloses a digital camera 100 that can be connected to a computer (host device) through an external communication interface 180 to transfer image and/or audio data to and from the computer. See Abstract and col. 4, lines 48-56.
C	a data transmit/receive device,	The "data transmit/receive device" of the camera can be the image photographing section 6, which further includes a photographing lens 7, a lens opening 8, and an image photographing element 9 such as a CCD. See FIG. 8.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	At least the CCD is arranged for providing analog image data.
D	a processor;	The CPU 23 contains a microprocessor 50 and RAM 52. See col. 8, lines 48-52.
E	a memory;	The digital camera 100 has a control program storing area 51, a built-in memory, in the CPU 23 to store an operating system for the microprocessor in the system. In addition, the digital camera 100 has the FIFO circuit or memory 13, and memory card 16 to store the digital pixel signals. See col. 8, lines 37-62.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The digital camera 100 can connect to an RS-232 or RS-422 interface of a computer through an external communication interface 180 to transfer image and/or audio data to and from the computer. See col. 8, lines 4-7. FIG. 8 shows that the digital camera 100 can communicate with a communication device, such as a computer, via the interface circuit 27 and the signal level conversion circuit 28. The signal level conversion circuit 28 can be disposed on the external communication interface 180. Thus, a first connecting device comprises at least the interface circuit 27 and the signal level conversion circuit 28. Either an RS-232 or an RS-422 interface is a multi-purpose interface.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	The digital camera 100 comprises a sampler CDS and a A/D converter for sampling and converting the analog image data output by the CCD to digital data. See col. 6, lines 24-29, 45-55 and FIG. 8.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Same as above
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Same as above.
H	wherein the interface device is configured by the processor and the memory	The CPU 23 contains a microprocessor 50 and RAM 52, as well as memory 55 for storing BIOS routines and other routine used by the camera. See col. 8, lines 48-58.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
H1	to include a first command interpreter and a second command interpreter,	The routines stored in memory 51 comprise a first and second command interpreter.
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	After the camera 100 is connected to a computer via the RS-232 standard interface, it monitors the DTR signal from the computer to determine if it is ready for data communication. See col. 10, line 41-col. 11, line 1. Thus, the camera 100 inherently has a first command interpreter that responds to the computer's inquiry that it is an input/output device that the computer can communicate with, i.e. an input/output device that is customary in a computer.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	Same as above.
K1	which signals to the host device that it is an input/output device customary in a host device	Same as above.
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. See also Fig. 17 and description.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	The camera 100 can transmit data to the computer, thus it inherently contains a second command interpreter is that is configured to interpret a data request command from the computer to the camera as a data transfer command for initiating a transfer of the digital data to the computer. See col. 11, lines 13-33.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	The computer will certainly use the standard RS-232 drivers to communicate with the camera 100.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. See also Fig 17 and description.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	FIFO circuit 13 and memory card 16.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	The CPU 23 is communicate with a Digital Signal Processing Circuit. See FIG. 8. Thus the CPU 23 is a digital signal processor.
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
Z*	Dependent Claim 13: 13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface,	See '399 claim 4, row Z1.

PRIOR ART CLAIM CHART

Code	USP 6,895,449 Claim Language	U.S. Patent No. 5,815,201 U.S. Patent No. 5,815,205 U.S. Patent No. 6,111,604 U.S. Patent No. 6,344,875 U.S. Patent No. 7,046,276
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	

PRIOR ART CLAIM CHART

N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.

PRIOR ART CLAIM CHART

C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	

PRIOR ART CLAIM CHART

N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	

PRIOR ART CLAIM CHART

E*	Dependent Claim 16: 6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.	See '399 claim 3, row E*.
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Exhibit A38

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,182,145
A	Independent Claim 1: 1. An interface device for communication between	Interface device 72, see Fig. 2.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Host device 20, see Fig. 2. (Drivers customary for the host device are inherently disclosed.)
C	a data transmit/receive device,	Data transmit/receive device 22, see Fig. 2.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	See col. 10, ll. 41-63. Fig. 7 shows that the interface device 72 includes processor subcircuits and logic circuits 130, 134, 136 and 142.
E	a memory;	See col. 10, ll. 41-63. Fig. 7 shows that the interface device 72 includes memory RAM 140.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Fig. 2, communication subchannel 74 and I/O port 34 of the host device.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Fig. 2, communication subchannel 76 and I/O port 52 of the host device.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	See col. 10, ll. 41 – col. 11, l. 14.
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,182,145
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,182,145
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,182,145
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449 Claim Language	US Patent No. 6,182,145
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.

PRIOR ART CLAIM CHART

Code	USP 6,895,449 Claim Language	US Patent No. 6,182,145
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,895,449 Claim Language	US Patent No. 6,182,145
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	<p>Dependent Claim 2:</p> <p>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.</p>	
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449 Claim Language	US Patent No. 6,182,145
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>16. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A39

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,298,388 (Taguchi)
A	Independent Claim 1: 1. An interface device for communication between	The '388 discloses a interface device for communication. See Fig. 1.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Fig. 1, Host device 90.
C	a data transmit/receive device,	Fig. 1., external data-transmit/receive device 11.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	Fig. 1., CPU 65; external device control 4.
E	a memory;	Fig. 1, RAM 82; external device control 4. The Pseudo IC card can also have the memory in a ROM 12. Col. 5, ll. 31-40.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Fig. 1, IC Card Connector.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Fig. 1, Cable 8.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	See Fig. 1, including processor and memory shown on the interface device.
H1	to include a first command interpreter and a second command interpreter,	Within CPU 65.
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	Col. 4, ll.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,298,388 (Taguchi)
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See, e.g., Col 3, ll. 15-20
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,298,388 (Taguchi)
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,298,388 (Taguchi)
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	External devices that can be hooked up to the interface include hard disks (col. 3, ll. 5-10), and appropriate drivers are disclosed. See, e.g., Fig 4, S4 and S5.
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	US Patent No. 6,298,388 (Taguchi)
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449	US Patent No. 6,298,388 (Taguchi)
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.

PRIOR ART CLAIM CHART

Code	USP 6,895,449	US Patent No. 6,298,388 (Taguchi)
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,895,449	US Patent No. 6,298,388 (Taguchi)
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	
N*9	Dependent Claim 7: 7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449	US Patent No. 6,298,388 (Taguchi)
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

PRIOR ART CLAIM CHART

Exhibit A40

PRIOR ART CLAIM CHART

JP 08-130702

Code	USP 6,470,399's Claim Language	JP 08-130702
A	<p>Independent Claim 1:</p> <p>1. An interface device for communication between</p>	<p>“The main use of these cameras is to digitalize images and to transfer the digital data to computers.” ([0005])</p>
B1	<p>a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and</p>	<p>A host device 59 (Fig. 1). “At this timing, the host equipment is currently a computer in current situation, especially, a personal computer” ([0057])</p> <p>It was well-known in the art that personal computers include drivers for input/output devices customary in them. <i>See, e.g.</i>, '399 Patent Specification, col. 4, lines 27-30 (“Drivers for input/output devices customary in a host device ... are found in practically all host devices.”).</p> <p>“The PCMCIA standard defines PCMCIA-ATA (AT bus attachable), a generic standard that defines the communication algorithm between the CPU and the internal/external memory on the computer side, allowing read operation directly if the pair of a memory card and a computer are compliant to said ATA algorithm.” ([0059])</p> <p>“In addition, the memory card reader system handling PCMCIA standard used connecting to each personal computer with SCSI cables as such is in the hardware/software market, and currently, even on a personal computer without a slot for the PCMCIA standard memory cards, the environment is available where the PCMCIA standard memory cards can be used as an external memory device.” ([0061])</p>
C	<p>a data transmit/receive device,</p>	<p>CCD 20 (Fig. 1).</p>

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,470,399's Claim Language	JP 08-130702
C1	the data transmit/receive device being arranged for providing analog data, comprising:	"... light coming from objects via each of lenses 11 and 13 in the lens assembly 10 and the aperture (iris) 12 is focused on said CCD image sensor 20, and after photoelectrical conversion here, they are read out in non-interlace in order of the sensor alignment and input to the analog imaging signal processing circuit 31."([0037])
D	a processor;	A system control CPU 41 and a flash memory control CPU 39 (Fig. 1). "In the description above, there are two kinds of CPUs installed in the digital electronic still camera according to the embodiment. One is the CPU 41 for controlling the system control/image processing inside the camera, while another one is the CPU 39 for flash memory control/communication with host equipment. As easily expected from the functions provided by both CPU and the original nature of CPU, as a second illustrative embodiment, it is possible to combine multiple CPUs to one chip CPU, allowing it to be made smaller and reducing the material cost." ([0063])
E	a memory;	A frame memory 35 (Fig. 1)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The system control CPU 41 and a pin connector 68 (Fig. 1). "Now in the digital electronic still camera according to the embodiment, once pictures are taken, image data are transferred to the host equipment 59 via the 68-pin connector 43."([0057])

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,470,399's Claim Language	JP 08-130702
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	A signal processing circuit 31 (Fig. 1). "... light coming from objects via each of lenses 11 and 13 in the lens assembly 10 and the aperture (iris) 12 is focused on said CCD image sensor 20, and after photoelectrical conversion here, they are read out in non-interlace in order of the sensor alignment and input to the analog imaging signal processing circuit 31."([0037])
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	The signal processing circuit 31 (Fig. 1). "In this signal processing circuit 31, a predefined analog process such as sample hold or gain control is performed on the imaging signals from said CCD image sensor 20."([0037])
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	The signal processing circuit 31 (Fig. 1). "The image signals processed in said signal processing circuit 31 are digitalized in the analog/digital converting circuit 32."([0037])
H	wherein the interface device is configured by the processor and the memory	The system control CPU 41, the flash memory control CPU 39 and a frame memory 35 (Fig. 1).
H1	to include a first command interpreter and a second command interpreter,	The system control CPU 41, the flash memory control CPU 39 and a frame memory 35 (Fig. 1).

PRIOR ART CLAIM CHART

JP 08-130702

Code	USP 6,470,399's Claim Language	JP 08-130702
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	“At this timing, the CPU on the computer side accesses the CPU 39 for controlling memory that resides in the memory card unit 60 in the electronic still camera according to the embodiment. The PCMCIA standard defines PCMCIA-ATA (AT bus attachable), a generic standard that defines the communication algorithm between the CPU and the internal/external memory on the computer side, allowing read operation directly if the pair of a memory card and a computer are compliant to said ATA algorithm. On the other hand, if the pair of a memory card and a computer are not compliant to the ATA standard or only either one of those is compliant to the ATA standard, driver software is required on the computer side for the read operation according to the interface specification of the memory card.”([0059])
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The ATA standard is typically used by a hard disk drive customarily found in a host device. ATA hard disk drivers were customary in host computers in the relevant time period.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	“At this timing, the CPU on the computer side accesses the CPU 39 for controlling memory that resides in the memory card unit 60 in the electronic still camera according to the embodiment.” ([0059])
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.

PRIOR ART CLAIM CHART
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Code	USP 6,470,399's Claim Language	JP 08-130702
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	<p>A host device 59 (Fig. 1). "At this timing, the host equipment is currently a computer in current situation, especially, a personal computer" ([0057])</p> <p>It was well-known in the art that personal computers include drivers for input/output devices customary in them. <i>See, e.g.</i>, '399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device ... are found in practically all host devices.").</p> <p>"The PCMCIA standard defines PCMCIA-ATA (AT bus attachable), a generic standard that defines the communication algorithm between the CPU and the internal/external memory on the computer side, allowing read operation directly if the pair of a memory card and a computer are compliant to said ATA algorithm." ([0059])</p>
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,470,399's Claim Language	JP 08-130702
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	
K1	which signals to the host device that it is an input/output device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	The ATA standard is typically used by a hard disk drive customarily found in a host device.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.

