To: T10 Technical Committee
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Subject: SSC COMPRESSION ALGORITHM default values

In SSC's Data Compression mode page (0Fh), we propose that the COMPRESSION ALGORITHM return the default compression algorithm (one of 03h-FFh) preferred by the device at power-up until it is set to some other value. Reading the page with MODE SENSE in "default values" mode would always return this preferred algorithm.

SSC-r16, PDF page 67, printed page 57, section 5.4.3.1:

A data compression enable (DCE) bit of one indicates that data compression is enabled. When this bit is one, data sent to the device server by the application client shall be processed using the selected compression algorithm before being written to the medium. A DCE bit of zero indicates that data compression is disabled.

A data compression capable (DCC) bit of one indicates that the device supports data compression and shall process data sent to it for transferal to the medium using the selected compression algorithm. ~~When the DCE bit is one and a compression algorithm has not been selected, the default compression algorithm value shall be returned in the COMPRESSION ALGORITHM field. Otherwise, the selected compression algorithm value shall be returned in the COMPRESSION ALGORITHM field.~~ A DCC bit of zero indicates that the device does not support data compression. This shall be a non-changeable bit.

… (PDF page 68/printed page 58)…

The COMPRESSION ALGORITHM field indicates the currently selected compression algorithm. The default value of the COMPRESSION ALGORITHM field shall indicate the default compression algorithm for the device.   The field indicates the compression algorithm the device shall use to process data sent to it by the application client when the DCE bit is set to one. If the application client selects an algorithm that the device does not support, then the device shall return a CHECK CONDITION status. The sense key shall be set to ILLEGAL REQUEST and the additional sense code and an additional sense code qualifier shall be set to INVALID FIELD IN PARAMETER LIST. ~~A value of zero shall indicate that no compression algorithm is currently selected.~~ Algorithm identifiers are shown in Table 39.

Table 39:
Type 01   Set with MODE SELECT to select the ~~Default~~ default algorithm
              MODE SENSE returns the actual algorithm that was selected