

**To:** T10 Technical Committee  
**From:** Rob Elliott, Compaq Computer Corporation (Robert.Elliott@compaq.com)  
**Date:** 28 September 2000  
**Subject:** SAM-2 ASCQ references in section 5.4

Revision 0: compilation of reflector messages on the topic

Revision 1: Added SPC-2 definition of "additional sense code" to SAM-2. Made the section 5.4 text refer to all 29h xxh codes.

### Overview

SAM-2 section 5.4 item b lists three additional sense codes - POWER ON, RESET, and TARGET RESET - which are not defined (with those names) in SPC-2. Either the names should be corrected or the text changed not to refer to "additional sense codes."

In the September CAP WG, the group consensus was that all the existing 29h xxh codes were being described. There was general agreement that all future 29h xxh codes should also receive this treatment. There was debate whether SPC-2 needed to mention this in its additional sense code tables to ensure that when a new code is added this property is understood; I have not included any such reference. Additional research showed the definition of "additional sense code" did not match SPC-2 and was incomplete, so the definition is modified.

### SAM-2 Section 3.1.3 (in Definitions)

**3.1.3 additional sense code:** ~~A field in the sense data. See 3.1.84 and SPC-2.~~ *A combination of the ADDITIONAL SENSE CODE and ADDITIONAL SENSE CODE QUALIFIER fields in the sense data (see 3.1.84 and SPC-2).*

### SAM-2 Section 5.4 Task and command lifetimes

The application client assumes that the task exists from the time the **Send SCSI Command** protocol service request is invoked until it receives one of the following target responses:

- a) A service response of TASK COMPLETE for that task;
- b) Notification of a unit attention condition with one of the following additional sense codes:
  - a) COMMANDS CLEARED BY ANOTHER INITIATOR (if in reference to the task set containing the task);
  - b) ~~POWER ON;~~
  - c) ~~RESET; or~~
  - d) ~~TARGET RESET;~~ *any additional sense code whose ADDITIONAL SENSE CODE field contains 29h (e.g. POWER ON, RESET, OR BUS DEVICE RESET OCCURRED; POWER ON OCCURRED; SCSI BUS RESET OCCURRED; BUS DEVICE RESET FUNCTION OCCURRED; DEVICE INTERNAL RESET; TRANSCEIVER MODE CHANGED TO SINGLE-ENDED; or TRANSCEIVER MODE CHANGED TO LVD);*
- c) A service response of SERVICE DELIVERY OR TARGET FAILURE for the command. In this case, system implementations shall guarantee that the task associated with the failed command has ended;
- d) A service response of FUNCTION COMPLETE following an ABORT TASK task management request directed to the specified task;
- e) A service response of FUNCTION COMPLETE following an ABORT TASK SET or a CLEAR TASK SET task management function directed to the task set containing the specified task; or
- f) A service response of FUNCTION COMPLETE in response to a TARGET RESET.

### Section 5.6.2 Overlapped commands

An overlapped command occurs when an application client reuses a Task Address (see 4.9.3) in a new command before a previous task to which that address was assigned completes its task

lifetime as described in 5.4. Each SCSI protocol standard shall specify whether or not a logical unit is required to detect overlapped commands.

A logical unit that detects an overlapped command shall abort all tasks for the initiator in the task set and shall return CHECK CONDITION status for that command. If the overlapped command condition was caused by an untagged task or a tagged task with a tag value exceeding FFh, then the sense key shall be set to ABORTED COMMAND and the additional sense code shall be set to OVERLAPPED COMMANDS ATTEMPTED. Otherwise, an additional sense code of TAGGED OVERLAPPED TASKS shall be returned with the ~~additional sense code qualifier~~ *byte* **ADDITIONAL SENSE CODE QUALIFIER field** set to the value of the duplicate tag.