PRIOR ART CLAIM CHART
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Code	USP 6,470,399's Claim Language	JP 08-130702
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K1	in such a way that it is an input/output device customary in a host device,	
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	“The image signals processed in said interpolating process DSP 33 are separated into brightness (Y) signals and color difference (Cr/Cb) signals and entered into the frame memory controller (FMC) 34 and stored in the frame memory (FM) 35 controlled by this controller 34. Said frame memory 35 is memory for storing signals via said controller 34 temporarily, which is comprised of a DRAM (Dynamic Random Access Memory) device, for example.” ([0039])
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	“The image signals processed in said signal processing circuit 31 are digitalized in the analog/digital converting circuit 32. In the areas beyond this point, signals are digitally processed.” ([0037]). The system control CPU 41 and the flash memory control CPU 39 are digital signal processors.

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,470,399's Claim Language	JP 08-130702
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	<p>The ATA standard is typically used by a hard disk drive customarily found in a host device. ATA hard disk drivers were customary in host computers in the relevant time period.</p>

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,895,449's Claim Language	JP 08-130702
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	The ATA standard is typically used by a hard disk drive customarily found in a host device.
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,895,449's Claim Language	JP 08-130702
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,895,449's Claim Language	JP 08-130702
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	

PRIOR ART CLAIM CHART
JP 08-130702

Code	USP 6,895,449's Claim Language	JP 08-130702
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	The ATA standard is typically used by a hard disk drive customarily found in a host device.
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A41

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 06-83917
A	Independent Claim 1: 1. An interface device for communication between	A selector 105, an interface 107 and a micro-computer 101 (Fig. 1)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	A host computer 108 (Fig. 1). "If the host computer 108 supports SCSI ..." ([0011]). Thus, it is indicated that the host computer 108 has a multi-purpose interface.
C	a data transmit/receive device,	A scanner 102 (Fig. 1)
C1	the data transmit/receive device being arranged for providing analog data, comprising:	It is not explicitly disclosed that the scanner 102 provides analog data. A scanner, however, generally generates analog data corresponding to the scanned object.
D	a processor;	CPU 101-a (Fig. 2)
E	a memory;	RAM 101-c (Fig. 2)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The interface 107 and the selector 105 (Fig. 1) "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices. The command is received by the communications interface 107 (S31). If the command read from the interface 107 is the command to enter the access mode (S32), the microcomputer 101 switches the selector 105 and sets so that the hard disk 106 is connected to the host computer 108 side (S33)." ([0011])

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 06-83917
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	A part of the scanner 102 (Fig. 1) "Operation is such that the data of a manuscript image read by the scanner 102 is sent to the printer 104 via the buffer memory 103, and an image is formed on a storage sheet, OHP sheet, etc. In addition, it can be saved on the hard disk 106 via the selector 105." ([0011]). Thus, the scanner 102 has a portion for interfacing with the buffer memory 103.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	It is not explicitly disclosed that the scanner 102 includes a sampling circuit. A scanner, however, generally generates analog data corresponding to the scanned object, samples the analog data and converts the analog data into digital data.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	It is not explicitly disclosed that the scanner 102 includes an analog-to-digital converter. A scanner, however, generally generates analog data corresponding to the scanned object, samples the analog data and converts the analog data into digital data.
H	wherein the interface device is configured by the processor and the memory	The CPU 101-a, the ROM 101-b and the RAM 101-c (Fig. 2)
H1	to include a first command interpreter and a second command interpreter,	The CPU 101-a
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	It was well known that the SCSI interface of a host computer sends an inquiry with respect to the type of the device connected to the host computer.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 06-83917
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	It was well known that the image forming device 10 replies the answer to the host computer 108 with respect to the type of the device 10 connected to the host computer 108.
K1	which signals to the host device that it is an input/output device customary in a host device	<p>“In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices.” ([0011])</p> <p>That is, the image forming device 10 replies that it is an hard disk drive customary in the host computer 108.</p>
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	<p>“In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices.” ([0011])</p> <p>“The printer 20 in this mode behaves as if it were an external hard disk device, as viewed from the host computer 108, so it is possible to directly create a file containing the data output from the host computer 108 on the hard disk 106 within the printer 20. Naturally, in addition to creating output data, it also can be used in work areas, etc., as a normal external storage device.” ([0017])</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 06-83917
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	<p>"If the host computer 108 supports SCSI, it is connected to the host computer 108 side by the selector, and thereafter, the host computer 108 becomes capable of freely accessing the hard disk 106, by using a method that is exactly the same as that for an ordinary external storage device." ([0011])</p> <p>"The printer 20 in this mode behaves as if it were an external hard disk device, as viewed from the host computer 108, so it is possible to directly create a file containing the data output from the host computer 108 on the hard disk 106 within the printer 20. Naturally, in addition to creating output data, it also can be used in work areas, etc., as a normal external storage device." ([0017])</p>
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	A host computer 108 (Fig. 2). "If the host computer 108 supports SCSI ..." ([0011]). Thus, it is indicated that the host computer 108 has a multi-purpose interface.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 06-83917
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	<p>"In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])</p> <p>"The printer 20 in this mode behaves as if it were an external hard disk device, as viewed from the host computer 108, so it is possible to directly create a file containing the data output from the host computer 108 on the hard disk 106 within the printer 20. Naturally, in addition to creating output data, it also can be used in work areas, etc., as a normal external storage device." ([0017])</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 06-83917
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 06-83917
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	"In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	For the second embodiment, it is disclosed "... a microcomputer 101 enters the mode in which the microcomputer 101 transparently passes to the hard disk 106 the commands/data received from the host computer 108 and similarly passes transparently to the host computer the response from the hard disk 106." ([0017])
Z*	Dependent Claim 4: 4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.	"In the present embodiment, the hard disk 106 is for SCSI bus connection, which is quite common in the case of the external storage device for a small computer. If the host computer 108 supports SCSI, ..." ([0011])
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	"101-a is a central processing unit (CPU)" ([0008])
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and <u>virtual files</u> which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	"In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 06-83917
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	"In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the <u>virtual file system</u> including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 06-83917
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a <u>virtual file system</u> to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 06-83917
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 06-83917
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 06-83917
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	<p>"... the present embodiment is configured such that the file management format in the hard disk 106 shared with the host computer is matched with the file storage format used by the host computer OS (operating system), so the host has no trouble reading or writing data." ([0015])</p>
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	<p>"In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])</p>
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	<p>See '399 claim 3, row E*.</p>

Exhibit A42

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
A	Independent Claim 1: 1. An interface device for communication between	Computer 2 functions as an interface between Computer 1 and the disk 162. (See, e.g., Fig. 1).
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Computer 1 includes a SCSI board 201 (Fig. 1). "SCSI, the abbreviation for Small Computer Systems Interface, is the ANSI (American National Standards Institute) standard for connecting computers and auxiliary storage devices." ([0026]).
C	a data transmit/receive device,	Disk 162 (Fig. 1).
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	Computer 2 comprises a CPU 122 (Fig. 1).
E	a memory;	The SCSI board 203 included in Computer 2 comprises a buffer 232 (Figs. 1 and 2). "232 is the buffer to which are written data and commands to be sent, and in which received data and commands are stored." ([0036]).
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Computer 2 includes a SCSI board 203, which interfaces Computer 1 with Computer 2 via the SCSI board 201 (Fig. 1).
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Computer 2 includes a SCSI board 202, which interfaces Computer 2 with the disk 162 (Fig. 1).
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	Computer 2 includes the CPU 122 and the buffer 232 (Fig. 2).

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
H1	to include a first command interpreter and a second command interpreter,	"The SCSI controller 234 outputs data to other equipment via the SCSI connector 22, and receives data from other equipment in accordance with the SCSI standard. This protocol is defined in the written standard ANSI X3.131-1986. Regarding the control register 233, the SCSI controller 234 operates by the writing of instructions to this register 233 by the CPU 121. These instructions include selection, data out, command, and message out." ([0035])
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	<p>"Moreover, in the SCSI standard, a device type code that differentiates among the types of connected equipment is provided. A direct-access device (e.g., a magnetic disk) is specified by code = 0, and a processor device (e.g., a computer) is specified by code = 3. This device type code is set in registers 181-186. The registers 181, 182 of the SCSI boards 201, 202 housed within the computer contain processor device code = 3 as the device type code. The registers 185, 186 of the disk controllers 151, 152 contain direct-access device code = 0." ([0028]).</p> <p>"Figure 9 is the flowchart that explains the disk emulation process of the computer system. This process is executed on the slave-system computer 112, and it causes the SCSI board 203 to emulate a disk." ([0049])</p> <p>"Figure 10 is the flowchart that shows the Inquiry process." " ([0051])</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	"This process 34 is called at step 333 of Figure 9, as a result of the reception of the Inquiry command at the SCSI board 203 of the slave-system computer 112. The Inquiry command requests equipment information. Here, the slave-system computer 112 operates as a virtual disk, so information regarding the disk 162 is returned as the equipment information." ([0052])
K1	which signals to the host device that it is an input/output device customary in a host device	"This process 34 is called at step 333 of Figure 9, as a result of the reception of the Inquiry command at the SCSI board 203 of the slave-system computer 112. The Inquiry command requests equipment information. Here, the slave-system computer 112 operates as a virtual disk, so information regarding the disk 162 is returned as the equipment information." ([0052])
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	"Furthermore, in the present embodiment, direct-access code = 0, not processor device code = 3, is set in the registers 183, 184 of the SCSI boards 203, 204. As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	"Figure 12 is the flowchart showing the sRead process. This process 36 is called at step 335 of Figure 9, as a result of the reception of the Read command at the SCSI board of the slave-system computer. The sRead command is a command that requests a disk read. At step 361, it is decided whether or not data whose reading was requested are in the disk buffer 29. If they are, the data are sent at step 363. If not, at step 362, the specified data are read from the disk 162 to the disk buffer 29, after which the data are sent at step 363." ([0054]).
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	Computer 1 includes a SCSI board 201 (Fig. 1). "SCSI, the abbreviation for Small Computer Systems Interface, is the ANSI (American National Standards Institute) standard for connecting computers and auxiliary storage devices." ([0026]).
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	"Furthermore, in the present embodiment, direct-access code = 0, not processor device code = 3, is set in the registers 183, 184 of the SCSI boards 203, 204. As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	<p>"SCSI, the abbreviation for Small Computer Systems Interface, is the ANSI (American National Standards Institute) standard for connecting computers and auxiliary storage devices." ([0026]). "As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])</p>
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>"232 is the buffer to which are written data and commands to be sent, and in which received data and commands are stored." ([0036]).</p>
Z*	<p>Dependent Claim 4:</p> <p>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.</p>	<p>Computer 1 includes a SCSI board 201 (Fig. 1). Computer 2 includes a SCSI board 203 (Fig. 1).</p>
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	<p>The CPU 122 processes digital signals.</p>
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
Z*	<p>Dependent Claim 13:</p> <p>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface,</p>	<p>See '399 claim 4, row Z1.</p>
B*3	<p>and wherein the specific driver for the multi-purpose interface is an ASPI manager.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP08-328990
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	<p>"As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP08-328990
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	"This process 34 is called at step 333 of Figure 9, as a result of the reception of the Inquiry command at the SCSI board 203 of the slave-system computer 112. The Inquiry command requests equipment information. Here, the slave-system computer 112 operates as a virtual disk, so information regarding the disk 162 is returned as the equipment information." ([0052])

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP08-328990
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	"As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP08-328990
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP08-328990
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP08-328990
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP08-328990
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	<p>"As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])</p> <p>Thus, the data to be transferred to the Computer 1 is formatted into blocks having a predetermined size being suited for a disk.</p>
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	Disk 161 (Fig. 1)
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A43

