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(54) Title: **CRITICAL EVENT LOG FOR A DISC DRIVE**

(57) Abstract: An apparatus, modules, means, and computer readable media for and a method of logging critical events to a critical event log storage area on a disc in a disc drive are disclosed. The disc drive having a data storage disc is operably connected to a host computer. The data communication between the host computer and the disc drive is established via a disc drive interface. The disc drive interface may be an ATA disc drive interface. A power-on operational status of the disc drive with the host computer is determined. Then a critical event is determined without a host computer intervention. A set of critical events predefined and stored in the firmware of the disc drive. The critical event can be monitored and logged either during an on-line data collection mode or an off-line data collection mode. During the off-line data collection mode, the firmware performs off line scan of the disc drive in the background. The determined critical event is logged to the critical event log by reading the critical event log from the critical event log storage area on the disc; appending the determined critical event to the critical event log; and storing the appended critical event log to the critical event log storage area on the disc.