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To: X3T9.2 SCSI-2 Working Group and X3T9.2 Committee Members

From: Paul R. Nitza

Subj: SCSI-2 Inquiry Command Modifications

Attached for your review is revision 1 of the Inquiry Peripheral Device Type proposal with the modifications discussed at the May working group meeting. In addition this document contains the Target supported options information which was discussed at the working group meeting.

The proposed Inquiry Peripheral Device Type provides a means for the Initiator to determine if a physical device is attached to a Target logical unit. In addition the Initiator can determine if the logical unit is capable of supporting a physical device (Page 1 of this proposal).

The Target supported options provides a means for the Initiator to determine if the logical unit supports various options defined in SCSI-2 (Page 2 of this proposal).

The Peripheral Device Type (byte 0) in the Inquiry Data, table 7-10 on page 7-12 must be modified as shown below:

Bit Byte	7	6	5	4	3	2	1	0
0		Qualifier			Peripheral Device Type			

The following must be added at the top of page 7-13:

The peripheral device type and qualifier fields identifies the physical device currently connected to the logical unit. If the Target is not capable of supporting a physical device on this logical unit this field shall be set to 7Fh (qualifier set to 0 1 1 and peripheral device type set to 1Fh). The qualifiers are shown in table 7-xx and the peripheral device types are shown in table 7-11.

Table 7-xx: Peripheral Device Type Qualifier

Qualifier	Description
0 0 0	The peripheral device type identified in bits 0 through 4 (defined in table 7-11) is currently connected to this logical unit. If the Target cannot determine whether or not a physical device is currently connected it shall also use this qualifier when returning the Inquiry data. Note: This qualifier does not imply that the device is ready for access by the Initiator.
0 0 1	The Target is capable of supporting the peripheral device type identified in bits 0 through 4 (defined in table 7-11) on this logical unit. However, the physical device is not currently connected to this logical unit.
0 1 0	Reserved
0 1 1	The logical unit is not capable of supporting a physical device. For this qualifier the peripheral device type in bits 0 through 4 must be set to 1Fh to provide compatibility with previous versions of SCSI. All other peripheral device type values in bits 0 through 4 are reserved for this qualifier.
1 X X	Vendor Unique

The last three lines in the current peripheral device type table (table 7-11 on page 7-13) must be replaced with the following entries:

Code	Description
0Ah - 1Eh	Reserved
1Fh	Unknown Device Type

Reserved byte 7 in the Inquiry Data, table 7-10 on page 7-12 must be modified as shown below:

```
=====================================================================
  Bit |   7   |   6   |   5   |   4   |   3   |   2   |   1   |   0   |
  Byte |       |       |       |       |       |       |       |       |
=====================================================================
   7  | Reserv | RelAdr | WBus |  Sync | Linked | Cache | CmdQue | ASense |
---------------------------------------------------------------------
```

The following seven paragraphs must be inserted on page 7-14 after the additional length paragraph:

The relative addressing field (RelAdr), when set to one, indicates that the Target supports relative addressing for this logical unit. If this field is set to zero the Target does not support relative addressing for this logical unit. Note: If this field is set to one the linked command field (Linked) must also be set to one since relative addressing can only be used with linked commands.

The wide bus field (WBus), when set to one, indicates that the Target supports wide data transfers (16 and/or 32 bits). If this field is set to zero the Target only supports 8 bit data transfers.

The synchronous transfer field (Sync), when set to one, indicates that the Target supports synchronous data transfer. If this field is set to zero the Target does not support synchronous data transfer.

The linked command field (Linked), when set to one, indicates that the Target supports linked commands for this logical unit. If this field is set to zero the Target does not support linked commands for this logical unit.

The cache field, when set to one, indicates that the Target supports caching for this logical unit. If this field is set to zero the Target does not support caching for this logical unit.

The command queuing field (CmdQue), when set to one, indicates that the Target supports command queuing for this logical unit. If this field is set to zero the Target does not support command queuing for this logical unit.

The autosense field (ASense), when set to one, indicates that the Target supports the autosense option for this logical unit. If this field is set to zero the Target does not support the autosense option for this logical unit.