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 02-51727
A	Independent Claim 1: 1. An interface device for communication between	Control board 3 (Figs. 1 and 2)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Personal Computer 1 (Figs. 1 and 2). "The aforementioned personal computer 1 contains an internal floppy disk device 7 that reads and writes data and programs, as an auxiliary storage device." (page 202, the lower right column, lines 5-8). Thus, the personal computer 1 has a driver for the auxiliary storage device. "The control board 3 controls the access of the personal computer 1 to the optical card read/write device 2 and is mounted in a slot of the personal computer 1, where it is used." (page 202, the lower right column, lines 16-19). Thus, the personal computer 1 has a slot as a multi-purpose interface.
C	a data transmit/receive device,	Optical card read/write device 2 (Figs. 1 and 2)
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	Directory expansion processing unit 10 and/or Retrieval processing unit 11 (Fig. 2)
E	a memory;	"The aforementioned directory expansion processing unit 10 reads the directory of the optical card, converts [the directory] into a format compatible with the OS of the personal computer 1, and expands [the directory] on a storage unit, such as RAM, of the control board 3." (page 3, the upper left column, lines 12-17)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Personal computer interface processing unit 15 (Fig. 2)

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 02-51727
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	I/O interface processing unit 16 (Fig. 2)
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	The directory expansion processing unit 10, the retrieval processing unit 11 (Fig. 2) and the RAM of the control board 3 (see page 3, the upper left column, lines 4-17).
H1	to include a first command interpreter and a second command interpreter,	The directory expansion processing unit 10 and the retrieval processing unit 11 (Fig. 2)
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	Obvious to the extent that such signals would be used in accessing a magnetic hard disk, since the system enables to access an optical recoding medium in the same manner as accessing a magnetic [hard] disk. (page 4, left col.)
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	Obvious to the extent that such signals would be used in accessing a magnetic hard disk, since the system enables to access an optical recoding medium in the same manner as accessing a magnetic [hard] disk. (page 4, left col.)
K1	which signals to the host device that it is an input/output device customary in a host device	The system enables a computer to access an optical recoding medium in the same manner as accessing a magnetic [hard] disk. (page 4, left col.)

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 02-51727
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	<p>"..., the main body of the computer is connected to a control board that controls the optical recording medium read/write device, to enable access in the same manner as an existing magnetic disk device and the like." (page 204, the upper left column, lines 11-22)</p> <p>Thus, the personal computer 1 can access the optical recording medium by the driver for the internal magnetic disk device.</p>
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	<p>"Secondly, the retrieval processing unit 11 receives information regarding the read data sent from the personal computer 1 and checks whether or not the data exists in the storage unit of the control board 3. If it does, the data is transferred to the personal computer 1 by the data transfer/receiving unit 12.</p> <p>If it does not exist, the data is read from the optical card via the data I/O processing unit 14. Then, the data transfer/receiving unit 12 stores [the data] in the storage unit of the control board 3, after which [the data] is transferred to the personal computer 1, so that it will not be necessary to later access the same data from the optical card." (page 203, the lower left column, lines 7-21).</p>
A	<p>Independent claim 11:</p> <p>11. An interface device for communication between</p>	See '399 claim 1, row A.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 02-51727
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	Personal Computer 1 (Figs. 1 and 2). "The aforementioned personal computer 1 contains an internal floppy disk device 7 that reads and writes data and programs, as an auxiliary storage device." (page 202, the lower right column, lines 5-8). Thus, the personal computer 1 has a driver for the auxiliary storage device. "The control board 3 controls the access of the personal computer 1 to the optical card read/write device 2 and is mounted in a slot of the personal computer 1, where it is used." (page 202, the lower right column, lines 16-19). Thus, the personal computer 1 has a slot as a multi-purpose interface.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 02-51727
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	"..., the main body of the computer is connected to a control board that controls the optical recording medium read/write device, to enable access in the same manner as an existing magnetic disk device and the like." (page 204, the upper left column, lines 11-22) Thus, the personal computer 1 can access the optical recording medium by the driver for the internal magnetic disk device.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 02-51727
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 02-51727
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>"If it does not exist, the data is read from the optical card via the data I/O processing unit 14. Then, the data transfer/receiving unit 12 stores [the data] in the storage unit of the control board 3, after which [the data] is transferred to the personal computer 1, so that it will not be necessary to later access the same data from the optical card." (page 203, the lower left column, lines 14-21)</p>
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	<p>Since the directory expansion processing unit 10 and the retrieval processing unit 11 process digital signals, they are digital signal processors.</p>
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 02-51727
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	"..., the main body of the computer is connected to a control board that controls the optical recording medium read/write device, to enable access in the same manner as an existing magnetic disk device and the like." (page 204, the upper left column, lines 11-22) Thus, the personal computer 1 can access the optical recording medium by the driver for the internal magnetic disk device.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 02-51727
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	"The aforementioned directory expansion processing unit 10 reads the directory of the optical card, converts [the directory] into a format compatible with the OS of the personal computer 1, and expands [the directory] on a storage unit, such as RAM, of the control board 3." (page 203, the upper left column, lines 12-17)

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 02-51727
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	"The aforementioned directory expansion processing unit 10 reads the directory of the optical card, converts [the directory] into a format compatible with the OS of the personal computer 1, and expands [the directory] on a storage unit, such as RAM, of the control board 3." (page 203, the upper left column, lines 12-17)

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 02-51727
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 02-51727
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 02-51727
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A44

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 04-309156
A	Independent Claim 1: 1. An interface device for communication between	Terminal device 200 (Fig. 1)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Host processor 100 (Fig. 1). "The broad configuration of the host computer includes the central processing unit 101, the RAM 102, the ROM 103, and the input and output ports 104, as is commonly known." ([0013]).
C	a data transmit/receive device,	Image capture device 209 (Fig. 1)
C1	the data transmit/receive device being arranged for providing analog data, comprising:	"The image capture device 209 is comprised of a television camera 209A and an AD converter 209B that performs AD conversion of the image capture signal output from the television camera. The image capture signal is digitized and input to the input and output ports 204." ([0015])
D	a processor;	"... the terminal device 200 of the present invention consists of processor functions comprised of the central processing unit 201 similar to the host processor 100, the RAM 202, the ROM 203, and the input and output ports 204, as well as the virtual disk 205." ([0015])
E	a memory;	"... the terminal device 200 of the present invention consists of processor functions comprised of the central processing unit 201 similar to the host processor 100, the RAM 202, the ROM 203, and the input and output ports 204, as well as the virtual disk 205." ([0015])
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Input and output ports 204 (Fig. 1) Virtual disk 205 (Fig. 1)
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 04-309156
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	<p>"The image capture device 209 is comprised of a television camera 209A and an AD converter 209B that performs AD conversion of the image capture signal output from the television camera. The image capture signal is digitized and input to the input and output ports 204." ([0015])</p> <p>It was well known that the AD conversion involves sampling the analog data provided by the television camera.</p>
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	<p>"The image capture device 209 is comprised of a television camera 209A and an AD converter 209B that performs AD conversion of the image capture signal output from the television camera. The image capture signal is digitized and input to the input and output ports 204." ([0015])</p> <p>However, the A/D converter is not integral with the so-called interface device.</p>
H	wherein the interface device is configured by the processor and the memory	<p>"... the terminal device 200 of the present invention consists of processor functions comprised of the central processing unit 201 similar to the host processor 100, the RAM 202, the ROM 203, and the input and output ports 204, as well as the virtual disk 205." ([0015])</p>
H1	to include a first command interpreter and a second command interpreter,	The central processing unit 201 (Fig. 1).
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 04-309156
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	<p>"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019])</p> <p>Thus, the host processor 100 communicates with the virtual disk 205 by a driver used for its own disk.</p>
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	<p>"Therefore, a control command string passed to the terminal device 200 can be written to the virtual disk 205 using, for instance, the COPY command. ... When the terminal device 200 detects the completion of a write to the virtual disk 205, then the OS emulator 202A interprets the command string, and the various image processing is executed by running the functions in the terminal in accordance with the control command string." ([0020])</p> <p>"The host processor 100 can take in the index data written to the virtual disk 205 to its own RAM 102.." ([0021])</p>
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	<p>Host processor 100 (Fig. 1).</p> <p>"The broad configuration of the host computer includes the central processing unit 101, the RAM 102, the ROM 103, and the input and output ports 104, as is commonly known." ([0013]).</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 04-309156
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019]) Thus, the host processor 100 communicates with the virtual disk 205 by a driver for its own input and output ports 104.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 04-309156
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 04-309156
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019])
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	RAM 202 (Fig.1)
Z*	Dependent Claim 4: 4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	The central processing unit 201 processes digital signals.
M*	Dependent Claim 6: 6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device.	"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019]) Thus, the data transferred from the image capture device 209 and stored in the virtual disk 205 is formatted in the same format as that of a disk of the host processor 100 (i.e., suitable for the disk of the host processor 100).
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 04-309156
N*2	<p>Dependent Claim 8:</p> <p>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device.</p>	
N*3	<p>Dependent Claim 9:</p> <p>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device.</p>	
N*4	<p>Dependent Claim 10:</p> <p>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device.</p>	
B*2	<p>Dependent Claim 12:</p> <p>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface.</p>	
Z*	<p>Dependent Claim 13:</p> <p>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface,</p>	See '399 claim 4, row Z1.
B*3	and wherein the specific driver for the multi-purpose interface is an ASPI manager.	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019])

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 04-309156
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	Input and output ports 204 (Fig. 1) Virtual disk 205 (Fig. 1)
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019]) Thus, the host processor 100 communicates with the virtual disk 205 by a driver used for its own disk.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 04-309156
N1	<p>wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.</p>	<p>"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019])</p> <p>The virtual disk 205 inherently includes a directory structure.</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 04-309156
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '449 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 04-309156
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '449 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 04-309156
N*2	<p>Dependent Claim 3:</p> <p>3. An interface device in accordance with claim 2 wherein the configuration file is a text file.</p>	
N*6	<p>Dependent Claim 4:</p> <p>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data.</p>	
N*7	<p>Dependent Claim 5:</p> <p>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device.</p>	
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 04-309156
N*12	<p>Dependent Claim 10:</p> <p>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host.</p>	
N*13	<p>Dependent Claim 11:</p> <p>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	<p>"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019])</p> <p>Thus, the data transferred from the image capture device 209 and stored in the virtual disk 205 is formatted into a predetermined size suitable for a disk.</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 04-309156
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	<p>"The host processor 100 can treat the virtual disk 205 in the same way it would treat its own disk as a result of these environment settings." ([0019])</p>
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	<p>See '399 claim 3, row E*.</p>

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Exhibit A45

PRIOR ART CLAIM CHART
U.S. Patent No. JP 08-223341

Code	USP 6,470,399's Claim Language	JP 08-223341
A	Independent Claim 1: 1. An interface device for communication between	A part including a signal processing 110, an A/D converter 112, a memory controller 116, a frame memory 118, and a communication interface circuit 124 (Fig. 1)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	An external device 20 (Fig. 2). "The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204." ([0027]) It was well-known in the art that personal computers include drivers for input/output devices customary in them. <i>See, e.g.</i> , '399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device ... are found in practically all host devices.").
C	a data transmit/receive device,	CCD 108 (Fig. 1).
C1	the data transmit/receive device being arranged for providing analog data, comprising:	"The signal processing circuit 110 includes a clamp circuit for keeping constant the direct current level of the image signals from the imaging device 108, a white balance adjustment circuit for adjusting the white balance, a gamma correction circuit for correcting the gamma characteristics and the like, and supplies to the analog-digital converter circuit (A/D) 112 the analog image signals for which the respective processes have been implemented." ([0018])
D	a processor;	CPU 130 (Fig. 1)
E	a memory;	A frame memory 118 (Fig. 1)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	A communication interface circuit 124 (Fig. 1)
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Signal Processing 110 and A/D converter 112 (Fig. 1)

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Code	USP 6,470,399's Claim Language	JP 08-223341
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	“The analog/digital converter circuit 112 is a converter circuit for converting analog RGB image signals to digital RGB image data of, for example, 8 to 10 bits respectively according to those levels.” ([0018]) The A/D converter circuit 112 samples the output of the signal processing 110 to convert it into a digital signal.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	“The analog/digital converter circuit 112 is a converter circuit for converting analog RGB image signals to digital RGB image data of, for example, 8 to 10 bits respectively according to those levels.” ([0018])
H	wherein the interface device is configured by the processor and the memory	CPU 130 and a frame memory 118 (Fig. 1)
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	“The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204.” ([0027]) The drivers for the communication interface 202 are drivers for an input/output device customary in a host device.

