REPLACEMENT SHEET
10 MAR 2004

WHAT IS CLAIMED:

1. ~~In a system which includes a field programmable gate array (FPGA) integrated with a hard disk drive assembly, the hard disk drive assembly further comprising an integrated microprocessor, the hard disk drive storing data to configure the field programmable gate array to perform multiple different functions under control of the on-board processor without intervention by the host of the overall system~~. A system for configuring a field programmable gate array (FPGA) to perform multiple different functions, the system comprising a FPGA integrated with a hard disk drive assembly, the hard disk drive assembly further comprising an integrated microprocessor, the hard disk drive storing, in a separate partitioned region, data to configure the field programmable gate array to perform multiple different functions under control of the microprocessor without intervention by the host of the overall system.

2. A system as claimed in claim 1 including a plurality of interfaces, each connected to the hard disk drive through an encoder or decoder, one or more of the encoders and decoders being implemented by a single FPGA which is reprogrammed to work with a different interface by the data stored on the hard disk drive.

3. A system as claimed in claim 1 including a plurality of interfaces, each connected to the hard disk drive through a packetizer or depacketizer, one or more of the packetizer and depacketizer being implemented by a single FPGA adapted to be programmed to work with a selected one of the plurality of interfaces by data stored on the hard disk drive.

4. A system as claimed in claim 3 including a disk controller adapted to store a plurality of data sets for programming the FPGA in identifiable sections of said hard disk drive, and to select one of said data sets for programming the FPGA in response to a command from the ~~on-board processor~~ microprocessor dependent on the selected interface which is to send or receive data from the system.

5. ~~In a system which includes a field programmable gate array (FPGA) integrated with a hard disk drive assembly, the hard disk drive assembly further comprising an integrated microprocessor, the hard disk drive storing data to configure the field programmable gate array to perform multiple different functions under control of the~~

~~on-board processor without intervention by the host of the overall system, the method comprising storing a plurality of data sets for programming the field programmable gate array on a partitioned region of the hard disk drive, identifying a selected one of the interfaces which is to send or receive data from the system, and programming the FPGA with one of the data sets from the hard disk drive under the control of the on-board processor in response to the identification of the selected interface.~~ A method of configuring a field programmable gate array (FPGA) to perform multiple different functions, the FPGA being integrated with a hard disk drive assembly, the hard disk drive being connected to a plurality of interfaces, the hard disk drive assembly further comprising an integrated microprocessor, the hard disk drive storing, in a separate partitioned region, data to configure the field programmable gate array to perform multiple different functions under control of the microprocessor without intervention by the host of the overall system, the method comprising storing a plurality of data sets for programming the field programmable gate array on a partitioned region of the hard disk drive, identifying a selected one of the interfaces which is to send or receive data from the system, and programming the FPGA with one of the data sets from the hard disk drive under the control of the microprocessor in response to the identification of the selected interface.

6. ~~In a system which includes a field programmable gate array integrated with a hard disk drive assembly, the hard disk drive assembly further comprising an integrated microprocessor, the hard disk drive storing data to configure the field programmable gate array to perform multiple different functions under control of the on-board processor without intervention by the host of the overall system, and means for storing a plurality of data sets for programming the field programmable gate array on a partitioned region of the hard disk drive, and programming the FPGA with one of the data sets from the hard disk drive under the control of the on-board processor in response to the identification of the selected interface.~~ A system as claimed in claim 1 including a plurality of interfaces each connected to the hard disc drive, the hard disk drive assembly further comprising means for storing a plurality of data sets for programming the field programmable gate array on said partitioned region of the hard disk drive, and programming the FPGA with one of the data sets from the hard disk drive under the control of the microprocessor in response to the identification of the selected interface.