To: X3T10 Committee (SCSI)

From: George Penokie (IBM)

Subject: Logical unit response to transciever change

1 Introduction

The following proposal describes additions to SAM-2, SPC-2, and SPI-2 (old SIP clauses) that are required to cause a unit attention condition to occur as a result of a target being forced to switch from LVD transceivers to SE transceivers. This event would occur when a single ended device is plugged into a bus that only has low voltage differential devices and would only apply to LVD devices that support multi-mode operations.

2 SAM-2 changes

In the Unit Attention Condition clause the following would be added to the unit attention condition events list:

x) A change in the transceiver mode from low voltage differential mode to single ended mode.

3 SPC-2 changes

The following ASC and ASCQ would be added:

xx 00 all devices TRANSCEIVER MODE CHANGE

xx 01 all devices TRANSCEIVER MODE CHANGED TO SE

xx 02 all devices TRANSCEIVER MODE CHANGED TO LDV

4 SPI-2 changes (SPI-2 clauses from SIP)

4.1 SDTR message description

Add to the list of conditions that cause the SDTR agreement to become invalid the following:

e) A change in the transceiver mode from low voltage differential mode to single ended mode.

4.2 WDTR message description

Add to the list of conditions that cause the WDTR agreement to become invalid the following:

d) A change in the transceiver mode from low voltage differential mode to single ended mode.

4.3 Command processing considerations and exception conditions clause

Add a subclause to the Command processing considerations and exception conditions clause titled 'Transceiver mode change' as follows:

When a target role agent that contains multimode transceivers detects a transceiver mode change from low voltage differential mode to single ended mode it shall create a unit attention condition for all initiators. The unit attention condition sense key shall be set to UNIT ATTENTION, and the additional sense code set to LVD TRANSCEIVER CHANGE TO SE.