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Code	USP 6,470,399's Claim Language	JP 08-223341
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	An external device 20 (Fig. 2). "The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204." ([0027]) It was well-known in the art that personal computers include drivers for input/output devices customary in them. <i>See, e.g.</i> , '399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device ... are found in practically all host devices.").
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	

PRIOR ART CLAIM CHART
U.S. Patent No. JP 08-223341

Code	USP 6,470,399's Claim Language	JP 08-223341
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	
K1	which signals to the host device that it is an input/output device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 1, row L1.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	

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Code	USP 6,470,399's Claim Language	JP 08-223341
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K1	in such a way that it is an input/output device customary in a host device,	
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	"The YC image data from the Y/C processing circuit 114, with normal image capture, is accumulated once in the frame memory 118 via the memory controller 116 under the control of the control processor (CPU) 130." ([0019])
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	"The YC image data from the Y/C processing circuit 114, with normal image capture, is accumulated once in the frame memory 118 via the memory controller 116 under the control of the control processor (CPU) 130." ([0019])
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART
U.S. Patent No. JP 08-223341

Code	USP 6,895,449's Claim Language	JP 08-223341
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	“The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204.” ([0027])
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART
U.S. Patent No. JP 08-223341

Code	USP 6,895,449's Claim Language	JP 08-223341
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 1, row N1.

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Code	USP 6,895,449's Claim Language	JP 08-223341
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	
N*8	Dependent Claim 6: 6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.	

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Code	USP 6,895,449's Claim Language	JP 08-223341
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
Y*	<p>Dependent Claim 14:</p> <p>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	

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Code	USP 6,895,449's Claim Language	JP 08-223341
E*	Dependent Claim 16: 16. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.	See '399 claim 3, row E*.

Exhibit A46

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 07-177406
A	Independent Claim 1: 1. An interface device for communication between	See, e.g., A part including an A/D converter 4, a flame memory 6, a system control circuit 12 and a serial interface 20 (Fig. 1)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See, e.g., "Fig. 3 is a configuration block diagram showing a processing system to perform conversion and processing of data received together with a display program, as described above, in a personal computer on the receiving side." ([0024]) Inherent, or otherwise obvious, that personal computers include drivers for input/output devices customary in them. See, e.g., '399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device ... are found in practically all host devices.").
C	a data transmit/receive device,	See, e.g., CCD 2 (Fig. 1)
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See, e.g., "The object image, focused on the CCD2 via the lens 1, is converted into electrical signals. Then, γ correction and other prescribed processing is performed by the image capture processing circuit 3, and the result is converted into digital signals by the A/D converter (ADC) 4." ([0011])
D	a processor;	See, e.g., A system control circuit 12 (Fig. 1)
E	a memory;	See, e.g., A flame memory 6 (Fig. 1)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See, e.g., The serial interface 20 (Fig. 1)
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See, e.g., The imaging process 3 and the A/D converter 4 (Fig. 4)

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 07-177406
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See, e.g., "The object image, focused on the CCD2 via the lens 1, is converted into electrical signals. Then, γ correction and other prescribed processing is performed by the image capture processing circuit 3, and the result is converted into digital signals by the A/D converter (ADC) 4." ([0011]) Inherent, or otherwise obvious, that an A/D converter circuit as described in this reference would utilize a sampling circuit for sampling the output of the processing circuit 3 to convert it into a digital signal.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See, e.g., "The object image, focused on the CCD2 via the lens 1, is converted into electrical signals. Then, γ correction and other prescribed processing is performed by the image capture processing circuit 3, and the result is converted into digital signals by the A/D converter (ADC) 4." ([0011])
H	wherein the interface device is configured by the processor and the memory	See, e.g., The system control circuit 12 and the flame memory 6 (Fig. 1)
H1	to include a first command interpreter and a second command interpreter,	See, e.g., The system control circuit 12
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates	See, e.g., "In an image

PRIOR ART CLAIM CHART

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	<p>with the interface device by means of the driver for the input/output device customary in a host device, and</p>	<p>recording/playback device such as a digital still camera (DSC), captured images are converted to electrical image data, and the converted image data can be recorded on an IC memory card, floppy disk (FD), or other recording media, or image data can be transmitted via communication lines." ([0002])</p> <p>See, e.g., "When using recorded images in different processing systems, that is, other devices with different management systems (OS), this embodiment enables the prompt display on the receiving side, by recording on recording media, together with image data, an image conversion and display program which can be executed by the management system (for example, MS-DOS) of the other device. [...] The format of the recording media can itself be made to conform to the management system (OS) of the receiving side. Image data can be recorded in a standard format, and transfer software used to convert image data so as to conform to each management system." ([0010])</p> <p>See, e.g., "Data is supplied to the card interface (I/F) circuit 10 and is recorded on the IC card 11."</p> <p>See, e.g., "Camera image data obtained by the camera on the transmitting side is played back on the camera side, and is transmitted, as camera image files, together with a display program or the like via a modem and general public circuits. In the personal computer on the</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 07-177406
		<p>receiving side, the image data and program data are received via modem, and based on the program data, the received image data is converted into personal computer image data and is displayed on a monitor." ([0029])</p> <p>Inherent, or otherwise obvious, that a personal computer would communicate with the above-described camera using drivers for input/output devices customary in the personal computer.</p>
M	<p>wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.</p>	
A	<p>Independent claim 11: 11. An interface device for communication between</p>	See '399 claim 1, row A.
B2	<p>a host device, which comprises a multi-purpose interface and a specific driver for this interface, and</p>	<p>See, e.g., "Fig. 3 is a configuration block diagram showing a processing system to perform conversion and processing of data received together with a display program, as described above, in a personal computer on the receiving side." ([0024])</p> <p>Inherent, or otherwise obvious, that personal computers include drivers for input/output devices customary in them. See, e.g., '399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device ... are found in practically all host devices.").</p>
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.

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Code	USP 6,470,399's Claim Language	JP 07-177406
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	
K1	which signals to the host device that it is an input/output device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 07-177406
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K1	in such a way that it is an input/output device customary in a host device,	
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	JP 07-177406
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>See, e.g., "At the time of recording, the selector 5 sets a path for the recording of the digital image data from the A/D converter 4 to frame memory (RAM) 6. Block data (data in each divided block when a screen is divided into a plurality of blocks) read out from the frame memory 6 are supplied to a compression/decompression unit 8 through a selector 7." ([0011])</p>
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	<p>See, e.g., "Encoding and other processing in this compression/expansion unit 8 is controlled based on instructions from the system control circuit 12." ([0012])</p>
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and <u>virtual files</u> which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 07-177406
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 07-177406
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 07-177406
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 07-177406
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	JP 07-177406
K2*	Dependent Claim 15: 15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.	
E*	Dependent Claim 16: 6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.	See '399 claim 3, row E*.

Exhibit A47

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
A	<p>Independent Claim 1:</p> <p>1. An interface device for communication between</p>	<p>See, e.g., page 207, Figure 17.2 and accompanying description. The "second application PC" is the interface device. In addition, the entire reference describes various aspects of SCSI being used as an interface for communication.</p>
B1	<p>a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and</p>	<p>See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device. The host device comprises drivers for I/O devices customary in a host device (e.g., SCSI hard disk driver) and a multi-purpose interface (e.g. SCSI interface). Specifically, these are the drivers for the SCSI interface (e.g., a SCSI hard disk driver), including those that send the standard SCSI commands through the interface (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2).</p>
C	<p>a data transmit/receive device,</p>	<p>See page 207, Figure 17.2. The device labeled "Experiment" is the data transmit/receive device that is attached to the interface PC (Target). The "Experiment" is readily attachable and detachable from the interface. See id. and accompanying description.</p>
C1	<p>the data transmit/receive device being arranged for providing analog data, comprising:</p>	<p>See page 207, Figure 17.2. The data transmit/receive device labeled "Experiment" is arranged for providing analog data, which is shown by the lines entering the A/D converter of the interface PC. See also the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into its A/D converter for "preprocessing".</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
D	a processor;	See page 207, Figure 17.2. The "second application PC" (the interface PC) necessarily includes a processor. This is confirmed by the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into it's A/D converter for "preprocessing".
E	a memory;	See page 207, Figure 17.2. The "second application PC" (the interface PC) necessarily includes a memory. Indeed, all PCs include memory of various types. See, e.g., page 3, showing a computer, including a CPU and "Main memory".
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See page 207, including Figure 17.2. The data transfer line labeled "SCSI" is shown connecting the host device (Workstation) to the interface device PC (Target). The cable/line would attach to the multipurpose interface of the host device, i.e. its SCSI port. See also page 96, discussing the SCSI connectors allowing connection to a host PC, and page 89 (same).

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See page 207, including Figure 17.2. The data transfer line labeled "SCSI" is shown connecting the data transmit/receive device (labeled "Experiment") to the interface device PC (Target). See also page 96, discussing the SCSI connectors allowing connection to a host PC, and page 89 (same). See also page 210, Fig. 18.1 showing that the controller could be connected to four separate devices, which would inherently involve, or alternatively obviously involve, connectors.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See, e.g., page 207, including Figure 17.2. The analog data provided by the data transmit/receive device (labeled "Experiment") is shown by the lines entering the A/D converter of the interface PC. The interface would necessarily include a sampling circuit working in conjunction with the A/D converter to convert the analog data to digital data; alternatively this limitation would be obvious in light of the disclosure of the A/D converter. See also the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into it's A/D converter and thereby functioning as "a data acquisition system".

