memorandum

T10/05-140r0

To	From	Subject	Date
INCITS T10 Committee	Michael Banther, HP	SSC-3 Position After Self-Test	8 April 2005

Revision History

Revision 0 – Initial document.

Reference Documents

spc3r22a – SCSI Primary Commands – 3 revision 22a

ssc3r01c – SCSI Stream Commands – 3 revision 01c

Background

SPC-3 defines an interface for a self-test (see spc3r22a, 5.5 *Self-test operations*). The SPC-3 text mentions that a self-test may include, 'a read/verify scan segment wherein a device performs read scanning of some or all of the medium surface.' However SPC-3 does not define the medium position for a sequential-access device when a self-test completes.

Because SSC-3 still supports implicit address mode commands, it should define the medium position after a self-test.

Changes to SSC-3

8.3.x Device Configuration Extension mode page

The Device Configuration Extension mode page (see table y), a subpage of the Device Configuration mode page (see 8.3.3), provides control over SCSI features specific to Sequential Access devices. If a device server supports the Device Configuration Extension mode page, then the device server shall provide access to the mode page using the shared mode page policy (see SPC-3).

Table y – Device Configuration Extension mode page

Byte \ Bit	7	6	5	4	3	2	1	0
0	PS	SPF (1b)	PAGE CODE (10h)					
1	SUBPAGE CODE (01h)							
2	(MSB)	PAGE LENGTH (1Ch)						
3								(LSB)
4	PAST			Reserved				
5	Reserved							
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See SPC-3 for a description of the PS bit, SPF bit, PAGE CODE field, SUBPAGE CODE field, and PAGE LENGTH field.

The Position After Self Test (PAST) field specifies the position of the medium after completion of a self test (see SPC-3) except:

a) When the logical unit is not ready and completion of the self-test does not cause a not ready to ready transition;

b) When processing of an ERASE(16), LOCATE(10), LOCATE(16), READ(16), READ REVERSE(16), VERIFY(16), WRITE(16), or WRITE FILEMARKS(16) command aborts a background mode self-test, the device server shall position the medium as specified by the command's PARTITION and LOGICAL OBJECT IDENTIFIER fields;

c) When processing of a LOAD UNLOAD command aborts a background mode self-test, the device server shall position the medium as specified by the command's LOAD, RETEN, EOT, and HOLD bits; and

d) When processing of a SPACE(6) or SPACE(16) command with the CODE field set to a value other than 0011b aborts a background mode self-test, the device server shall position the medium as specified by the command's CODE and COUNT fields relative to the medium position specified by the PAST field;

e) When processing of a SPACE(6) or SPACE(16) command with the CODE field set to 0011b aborts a background mode self-test, the device server shall position the medium to end-of-data;

f) When processing of a REWIND command aborts a background mode self-test, the device server shall position the medium at the beginning-of-partition in the current partition.

Table y+1 specifies values for the PAST field.

Table y+1 – PAST field definition

Code	Description
000b	Vendor-specific
001b	The logical unit shall position to the beginning of the default data partition (BOP 0) after completing a self test.
010b	The logical unit shall maintain its position after completing a self test.
011b – 111b	Reserved

EDITORIAL NOTE: I've defined the code values based on the existing REWIND ON RESET field in the Device Configuration mode page (see ssc3r01c, 8.3.3). Due to the numerous additional positions that customers may want (e.g. position to beginning of current partition, position to end-of-data, etc.), I've made the field three bits wide instead of two.