

To: T10 Technical Committee  
 From: Rob Elliott, HP (elliott@hp.com)  
 Date: 16 January 2006  
 Subject: 06-025r1 SAM-4 More initiator port to I\_T nexus changes

### **Revision history**

Revision 0 (16 December 2005) First revision

Revision 1 (16 January 2006) Incorporated comments from January 2006 CAP WG.

### **Related documents**

sam4r04 - SCSI Architecture Model - 4 revision 4

04-088r4 - SAM-3 Multiple Target Port Model (Charles Binford, Sun), incorporated into sam3r14 and later

04-116r5 - Response to T10 letter ballot comments on SAM-3 (Ralph Weber, ENDL)

### **Overview**

During SAM-3 letter ballot (where 04-088 was incorporated), many uses of "SCSI initiator port" were changed to "I\_T nexus." A few more changes are needed.

### **Suggested changes**

#### **5.3.1 Status codes**

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**TASK SET FULL.** When the logical unit has at least one task in the task set for ~~a SCSI initiator port~~ [an I\\_T nexus](#) and a lack of task set resources prevents accepting a received task from that ~~SCSI initiator port~~ [I\\_T nexus](#) into the task set, TASK SET FULL shall be returned. When the logical unit has no task in the task set for ~~a SCSI initiator port~~ [an I\\_T nexus](#) and a lack of task set resources prevents accepting a received task from that ~~SCSI initiator port~~ [I\\_T nexus](#) into the task set, BUSY should be returned.

The logical unit should allow at least one command in the task set for each supported [I\\_T nexus \(i.e., for each SCSI target port, allow at least one command from each](#) SCSI initiator port that has identified itself to the SCSI target port in a SCSI transport protocol specific manner ([e.g., login](#)) or by the successful transmission of a command).

Retry delay timer, when supported by a protocol, may provide the SCSI initiator port with more information on when the command should be retransmitted (see table 25).

If the UA\_INTLCK\_CTRL field in the Control mode page contains 11b (see SPC-3), termination of a command with TASK SET FULL status shall cause a unit attention condition to be established for the SCSI initiator port that sent the command with an additional sense code set to PREVIOUS TASK SET FULL STATUS unless a PREVIOUS TASK SET FULL STATUS unit attention condition already exists.

ACA ACTIVE. This status shall be returned as described in 5.8.2.2 and 5.8.2.3 when an ACA exists within a task set. The [application client](#) ~~SCSI initiator port~~ may reissue the command [on the same I\\_T nexus](#) after the ACA condition has been cleared.

**TASK ABORTED.** This status shall be returned when a task is aborted by another ~~SCSI initiator port~~ [I\\_T nexus](#) and the Control mode page TAS bit is set to one (see 5.6.3).

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## 5.2.3 Retry delay timer codes

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Table 1 — Retry delay timer [excerpts]

Status code	Retry delay timer code	Description
BUSY	0001h - FFEFh	The number of 100 millisecond increments the <del>initiator port</del> application client should wait before sending another command to the logical unit <u>on any I_T nexus</u> .
	FFFEh	The application client should stop sending commands on this I_T_L nexus.
	FFFFh	The logical unit is not able to accept the command because it is servicing too many other <del>initiator ports</del> I_T nexuses.
TASK SET FULL	0001h - FFEFh	The <del>initiator port</del> application client should wait before sending another command to the logical unit <u>on any I_T nexus</u> until: a) at least the number of 100 milliseconds increments indicated in the RETRY DELAY TIMER CODE field have elapsed; or b) a command addressed to <del>that</del> the logical unit <u>on any I_T nexus</u> completes.

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Editor's Note 1: Straddle the BUSY column for the first three rows

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## 5.6.1 Mechanisms that cause tasks to be aborted

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If one or more tasks are cleared or aborted, the affected tasks are also cleared from the SCSI initiator ports in a manner that is outside the scope of this standard.

## 5.8.7 Unit Attention condition

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If a REPORT LUNS command enters the enabled task state, the logical unit shall perform the REPORT LUNS command and shall not report any unit attention condition. For each logical unit accessible by the I\_T nexus on which the REPORT LUNS command was received, any pending unit attention condition established for the SCSI initiator port associated with that I\_T nexus as a result of a change in the logical unit inventory shall be cleared. Other pending unit attention conditions shall not be cleared.