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	<p>See, e.g., page 207, including Figure 17.2. The analog data provided by the data transmit/receive device (labeled "Experiment") is shown by the lines entering the A/D converter of the interface PC. The interface would necessarily include a sampling circuit working in conjunction with the A/D converter to convert the analog data to digital data.</p> <p>See also the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into it's A/D converter and thereby functioning as "a data acquisition system".</p>
H	wherein the interface device is configured by the processor and the memory	See page 207 including Figure 17.2. The interface device is PC (Target). This interface PC is configured by a processor and memory (as identified above).
H1	to include a first command interpreter and a second command interpreter,	See page 207 including Figure 17.2. The first command interpreter and second command interpreter are included in the interface PC (Target) for interpreting commands from the host (Workstation) and to acquiring data from the data transmit receive device.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
I	<p>wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device</p>	<p>See page 207 including Figure 17.2. The standard SCSI INQUIRY command, which would be sent by the host (Workstation) to the interface's (Target) first command interpreter, is shown on page 208, in Figure 17.1. Opcode 12h is the INQUIRY received by the interface (Target) PC. This INQUIRY is as to the type of device attached to the SCSI (multipurpose) interface of the host. See pages 138-139, detailing the INQUIRY and response to INQUIRY under the SCSI command set. ("The inquiry command tells us about a LUN ... This command can be used to learn...the device type....) Page 138. The list of possible responses as to "Device Class" are shown in Table 12.1 on page. 133.</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	<p>See pages 138-139, detailing the INQUIRY and response to the INQUIRY under the SCSI command set. Table 12.11 on page 139 shows the INQUIRY (12h) command in the first byte. The responsive signal is shown in Table 12.12, under the field "Device Class". The list of possible responses as to "Device Class" are shown in Table 12.1 on page. 133.</p> <p>In the example of Figure 17.2 on p. 207, the interface PC (Target) would respond that its "Device Class" is "Processor Device" (code 03h from Table 12.1, page 133). Indeed, the entire chapter 17, "Processor Devices," from which the relevant example is found, is dedicated to describing application of device type "Processor Device".</p>
K1	which signals to the host device that it is an input/output device customary in a host device	<p>See above. A response indicating a device class of "Processor Device" tells the host (Workstation) that it is effectively attached to a standard I/O device customary in a host device, and thus that it can issue standard SCSI commands to communicate with the attached device.</p> <p>See also page 207 ("SCSI is powerful in this area because it allows customized hardware to be controlled using an industry standard interface").</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	<p>See pages 207-208. The host (Workstation) can communicate with the interface PC (Target) using standard SCSI commands via the standard SCSI command driver that is customary in the host device (such as a SCSI hard disk driver). See description above.</p> <p>See also page 207: "SCSI is powerful in this area because it allows customized hardware to be controlled using an industry standard interface."</p>
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	<p>See pages 207-208, including Figure 17.2. The command interpreter of the interface PC (Target) interprets a SCSI data request (see, e.g., Receive/Read commands in Table 17.1) as a data transfer command transferring digital data to the host [Workstation].</p> <p>"The second application [Interface] is a PC equipped with an A/D converter, which together function as a data acquisition system. The PC collects all of the necessary data and is even capable of preprocessing. It plays the role of a SCSI target and <u>delivers the preprocessed data to a workstation [Host].</u>" Page 207.</p>
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device. The host device comprises drivers for I/O devices customary in a host device (e.g., SCSI hard disk driver) and a multi-purpose interface (e.g., SCSI interface). Specifically, these are the drivers for the SCSI interface (e.g., a SCSI hard disk driver), including those that send the standard SCSI commands through the interface (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2).
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See pages 207-208. The host (Workstation) can communicate with the interface PC (Target) using standard SCSI commands via the standard SCSI command driver that is customary in the host device. See description above. See also page 207: "SCSI is powerful in this area because it allows customized hardware to be controlled using an industry standard interface."
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	<p>See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device. The host device comprises drivers for I/O devices customary in a host device and a multi-purpose interface, including a hard disk driver. Specifically, these are the drivers for the SCSI interface, including those that send the standard SCSI commands through the interface (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2).</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>See, e.g., page 208, Table 17.1, which includes commands for writing/reading a buffer. Further, this limitation is inherently disclosed since the interface PC (Target) has memory which would act as a buffer when transferring the data from the data transmit/receive device (Experiment) to the host (Workstation).</p>
Z*	<p>Dependent Claim 4:</p> <p>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.</p>	<p>See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device and is connected to the interface by its SCSI interface. See, also page 208, Table 17.1, disclosing commands to read and write to the data buffer.</p>
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	<p>See pages 207-208, including Figure 17.2. The processor of the interface PC (Target) would necessarily include a DSP.</p>
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	<p>Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	<p>See, e.g., page 207, Figure 17.2. The host device comprises drivers for I/O devices customary in a host device. Specifically, these are the drivers for the SCSI interface (e.g., a SCSI hard disk driver), including those that send the standard SCSI commands for a SCSI hard disk drive (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2).</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	See, e.g., page 207, Figure 17.2. The host device comprises drivers for storage devices customary in a host device. Specifically, these are the drivers for the SCSI interface, including those that send the standard SCSI commands for a SCSI hard disk drive (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2).
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	<p>Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).</p>
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	<p>Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).</p>
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	<p>Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).</p>
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	<p>Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	<p>Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).</p>
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	<p>See pages 207-208. The interface inherently disclose proper formatting of the data acquired from the data transmit/receive device into a predetermined size suitable for storage in the host computer.</p> <p>"The second application [Interface] is a PC equipped with an A/D converter, which together function as a data acquisition system. The PC collects all of the necessary data and is even capable of <u>preprocessing</u>. It plays the role of a SCSI target and <u>delivers the preprocessed data to a workstation</u> [Host]." Page 207.</p>
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	<p>Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI device (such as a hard disk drive). See, e.g., Table 17.1 on page 208 (Opcodes 08h and 0Ah for "receive" and "send," which are commands with the descriptions "Like read" and "Like write," respectively).</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995)
E*	Dependent Claim 16: 6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.	See '399 claim 3, row E*.

Exhibit A48

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Tasler's Thesis
A	Independent Claim 1: 1. An interface device for communication between	See the whole circuit except the PC block in pg. 39.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See the PC block on pg. 39, which is an IBM PC (p. 37) and would include conventional input/output devices such as mass storage devices and display device used for "displaying and storing" information data in files (p. 31, 69, 70). An IBM PC at that time would include associated drivers, and a multi-purpose interface (e.g., SCSI interface for mass storage devices) or a line printer port interface (p. 19) and associated drivers.
C	a data transmit/receive device,	It is the STM scanner providing the "Tunneling Current I" on pg. 39. Pgs. 4-7 provide description of STM. To the extent this does not meet the Court's interpretation of the limitation, it would be obvious.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The Tunneling Current I is analog data. See pg. 4-7.
D	a processor;	The DSP in pg. 39 is a processor.
E	a memory;	The DSP in pg. 39 has 10KB on-chip memory. See pgs. 18.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See the MUX that connects to the PC via the PC's LPT1 port on pg. 39. See also pgs. 19-22. To the extent that this does not meet the Court's interpretation, it would be obvious.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See the TLC320AC01 chip that connects to the "Tunneling Current I" on pg. 39. See also pg. 23. To the extent that this does not meet the Court's interpretation, it would be obvious.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Tasler's Thesis
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	The TLC320AC01 chip that connects to the "Tunneling Current I" has A/D converter and sampling circuit.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Same as above.
H	wherein the interface device is configured by the processor and the memory	The DSP in pg. 39 is configured by the processor and on-chip memory to communicate with the PC via the LPT port. See pgs. 19-20.
H1	to include a first command interpreter and a second command interpreter,	The DSP has built-in software that forms a first and a second command interpreter.
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	The DSP communicates with the PC via the LPT printer port. Therefore, there is a first command interpreter software in the DSP that tells the PC that it is a printer. See pgs. 19-20. Note that additional software in the PC side is needed to further process the in-coming data. See pg. 30, para. 2. and pg. 31, para. 3-4.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	Same as above.
K1	which signals to the host device that it is an input/output device customary in a host device	Same as above.
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	Because the LPT port is a standard interface on the PC, the PC will use the standard LPT driver to communicate with the DSP.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Tasler's Thesis
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	There is software in the DSP (a second command interpreter) that transmit data to the PC in response to a request from the PC. See pg. 31, para 3. "While scanning along the surface of the sample, the DSP transmits pre-processed image data to the PC. Meanwhile the PC is displaying and storing all information."
A	Independent claim 11: 11. An interface device for communication between	Same as "A" above.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	The PC has a LPT port, which is a multi-purpose interface (p. 19). Because the LPT port is a standard interface, the PC has a specific driver for the LPT interface.
C	a data transmit/receive device	Same as "C" above.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	Same as "C1" above.
D	a processor;	Same as "D" above.
E	a memory;	Same as "E" above.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Same as "F" above.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Same as "G" above.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Same as "G1" above.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	Same as "G2" above.
H	where the interface device is configured using the processor and the memory	Same as "H" above.
H1	to include a first command interpreter and a second command interpreter,	Same as "H1" above.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Tasler's Thesis
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	Same as "I" above.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	Same as "J" above.
K1	which signals to the host device that it is an input/output device customary in a host device,	Same as "K1" above.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	Same as "L1" above.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Same as "M" above.
A	Independent Claim 14: 14. A method of communication between	Same as "A" above.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Same as "B1" above.
C	a data transmit/receive device	Same as "C" above.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	Same as "C1" above.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	Same as "F" above.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	Same as "G" above.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	Same as "G1" above.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	Same as "G2" above.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	Same as "I" above.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Tasler's Thesis
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	Same as "J" above.
K1	in such a way that it is an input/output device customary in a host device,	Same as "K1" above.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	Same as "L1" above.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	Same as "M" above.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	See pg. 20, paras. 3-6. "The interface of the DSP is buffered ..."
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	The DSP comprises a digital signal processor.
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	
B*1	Dependent Claim 15: 15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Tasler's Thesis
A	Independent Claim 1: 1. An interface device for communication between	Same as "A" above.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Same as "B1" above.
C	a data transmit/receive device comprising the following features:	Same as "C" above.
D	a processor;	Same as "D" above.
E	a memory;	Same as "E" above.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Same as "F" above.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	Same as "G" above.
H	wherein the interface device is configured by the processor and the memory	Same as "H" above.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	Same as "I" above.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	Same as "J" above.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Tasler's Thesis
A	Independent claim 17: 17. An interface device for communication between	Same as "A" above.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	Same as "B2" above.
C	and a data transmit/receive device comprising the following features:	Same as "C" above.
D	a processor;	Same as "D" above.
E	a memory;	Same as "E" above.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Same as "F" above.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	Same as "G" above.
H	where the interface device is configured using the processor and the memory	Same as "H" above.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	Same as "I" above.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	Same as "J" above.
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Tasler's Thesis
A	Independent Claim 18: 18. A method of communication between	Same as "A" above.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	Same as "B1" above.
C	and a data transmit/receive device via an interface device comprising the following steps:	Same as "C" above.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	Same as "F" above.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	Same as "G" above.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	Same as "I" above.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	Same as "J" above.
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Tasler's Thesis
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Tasler's Thesis
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	

Exhibit A49

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
A	Independent Claim 1: 1. An interface device for communication between	Intelligent controller (Hardware Solutions, p. 88)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Host computer (Hardware Solutions, p. 88)
C	a data transmit/receive device,	WORM Disk (Hardware Solutions, p. 88)
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	The controller that translates commands from host computer to WORM disk
E	a memory;	Firmware (Hardware Solutions, p. 88)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	SCSI interface connected to host computer (Hardware Solutions, p. 88)
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	SCSI interface connected to WORM disk (Hardware Solutions, p. 88)
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	Controller operates in accordance with the firmware (Hardware Solutions, p. 88)
H1	to include a first command interpreter and a second command interpreter,	Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)
K1	which signals to the host device that it is an input/output device customary in a host device	Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	It is well known to one of ordinary skill in the art that the host computer communicates to a disk via a driver customary for a conventional magnetic disk.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Commands from the host are converted by the controller to commands to the WORM disk and an appropriate status is returned to the host after the WORM disk completes the command (Hardware Solutions, p. 88)
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	WORM disk SCSI device driver is a specific driver for the interface (Software Drivers, p. 85)
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	The WORM-specific file system software allows existing utilities and applications to access files on the WORM disk (Software Drivers, p. 85)
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Commands from the host are converted by the controller to commands to the WORM disk and an appropriate status is returned to the host after the WORM disk completes the command (Hardware Solutions, p. 88)
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	<p>Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	It is well known to one of ordinary skill in the art that the host computer communicates to a disk via a driver customary for a conventional magnetic disk.
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Data Disasters: What Not To Do, Michael Lang (December 1993)
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	<p>Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88)</p>
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	<p>See '399 claim 3, row E*.</p>

Exhibit A - Part 4

Exhibit A50

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Prior Art Reference
A	Independent Claim 1: 1. An interface device for communication between	Data acquisition board that could be plugged into a PC.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	A PC. Drivers and multiple-purpose interface are not specifically disclosed.
C	a data transmit/receive device,	Ultrasonic welders; high speed pneumatic actuator
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The intelligent board would acquire the analog inputs... (see page 2/3)
D	a processor;	At the beginning of the operation, the PC transfers the control program to the board from disc. It also transfers various standard parameters as explained below, and then starts the boards processor. (see page 2/1)
E	a memory;	Powerful features such as on-board memory and sophisticated DMA techniques begin to appear. (see page 2/1)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	A first connecting device is Inherent; the multiple-purpose interface is not specifically disclosed.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	A first connecting device is Inherent.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	Inherent.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	These early boards were quite basic—they handled analog to digital conversion... (see page 2/1)
H	wherein the interface device is configured by the processor and the memory	Inherent.
H1	to include a first command interpreter and a second command interpreter,	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Prior Art Reference
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Prior Art Reference
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Prior Art Reference
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Prior Art Reference
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Prior Art Reference
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Prior Art Reference
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Prior Art Reference
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Prior Art Reference
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Prior Art Reference
K2*	Dependent Claim 15: 15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.	
E*	Dependent Claim 16: 6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.	See '399 claim 3, row E*.

