To: T10 Technical Committee
From: Bob Sheffield(robert.l.sheffield@intel.com)
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Subject: 06-001r1: SAT - I_T Nexus Loss

Revision history

Revision 0 (21 November 2005) First revision
Revision 1 (14 December 2005) Incorporated editoral changes from December 12 SAT WG

Related documents

sat-r07 - SCSI / ATA Translation revision 07
05-306r2 - SAS-2 STP connection time limits and STP/SMP I_T nexus loss (http://www.t10.org/ftp/t10/document.05/05-306r2.pdf)

Overview

This proposal is based on discussion of a SAS-2 proposal, 05-306r2, which provides handling for I_T nexus loss for devices using STP protocol. In SAS-2, an STP/SATA bridge may detect an I_T nexus loss. The SATL may detect this condition during discovery prompted by a BROADCAST (CHANGE) by detecting the STP I_T NEXUS LOSS OCCURRED bit in the REPORT PHY SATA response. The SATL needs to process the I_T nexus loss in accordance with SAM-3 by issuing an ATA hard reset to the device, terminating all outstanding commands to that device, and establishing a unit attention condition. A SATL using other transports may also detect an I_T nexus loss, and should perform the same processing.

Suggested changes

(new text)

6.5 SAM-3 I_T nexus loss

The SATL may detect an I_T nexus loss (see SAM-3). If the SATL detects an I_T nexus loss (e.g., in a SAS domain the expander device with an STP/SATA bridge transmits a BROADCAST (CHANGE) and the subsequent REPORT PHY SATA response from the affected phy contains an STP I_T NEXUS LOSS OCCURRED bit set to one), the SATL:

1) shall issue an ATA hard reset (see 3.1.9) to the affected ATA device;
2) shall terminate processing of any commands to the affected ATA device; and
3) should establish a unit attention with the additional sense code set to I_T NEXUS LOSS OCCURRED.