

LASER MAGNETIC STORAGE
INTERNATIONAL COMPANY

OSI DIVISION

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To: Members of X3T9.2 and Parties
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Subject: SCSI-2 Identification of Request Sense Data

The current SCSI-2 proposal does not include any way for an initiator to distinguish between the response data format of SCSI-1 and SCSI-2 devices. The SCSI-1 specification (ANSI X3.131-1986) allowed the content of additional sense bytes (Bytes 8 through n) to be vendor unique. SCSI-2 requires particular data in bytes 8 through 17 but provides no good means to distinguish these bytes from the vendor unique definition of SCSI-1.

The proposed solution is to define a new Error Code value (72h) replacing, for SCSI-2, the meaning of the existing 70h value. Sense data returned with an Error Code value of 70h shall conform to the format requirements of SCSI-1 (and may also conform to CCS). Sense data returned with Error Code values of 71h or 72h shall conform to the requirements of SCSI-2.

37 The CCS proposal (X3T9.2/85-52 Rev. 4B) redefined Request Sense data bytes 8 through 18 from vendor unique to specific definitions. However, the results of the Inquiry command could be used to distinguish between devices claiming compliance with CCS and those which simply claimed compliance with SCSI-1. (A Response Data Format reply of one implied compliance with all the requirements of CCS.)

The current SCSI-2 proposal definition of the Inquiry Response Data Format value of 2 implies only that the format of the Inquiry data is as specified in the SCSI-2 specification. (The ANSI-Approved version value could be used eventually to straighten this out but it is of no use for at least the next year or two.)

Forcing a CCS like solution is not acceptable because this makes it impossible to build consistent transition products where the Inquiry data is returned in the SCSI-2 format. This data contains the vendor and product identification used to configure the driver for an otherwise SCSI-1 device installed in a CCS/SCSI-2 system.

The Inquiry and Mode Sense commands as currently defined by the SCSI-2 proposal allow the user to request the response data format. In this way, a SCSI-1 device will reject a command that demands the new responses.

This mode is not acceptable for a Request Sense command because this is the command used to discover the cause of problems.

The proposed change to the SCSI-2 document is the following paragraph and note replacing the second paragraph after Table 7-4 in section 7.1.2. (This is the next to last paragraph on page 7-4 in the 10/31/86 version of the document.)

Error code values of 00h to 6Fh are not defined by this standard, their use is not recommended. The Sense Data format for Error Code 70h shall conform to the definition of bytes 0 through 7 given in Table 7-4. (This Error Code format is compatible with ANSI - X3.131-1986.) The Sense Data format for Error Codes 71h (deferred errors) and 72h (current errors) shall conform to the definition given in Table 7-4. Error Code values of 73h through 7Eh are Reserved. Error Code 7Fh is set aside for vendor unique Sense Data formats.

Note: If the Inquiry Data Response Data Format field (see Table 7-8) contains a 1 and the Error Code is 70h, the Sense Data format can be expected to conform with all the requirements of Table 7-4.

Also in the first sentence of section 7.1.2.1 Deferred errors:

Error Code values 70h and 72h indicate that the CHECK CONDITION status reported