Exhibit A51

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
A	Independent Claim 1: 1. An interface device for communication between	Control unit (Figs. 1 and 2)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Mainframe (Figs. 1 and 2)
C	a data transmit/receive device,	Devices (Figs. 1 and 2)
C1	the data transmit/receive device being arranged for providing analog data, comprising:	
D	a processor;	Shared microprocessor (Fig. 4)
E	a memory;	Printer buffer (Fig. 4)
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Channel interface (Fig. 4)
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Receiver (Fig. 4)
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	The control unit is configured to perform emulation of a standard I/O device (Standard Device Emulation, p. 72-74 and Fig. 4)
H1	to include a first command interpreter and a second command interpreter,	The control unit is configured to perform emulation of a standard I/O device (Standard Device Emulation, p. 72-74 and Fig. 4)
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	By emulating a standard I/O device, the control unit indicates to the mainframe that it is a standard I/O device
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	By emulating a standard I/O device, the control unit indicates to the mainframe that it is a standard I/O device

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
K1	which signals to the host device that it is an input/output device customary in a host device	By emulating a standard I/O device, the control unit indicates to the mainframe that it is a standard I/O device
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The chief advantage of emulating a standard I/O device is the ability to use IBM supported software that exists both in application programs and operating systems.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	Since the device can be a tape or DASD (see Figs. 1-3), one skilled in the art would know the commands include requests for transferring data to the mainframe.
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	
D*	Dependent Claim 5: 5. An interface device according to claim 1, wherein the processor is a digital signal processor.	
N*1	Dependent Claim 7: 7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989.
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A52

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
A	Independent Claim 1: 1. An interface device for communication between	Universal Serial bus (USB)
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	"Universal Serial bus (USB) is a communications architecture that gives a personal computer (PC) the ability to interconnect a variety of devices using a simple fourwire cable." (page 1, para 2, lines 1-3). "USB devices are segmented into device classes that ... share a single class driver." (page 7, para 4.1, lines 1-3). Thus, this document teaches that the PC has a multi-purpose interface for USB and class drivers.
C	a data transmit/receive device,	For example, a standard mouse device (page 2, lines 2-4) such as an optical mouse comprises an LED and an image sensor to sense the movement of the optical mouse.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	It was well known that the image sensor of the optical mouse provides analog data with respect to its movement.
D	a processor;	It was well known that the optical mouse comprises a microprocessor including a processor and a memory.
E	a memory;	It was well known that the optical mouse comprises a microprocessor including a processor and a memory.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The mouse has a connecting device for interfacing with the personal computer.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	The optical mouse has a connecting portion between the microprocessor and the image sensor. To the extent this does not comply with the Court's claim construction, it would be obvious.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	The optical mouse would have, or render obvious, a sampling circuit and an A/D converter to convert the analog data provided by the image sensor into a digital signal to be processed by the microprocessor.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	The optical mouse would have, or render obvious, a sampling circuit and an A/D converter to convert the analog data provided by the image sensor into a digital signal to be processed by the microprocessor.
H	wherein the interface device is configured by the processor and the memory	The optical mouse comprises the microprocessor including a processor and a memory.
H1	to include a first command interpreter and a second command interpreter,	The processor in the microprocessor.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	<p>"The class type for a HID class device is defined by the Interface descriptor." (page 12)</p> <p>"When a Get_Descriptor (Configuration) request is issued, it returns the Configuration descriptor, all Interface descriptors, all Endpoint descriptors, and the HID descriptor for each interface." (page 46, para 7.1, lines 2-4)</p> <p>Thus, the USB-compliant device receives an inquiry as to its HID class and returns the HID class (interface descriptor) to which the USB-compliant device is classified.</p>
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	<p>"When a Get_Descriptor (Configuration) request is issued, it returns the Configuration descriptor, all Interface descriptors, all Endpoint descriptors, and the HID descriptor for each interface." (page 46, para 7.1, lines 2-4)</p> <p>Thus, the USB-compliant device receives an inquiry as to its HID class and returns the HID class (interface descriptor). The USB devices are segmented into the HID classes that have similar data transport requirements and share a single class driver (see page 7, para 4.1). Thus, the USB device returns the HID class to which it was classified, regardless of its real device type.</p>
K1	which signals to the host device that it is an input/output device customary in a host device	For example, the mouse is classified to the "Keyboards and pointing devices" class (see page 2, lines 3-4).

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The personal computer communicates with the mouse by a class driver assigned to the HID class to which the mouse is classified (see page 7, para 4.1).
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	"Universal Serial bus (USB) is a communications architecture that gives a personal computer (PC) the ability to interconnect a variety of devices using a simple fourwire cable." (page 1, para 2, lines 1-3). "USB devices are segmented into device classes that ... share a single class driver." (page 7, para 4.1, lines 1-3). Thus, this document teaches that the PC has a multi-purpose interface for USB and class drivers.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	The personal computer communicates with the mouse by a class driver assigned to the HID class to which the mouse is classified (see page 7, para 4.1).
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	It was well known that the memory in the microprocessor of the mouse functions as a buffer to buffer data to be transferred from the mouse to the personal computer.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	The processor in the microprocessor processes the image digital signal.
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	USB device classes include "Mass storage" in which a hard disk drive is classified (see page 1, para 2). Since a single device class share a single class driver, the personal computer has a driver for the "Mass storage."

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A53

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"July 1996 Apple article on SCSI drivers"
A	Independent Claim 1: 1. An interface device for communication between	
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Personal Computer (Macintosh) has a SCSI and SCSI device drivers for communicating with input/output (Fig. 3-2)
C	a data transmit/receive device,	SCSI devices such a scanner (Fig. 3-2, "peripheral devices")
C1	the data transmit/receive device being arranged for providing analog data, comprising:	For example, the scanner provides analog data of a scanned image. (Fig. 3-2). To the extent that this does not meet the Court's construction, this limitation is obvious.
D	a processor;	Inherent or obvious to the extent that a personal computer (Macintosh) incorporates a processor.
E	a memory;	Inherent or obvious to the extent that a personal computer (Macintosh) incorporates a memory.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	Inherent or obvious to the extent that using a SCSI interface on a personal computer involves a connector. To the extent that this limitation does not meet the Court's construction, this limitation is obvious.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	Inherent or obvious to the extent that using a SCSI interface on a personal computer involves a connector. To the extent that this limitation does not meet the Court's construction, this limitation is obvious.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	
H	wherein the interface device is configured by the processor and the memory	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"July 1996 Apple article on SCSI drivers"
H1	to include a first command interpreter and a second command interpreter,	
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The personal computer communicates with the SCSI device by a corresponding SCSI driver.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	Personal Computer (Macintosh) has a SCSI and SCSI device drivers.
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"July 1996 Apple article on SCSI drivers"
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	The personal computer communicates with the SCSI device by a corresponding SCSI driver.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"July 1996 Apple article on SCSI drivers"
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	
E*	Dependent Claim 3: 3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"July 1996 Apple article on SCSI drivers"
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	<p>The SCSI interface of the SCSI device comprises a partition map including a root directory and files. To the extent that this does not meet the Court's construction of the limitation, it would be obvious.</p> <p>"Although the driver descriptor map and the partition map are not used by the SCSI Manager, they must be present on all block devices compatible with the Macintosh Operating System." (page 3)</p> <p>"At an even higher level of abstraction, a device driver can define the mapping of physical addresses on a device to the logical addresses of a file system." (page 4)</p>
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	<p>The personal computer has a hard disk driver (Fig. 3-2)</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"July 1996 Apple article on SCSI drivers"
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	The personal computer communicates with the SCSI devices by corresponding SCSI drivers including a hard disk driver.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"July 1996 Apple article on SCSI drivers"
N1	<p>wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.</p>	<p>The SCSI interface of the SCSI device comprises a partition map including a root directory and files. To the extent that this does not meet the Court's construction of this limitation, it would be obvious.</p> <p>"Although the driver descriptor map and the partition map are not used by the SCSI Manager, they must be present on all block devices compatible with the Macintosh Operating System." (page 3)</p> <p>"At an even higher level of abstraction, a device driver can define the mapping of physical addresses on a device to the logical addresses of a file system." (page 4)</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"July 1996 Apple article on SCSI drivers"
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"July 1996 Apple article on SCSI drivers"
N2	<p>wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.</p>	<p>The SCSI interface of the SCSI device comprises a partition map including a root directory and files.</p> <p>"Although the driver descriptor map and the partition map are not used by the SCSI Manager, they must be present on all block devices compatible with the Macintosh Operating System." (page 3)</p> <p>"At an even higher level of abstraction, a device driver can define the mapping of physical addresses on a device to the logical addresses of a file system." (page 4)</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"July 1996 Apple article on SCSI drivers"
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"July 1996 Apple article on SCSI drivers"
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"July 1996 Apple article on SCSI drivers"
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	The SCSI devices include a hard disk drive (Fig. 3-2).
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A54

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
A	Independent Claim 1: 1. An interface device for communication between	A camera (page 3) is connected to the system. The camera comprises an image sensor, a processing circuit for processing an image data provided by the image sensor, and an interface between the image sensor and the processing circuit.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	Main CPU (mentioned in page 4)
C	a data transmit/receive device,	The camera (page 3)
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The image sensor of the camera provides analog image data.
D	a processor;	One of ordinary skill in the art would know that a digital camera comprises a processor to process the image data and a memory to store the image data.
E	a memory;	One of ordinary skill in the art would know a digital camera comprises a processor to process the image data and a memory to store the image data.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The camera comprises a connecting device interfacing with the Internet (page 3).
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	The camera comprises a connecting device interfacing with the image sensor. To the extent this does not meet the Court's claim construction, it would be obvious.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	One skilled in the art would consider the camera as comprising a sampling circuit and A/D converter to convert the image analog data provided by the image sensor into digital image data to transmit via the Internet.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	One skilled in the art would consider the camera as comprising a sampling circuit and A/D converter to convert the image analog data provided by the image sensor into digital image data to transmit via the Internet.
H	wherein the interface device is configured by the processor and the memory	One skilled in the art would know the camera comprises a processor to process the image data and a memory to store the image data.
H1	to include a first command interpreter and a second command interpreter,	The processor in the camera.
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	
K1	which signals to the host device that it is an input/output device customary in a host device	
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	
A	Independent claim 11: 11. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 claim 1, row C1.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
A	Independent Claim 14: 14. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1
C	a data transmit/receive device	See '399 claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 claim 1, row C1.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, row M.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	The memory of the camera buffers data to be transferred via the Internet.
Z*	<p>Dependent Claim 4:</p> <p>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface.</p>	
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	The processor of the camera processes digital image data.
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
A	Independent Claim 1: 1. An interface device for communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
N1	<p>wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.</p>	<p>"A derived virtual device (DVD) is an execution context at a network virtual device (NVD); i.e., a set of resources and procedures to access them." (page 7)</p> <p>"STORM (STORage Manager) creates a DVD for client access to a file, mapping only the file blocks." (page 8)</p> <p>"A DVD can be defined to map the blocks of a file, which the client can then treat like a raw device." (page 9)</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
A	Independent claim 17: 17. An interface device for communication between	See '399 claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 claim 1, row C.
D	a processor;	See '399 claim 1, row D.
E	a memory;	See '399 claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '399 claim 11, row L3.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
N2	<p>wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.</p>	<p>"A derived virtual device (DVD) is an execution context at a network virtual device (NVD); i.e., a set of resources and procedures to access them." (page 7)</p> <p>"STORM (STORage Manager) creates a DVD for client access to a file, mapping only the file blocks." (page 8)</p> <p>"A DVD can be defined to map the blocks of a file, which the client can then treat like a raw device." (page 9)</p>

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
A	Independent Claim 18: 18. A method of communication between	See '399 claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	See '449 claim 17, row N2.
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	"Derived Virtual Devices: A Secure Distributed File System Mechanism"
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	See '399 claim 3, row E*.

