

To: T10 Technical Committee
 From: Mark Overby, NVIDIA Corporation (moverby@nvidia.com)
 Date: 13 March 2007
 Subject: T10/07-081r1 SPC-4: ASC-ASCQ for ATA REQUEST SENSE

Revision History

Revision 0 - Initial draft of document

Revision 1 - Changed requested reservations and updated overview. Added list of example ASC/ASCQ used for T13.

Related Documents

SPC-4 (T10/1731-D rev 09)

1 Overview

This proposal defines a new set of ASC/ASCQ codes that are reserved for use by the T13 standards committee to implement the proposed REQUEST SENSE for ATA. The direction the proposal is going for T13 is to leverage the sense key, ASC, and ASCQ values that are already defined in the T10 standards and use those same definitions for T13. However, there are ATA-specific ASC/ASCQ's that would be needed to describe specific ATA functionality related status and errors that would not be appropriate (e.g, SMART Command Transport, NV Cache Command Set, ATA Streaming, ATA Time-Limited Error Reporting) for T10 standards. Therefore, it is requested that a set of ASC/ASCQ codes be reserved for T13 use for the ATA family of standards.

It is the intent of ATA to review the use of current commands and leverage existing SCSI ASC and ASCQ whenever possible. The ATA8-ACS2 standard would be updated to point to SPC-4 to reuse those ASC/ASCQ codes. For codes that are specific to only ATA functionality and have no corresponding SCSI functionality, they would be defined in ATA8-ACS2.

Examples of the ASC/ASCQ's that would be T13-specific would be (note - this list is not comprehensive and is merely a sampling):

- a) ATA TIME LIMITED COMMAND EXPIRED
- b) ATA STREAM TIMEOUT OCCURRED
- c) ATA NV CACHE PINNED SET FULL
- d) ATA NV CACHE UNABLE TO FLUSH
- e) ATA NV CACHE UNABLE TO POPULATE PINNED DATA
- f) ATA SCT COMMAND TIMER EXPIRED
- g) ATA PRCS VIBRATION LIMITS EXCEEDED
- h) ATA COMMAND PROHIBITED IN CURRENT SECURITY STATE
- i) ATA DEVICE ALREADY FROZEN

2 Document Changes

2.1 Changes to SPC-4 (T10/1731-D rev 09)

Add the following new ASC / ASCQ to table 28 and C.2

ASC	ASCQ	D	T	L	P	W	R	O	M	A	E	B	K	V	F	Description
7Ah	00h-7Fh	D					R					E	B			Reserved for T13 ATA Standards (see ATA8-ACS2)