Exhibit A55

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Casio QV-10
A	Independent Claim 1: 1. An interface device for communication between	The QV-10 camera includes an interface device that is formed by at least a portion of the CPU and the on-chip memory that are part of the camera.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	The QV-10 camera can be connected to, for example, a PC that utilizes drivers for a variety of input/output devices customary in a host device (e.g., a driver for devices connectable to the RS-232C port, such a storage device or hard disk). The PC has at least a RS-232C port, which is a multi-purpose interface. See Pgs. 78 and 81 of the QV-10 Owner's Manual.
C	a data transmit/receive device,	The QV-10 camera includes a "data transmit/receive device" formed at least in part by a lens and a CCD chip.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	The lens and CCD of QV-10 provide analog image data.
D	a processor;	The interface portion of the QV-10 camera inherently includes a processor or processors, to handle camera operation , DSP processing, etc..
E	a memory;	The interface portion of the QV-10 camera inherently includes an internal memory that is located on the camera. The internal memory forms at least a portion of the claimed "memory."
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	The QV-10 camera includes a first connecting device comprising a RS-232C port for interfacing the interface device with a multipurpose RS-232C interface on a host PC.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Casio QV-10
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	The QV-10 camera includes a second connecting device comprising a sampling circuit and an analog to digital converter. This circuitry interfaces analog data provided by a data transmit receive device (including the CCD image sensor) with the interface device.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See above
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See above.
H	wherein the interface device is configured by the processor and the memory	The interface device of the QV-10 camera is configured to include first and second command interpreters as set forth more fully below.
H1	to include a first command interpreter and a second command interpreter,	See above.
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	The first command interpreter may comprise, for example, a RS-232C command interpreter. When a QV-10 camera is plugged into a RS-232C port on a host PC, the camera may receive inquiry signals from the host to determine when something is operatively connected thereto.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	The QV-10 camera then sends a signal to the host PC, regardless of the image sensor, or other data transmit/receive device attached to the interface device, that causes the PC to recognize that it can communicate with the QV-10 by means of a software driver for a device that stores digital images.
K1	which signals to the host device that it is an input/output device customary in a host device	See above.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Casio QV-10
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	The computer communicates with the QV-10 camera by means of the QV-10 driver software to allow the interface device to communicate with the PC.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	A user may use the interface provided by the driver software to view the images stored in the QV-10 camera's memory in a directory structure and retrieve the images files. See pgs. 15-21 of the QV-Link Owner's Manual. The QV-10 camera inherently includes a second command interpreter that is adapted to cause the processor of the QV-10 camera to interpret a data request command from the PC as being a command to initialize a transfer of digital data to the PC. The digital data can include digitized pictures.
A	Independent claim 11: 11. An interface device for communication between	See '399 Claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	The QV-10 camera can be connected to a PC has at least a RS-232C port, which is a multi-purpose interface. The PC therefore inherently contains a RS-232C driver. See Chapter 5 of QV-10 User's Manual titled "[u]sing the QV-10 camera with a PC."
C	a data transmit/receive device	See '399 Claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 Claim 1, row C1.
D	a processor;	See '399 Claim 1, row D.
E	a memory;	See '399 Claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 Claim 1, row F.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Casio QV-10
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 Claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 Claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 Claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 Claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 Claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 Claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 Claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 Claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	The PC communicates with the QV-10 through the RS-232C interface by means of the RS-232C driver.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 Claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 Claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 Claim 1, row B.
C	a data transmit/receive device	See '399 Claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 Claim 1, row C1

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Casio QV-10
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 Claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 Claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 Claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 Claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 Claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 Claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 Claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 Claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 Claim 1, row M.
B*1	Dependent Claim 2: 2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Casio QV-10
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	<p>The QV-10 camera includes internal memory. The internal memory comprises a buffer to buffer data acquired by the data transmit/receive device until it is transferred to the host PC. The QV-10 camera also comprises a memory buffer used during processing of images acquired by the image sensor.</p>
Z*	<p>Dependent Claim 4:</p> <p>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an RS-232C interface and the first connecting device also comprises an RS-232C interface.</p>	<p>See '399 Claim 1, row B1.</p>
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	<p>The QV-10 inherently contains a digital signal processor to process digital image data; otherwise, such processing would not be able to occur.</p>
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Casio QV-10
A	Independent Claim 1: 1. An interface device for communication between	See '399 Claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 Claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 Claim 1, row C.
D	a processor;	See '399 Claim 1, row D.
E	a memory;	See '399 Claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 Claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 Claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 Claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 Claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 Claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	The response signal contains information that, when received and processed by the PC, causes the PC to recognize that it can communicate with the interface device by means of a software driver for a device that stores digital images.
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	The QV-10 camera is adapted to utilize a software driver to allow the interface device to communicate with the PC.
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	The QV-10 camera is adapted to store pictures in a file system and a directory structure defined in its memory. The file system is "virtual" – the digitized pictures being representatives of images.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Casio QV-10
A	Independent claim 17: 17. An interface device for communication between	See '399 Claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 Claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 Claim 1, row C.
D	a processor;	See '399 Claim 1, row D.
E	a memory;	See '399 Claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 Claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 Claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 Claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 Claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 Claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	See '449 Claim 1, row K2.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	See '449 Claim 1, row L2
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Casio QV-10
A	Independent Claim 18: 18. A method of communication between	See '399 Claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 Claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 Claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 Claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 Claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 Claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 Claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	See '449 Claim 1, row K2.
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	See '449 Claim 1, row L2.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	
N*5	Dependent Claim 2: 2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Casio QV-10
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	
N*14	<p>Dependent Claim 12:</p> <p>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host.</p>	
N*15	<p>Dependent Claim 13:</p> <p>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Casio QV-10
K2*	<p>Dependent Claim 15:</p> <p>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.</p>	
E*	<p>Dependent Claim 16:</p> <p>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device.</p>	<p>Images are stored in a data buffer, permitting time independence from when a photograph is captured and when it is transferred to the host PC.</p>

Exhibit A56

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
A	<p>Independent Claim 1:</p> <p>1. An interface device for communication between</p>	<p>See, e.g., page 1-1 of DCS200 User's Manual: "The KODAK Professional DCS 200 Digital Camera can be used with a Macintosh computer and/or with an IBM PC or compatible computer."</p> <p>See, e.g., page 2-2 of DCS200 User's Manual: "The KODAK Professional DCS 200 Digital Camera (DCS 200 Camera) is a portable camera system that takes and stores high-resolution images."</p>
B1	<p>a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and</p>	<p>See, e.g., page 1-1 of DCS200 User's Manual: "The KODAK Professional DCS 200 Digital Camera can be used with a Macintosh computer and/or with an IBM PC or compatible computer."</p> <p>See, e.g., page 1-1 of DCS200 User's Manual: "You may able to use the camera on other computer platforms, or with additional operating systems[.]"</p> <p>See, e.g., page 1-7 ("Required SCSI Interface") of DCS200 User's Manual: "IBM PC or Compatible Computer – Hardware and Software"</p> <p>See, e.g., page 4-9 and 4-12: "SCSI port on the back of the Macintosh computer."</p> <p>See, e.g., pages 5-10 and 5-11: "SCSI2 port on the back of the PC"</p> <p>See also Chapters 4 and 5 of DCS200 User's Manual.</p> <p>Inherent, or otherwise obvious, that a Macintosh computer and an IBM PC comprise drivers for input/output devices customary in a host device.</p>
C	<p>a data transmit/receive device,</p>	<p>See, e.g., page xiii of DCS200 User's Manual: "Nikon N8008s"</p> <p>See also page 2-3 of DCS200 User's Manual: "The KODAK camera back is a sealed, one-piece unit. A single mounting screw attaches it to an unmodified Nikon N8008s (also called a Nikon F-801s in some parts of the world) camera body that has had its film back removed."</p> <p>Refer to 'Maintenance' on page 6-48 for directions on separating the KODAK camera back from the Nikon N8008s Camera[.]</p> <p>See, e.g., page 1-10 of DCS200 User's Manual: "Focusing screens. Custom focusing screens for the Nikon 8008s camera[.]"</p> <p>See, e.g., page 1-10 of DCS200 User's Manual: "Electronic Flash and accessories"</p> <p>See, e.g., page 1-10 of DCS200 User's Manual: "Extra lenses for the Nikon N8008s camera"</p> <p>See, e.g., page 1-10 of DCS200 User's Manual: "Refer to 'Using the Nikon 8008s Camera' on page 3-37 for an explanation of how standard lenses behave when used as part of the DCS Camera"</p> <p>See, e.g., page 1-10 of DCS200 User's Manual: "Close-up Accessories"</p> <p>See, e.g., page 1-10 of DCS200 User's Manual: "Nikon remote control accessories"</p> <p>See, e.g., page 1-10 of DCS200 User's Manual: "Finder accessories"</p> <p>See, e.g., pages 4-2 and 5-2: "While connected, you can use both the camera and computer simultaneously."</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
C1	the data transmit/receive device being arranged for providing analog data, comprising:	<p>See, e.g., page 6-2 of DCS200 User's Manual: "When you take a picture, light passes through the lens onto the imager; each pixel receives and stores a specified amount of light. These data – for one image – leave the imager chip in analog form, and are converted to digital form and stored with other data in the 2 megabytes (MB) of dynamic random access memory (DRAM)."</p> <p>See, e.g., page 2-4 of DCS200 User's Manual: "A KODAK charge coupled device (CCD) imager available in a color and a monochrome model. When you take a picture, the imager records data on a 1524 x 1012 –pixel matrix, resulting in images composed of 1.5 megapixels of data."</p> <p>See, e.g., page 6-2 of DCS200 User's Manual: "The KODAK camera back incorporates a 1524 x 1012-pixel charge coupled device (CCD) full-frame imager that collects light on 1,542,288 pixels, each 9x9 micrometers in size. There are two versions of the imager, one in the color camera back and another in the monochrome camera back. The CCD imager is 14.0 mm x 9.3 mm, smaller than the image area of 35 mm film."</p>
D	a processor;	<p>Inherent, or otherwise obvious, that the DCS200 comprises a digital signal processor to process digital image data.</p> <p>To the extent this limitation is neither expressly nor inherently disclosed, it would be obvious in light of numerous references including U.S. Patent No. 5,231,501 at 8:27-29: "The digital signal processing circuit 177 comprises a microcomputer"</p>
E	a memory;	<p>See, e.g., page xiii of DCS200 User's Manual: "an internal hard disk"</p> <p>See, e.g., page 2-4 of DCS200 User's Manual: "A two megabyte (MB) single-image dynamic random access memory (DRAM) that holds the current image"</p> <p>See, e.g., page 6-2 of DCS200 User's Manual: "These data – for one image – leave the imager chip in analog form, and are converted to digital form and stored with other data in the 2 megabytes (MB) of dynamic random access memory (DRAM)."</p>
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	<p>See, e.g., page 2-2 of DCS200 User's Manual: "You can attach the DCS200 Camera to one of several computers[.]"</p> <p>See, e.g., page 2-5 of DCS200 User's Manual: "A SCSI port to connect the DCS200 Camera to your computer for moving images from the camera to your computer."</p> <p>See, e.g., pages 4-13 and 5-11: "SCSI port on the back of the DCS200 camera."</p> <p>See, e.g., page 6-16: "A single 25-pin, female, subminiature D, SCSI connector appears on the KODAK camera back."</p>
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	<p>See, e.g., page 2-4 of DCS200 User's Manual: "Contacts for Nikon N8008s" and "Imager" and "CCD"</p> <p>See, e.g., pages 6-51 to 6-54 of DCS200 User's Manual: "Separating the Nikon N8008s Camera from the KODAK Camera Back" and "Reconnecting the Nikon N8008s Camera and the KODAK Camera Back"</p> <p>See also page 2-3 of DCS200 User's Manual: "The KODAK camera back is a sealed, one-piece unit. A single mounting screw attaches it to an unmodified Nikon N8008s (also called a Nikon F-801s in some parts of the world) camera body that has had its film back removed."</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	<p>See, e.g., page 2-4 of DCS200 User's Manual: "A KODAK charge coupled device (CCD) imager available in a color and a monochrome model. When you take a picture, the imager records data on a 1524 x 1012 -pixel matrix, resulting in images composed of 1.5 megapixels of data."</p> <p>See, e.g., page 6-2 of DCS200 User's Manual: "The KODAK camera back incorporates a 1524 x 1012-pixel charge coupled device (CCD) full-frame imager that collects light on 1,542,288 pixels, each 9x9 micrometers in size. There are two versions of the imager, one in the color camera back and another in the monochrome camera back. The CCD imager is 14.0 mm x 9.3 mm, smaller than the image area of 35 mm film."</p> <p>See, e.g., page 6-2 of DCS200 User's Manual: "When you take a picture, light passes through the lens onto the imager; each pixel receives and stores a specified amount of light. These data - for one image - leave the imager chip in analog form, and are converted to digital form and stored with other data in the 2 megabytes (MB) of dynamic random access memory (DRAM)."</p> <p>To the extent that the DCS 200 and/or DCS200 User's Manual do not anticipate or render obvious the "sampling circuit" limitation of the asserted claims of the '399 patent, the limitation would be obvious when combining the DCS200 and/or DCS200 User's Manual with the textbook by Kenneth Short, Microprocessors and Programmed Logic, Prentice-Hall, Inc., 1981, pp. 424-426 ("Microprocessor and Programmed Logic"). One skilled in the art would have been motivated to combine these references because the DCS200 comprises and the DCS200 User's Manual discloses using an A/D converter, and Microprocessors and Programmed Logic teaches using a sample and hold circuit with an A/D converter to minimize inaccuracies. Thus, one skilled in the art would have been motivated to combine the references to minimize the inaccuracies of the A/D measurement in the DCS200 and disclosed in the DCS200 User's Manual. Further, the general similarity of technology of the references would have motivated one skilled in the art to combine the references.</p>
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	<p>See above, element G1.</p> <p>See, e.g., page 3-2 of DCS200 User's Manual: "[T]he pictures you take are stored on the internal hard disk in the DCS 200 Camera, on an optional external hard disk, or in single-image dynamic random access memory (if you are working with a camera model without a hard disk."</p>
H	wherein the interface device is configured by the processor and the memory	<p>See above, '399 claim 1, row D.</p> <p>See, e.g., page xiii of DCS200 User's Manual: "an internal hard disk"</p> <p>See, e.g., page 2-4 of DCS200 User's Manual: "A two megabyte (MB) single-image dynamic random access memory (DRAM) that holds the current image"</p> <p>See, e.g., page 6-2 of DCS200 User's Manual: "These data - for one image - leave the imager chip in analog form, and are converted to digital form and stored with other data in the 2 megabytes (MB) of dynamic random access memory (DRAM)."</p>
H1	to include a first command interpreter and a second command interpreter,	<p>See '399 claim 1, row H.</p> <p>To the extent this limitation is neither expressly nor inherently disclosed, it would be obvious in light of the SCSI book.</p>
I	wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device	<p>See, e.g., page 1-7 ("Required SCSI Interface") of DCS200 User's Manual: "SCSI Host Adapter for PCs with AT-style bus, Kodak CAT No. 838 0917 (Future Domain No. TMC-1660), or Host Adapter for PCs with Micro Channel-style bus, Kodak CAT No. 835 4763 (Future Domain No. MCS-700)."</p> <p>See, e.g., page 4-9 and 4-12: "SCSI port on the back of the Macintosh computer."</p> <p>See, e.g., pages 5-10 and 5-11: "SCSI2 port on the back of the PC"</p>

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 claim 1, rows H, I, and F. To the extent this limitation is neither expressly nor inherently disclosed, it would be obvious in light of the SCSI book.
K1	which signals to the host device that it is an input/output device customary in a host device	See '399 claim 1, rows H, I, and F. To the extent this limitation is neither expressly nor inherently disclosed, it would be obvious in light of the SCSI book.
L1	whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and	See '399 claim 1, rows H, I, and F. To the extent this limitation is neither expressly nor inherently disclosed, it would be obvious in light of the SCSI book.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 claim 1, rows H, I, and F. To the extent this limitation is neither expressly nor inherently disclosed, it would be obvious in light of the SCSI book.
A	Independent claim 11: 11. An interface device for communication between	See '399 Claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface, and	See, e.g., page 1-1 of DCS200 User's Manual: "The KODAK Professional DCS 200 Digital Camera can be used with a Macintosh computer and/or with an IBM PC or compatible computer." See, e.g., page 1-7 ("Required SCSI Interface") of DCS200 User's Manual: "IBM PC or Compatible Computer – Hardware and Software" See, e.g., page 4-9 and 4-12: "SCSI port on the back of the Macintosh computer." See, e.g., pages 5-10 and 5-11: "SCSI2 port on the back of the PC" Inherent, or otherwise obvious, that the host device comprises a multipurpose interface and a specific driver for the multipurpose interface.
C	a data transmit/receive device	See '399 Claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, comprising:	See '399 Claim 1, row C1.
D	a processor;	See '399 Claim 1, row D.
E	a memory;	See '399 Claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 Claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including	See '399 Claim 1, row G.

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
G1	a sampling circuit for sampling the analog data provided by the data transmit/receive device and	See '399 Claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	See '399 Claim 1, row G2.
H	where the interface device is configured using the processor and the memory	See '399 Claim 1, row H.
H1	to include a first command interpreter and a second command interpreter,	See '399 Claim 1, row H1.
I	wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device	See '399 Claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device,	See '399 Claim 1, row J.
K1	which signals to the host device that it is an input/output device customary in a host device,	See '399 Claim 1, row K1.
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	Inherent, or otherwise obvious, that the PC communicates with the DCS200 through the multipurpose interface by means of the driver for the multipurpose interface.
M	wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 Claim 1, row M.
A	Independent Claim 14: 14. A method of communication between	See '399 Claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 Claim 1, row B.
C	a data transmit/receive device	See '399 Claim 1, row C.
C1	the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:	See '399 Claim 1, row C1

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 Claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including	See '399 Claim 1, row G.
G1	a sampling circuit for sampling the analog data provided by the data/transmit/receive device and	See '399 Claim 1, row G1.
G2	an analog-to-digital converter for converting data sampled by the sampling circuit into digital data;	See '399 Claim 1, row G2.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 Claim 1, row I.
J	regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 Claim 1, row J.
K1	in such a way that it is an input/output device customary in a host device,	See '399 Claim 1, row K1.
L1	whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and	See '399 Claim 1, row L1.
M	interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device.	See '399 Claim 1, row M.
B*1	<p>Dependent Claim 2:</p> <p>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,470,399's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
E*	<p>Dependent Claim 3:</p> <p>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device.</p>	
D*	<p>Dependent Claim 5:</p> <p>5. An interface device according to claim 1, wherein the processor is a digital signal processor.</p>	<p>Inherent, or otherwise obvious, that the DCS200 comprises a digital signal processor to process digital image data.</p> <p>See also, '399 Claim 1, row D.</p>
N*1	<p>Dependent Claim 7:</p> <p>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device.</p>	<p>See, e.g., page 6-2 of the DCS200 User's Manual: "Once the data are in the single-frame DRAM, the hard disk – if present – is started if it is not already running, and data from the image are transferred to the hard disk. Hardware in the camera back generates a thumbnail from the image data. The thumbnail is a subsample of image data, with data sampled from every eighth pixel. The thumbnail is subsequently stored with the full image on the hard disk (if present)."</p> <p>See, e.g., page 7-5 of the DCS200 User's Manual: "The image window displays thumbnails, either from images on the DCS 200 Camera hard disk, from an external hard disk, or from image archives previously saved in a file on the Macintosh computer hard disk by this driver. Thumbnails appear in the image window in the same logical order that images appear on the DCS 200 Camera hard disk, or on an external hard disk, or in the Macintosh computer archive file."</p> <p>See also, page 8-5 of the DCS200 User's Manual.</p>
B*1	<p>Dependent Claim 15:</p> <p>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive.</p>	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
A	Independent Claim 1: 1. An interface device for communication between	See '399 Claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and	See '399 Claim 1, row B1.
C	a data transmit/receive device comprising the following features:	See '399 Claim 1, row C.
D	a processor;	See '399 Claim 1, row D.
E	a memory;	See '399 Claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 Claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 Claim 1, row G.
H	wherein the interface device is configured by the processor and the memory	See '399 Claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device,	See '399 Claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 Claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and	
N1	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.	To the extent this limitation is neither expressly nor inherently disclosed, it would be obvious in light of Murata.

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
A	Independent claim 17: 17. An interface device for communication between	See '399 Claim 1, row A.
B2	a host device, which comprises a multi-purpose interface and a specific driver for this interface,	See '399 Claim 11, row B2.
C	and a data transmit/receive device comprising the following features:	See '399 Claim 1, row C.
D	a processor;	See '399 Claim 1, row D.
E	a memory;	See '399 Claim 1, row E.
F	a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and	See '399 Claim 1, row F.
G	a second connecting device for interfacing the interface device with the data transmit/receive device,	See '399 Claim 1, row G.
H	where the interface device is configured using the processor and the memory	See '399 Claim 1, row H.
I	in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device,	See '399 Claim 1, row I.
J	sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device	See '399 Claim 1, row J.
K2	which signals to the host device that it is a storage device customary in a host device,	
L3	whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and	Inherent, or otherwise obvious, that the PC communicates with the DCS200 through the multipurpose interface by means of the driver for the multipurpose interface.
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
A	Independent Claim 18: 18. A method of communication between	See '399 Claim 1, row A.
B1	a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface,	See '399 Claim 1, row B1.
C	and a data transmit/receive device via an interface device comprising the following steps:	See '399 Claim 1, row C.
F	interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;	See '399 Claim 1, row F.
G	interfacing of the data transmit/receive device with a second connecting device of the interface device;	See '399 Claim 1, row G.
I	inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached;	See '399 Claim 1, row I.
J	regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device	See '399 Claim 1, row J.
K2	in such a way that it is a storage device customary in a host device,	
L2	whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and	
N2	wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure.	

PRIOR ART CLAIM CHART

Code	USP 6,895,449's Claim Language	Kodak DCS200 and Kodak DCS200 User's Manual
N*5	<p>Dependent Claim 2:</p> <p>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device.</p>	
N*8	<p>Dependent Claim 6:</p> <p>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host.</p>	
N*9	<p>Dependent Claim 7:</p> <p>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device.</p>	
N*10	<p>Dependent Claim 8:</p> <p>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host.</p>	
N*11	<p>Dependent Claim 9:</p> <p>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device.</p>	