Date: Dec 17, 1994

To: X3T9.2 Committee (SCSI)

From: George Penokie (IBM)

Subject: SPC Rev 4 Comments

I have the following comments on the SCSI-3 Primary Commands Standard (X3T10/995D).

1-I do not understand why processor devices are part of SPC. The reasons given in the second paragraph of section 6 are very weak. I would like to see processor devices removed from SPC.

2-Page 22 ; section 7.3.3 table 12, section 7.3.4 table 13, section 7.3.5 table 14, and section 7.3.6 table 15 - The field lables with SCSI Identifier and SCSI LUN should be renamed to SAM terminology. I believe the correct terminology is Target Identifier and Logical Unit Number.

3-Page 32 ; section 7.5.1 ; 6th paragraph from bottom - This paragraph has information that seems pointless. Regardless of the value of the NormACA bit the ACA Autoclear function is supported, so what is the point of stating that in the descriptions of both the 1 and 0 values of the NormACA bit. Eather state it once or, even better, not at all.

4-Page 35 ; section 7.5.2 ; Table 24 ; Remove all references to the L cable. The L cable was not approved by the SCSI committee.

5-Page 36 ; section 7.6, Page 38 ; section 7.7 and Page 81 ;section 8.2 - There should be referances to the logging annex.

6-Page 44 ; section 7.10.3 - The last sentance states 'Default values shall be accessible even if the device is not ready'. In SCSI-2 the sentence states 'Default values are accessble even if the device is not ready'. Changing an 'are' to a 'shall' places a major burden on SCSI devices. The shall should be changed to a 'should'.

7-Page 45 ; section 7.12 - What is the MOVE MEDIUM command doing in SPC. If the argument for placing this command into SPC is valid them most of the commands defined in SCC should also be placed into SPC.

8-Page 46 ; section 7.13 - I beleve we defined an op code for the POST STATUS command of 11h in the original proposal.

9-Page 50 ; section 7.15 - What is the READ ELEMENT STATUS command doing in SPC. If the argument for placing this command into SPC is valid them most of the commands defined in SCC should also be placed into SPC.

10-Page 54 ; section 7.19 - In the paragraph above note 33 the ASCs should be changed from 'STANDBY CONDITION ACTIVATED BY or IDLE CONDITION ACTIVATED BY' to 'LOW POWER CONDITION ACTIVE'.

11-Page 59 ; section 7.19.1 - In the paragraph below table 51 the sentence 'that has 65 536' should be 'that has 65536'.

12-Page 84 ; section 8.2 ; table 71 - Why is the Format Status Page in this table? If this is here why are not all the device specific pages list.

13-Pages 102 - 105 ; section 9 and section 10 - Should be removed.

14- Annex A - Might want to change the format to the same as the new SCSI-2 TIB.

15- Annex A ; table A.2 ; LBIN should be added to this table as follows:

Log Sense CDB Values		Log Page Parameter Control Byte Value		Target Action
PPC Bit	PC Field	LP Bit	LBIN Bit	Parameter Values returned to the Initiator
0	00	0	x	Returns all Current Threshold Values starting with the specified Parameter Pointer.
0	01	0	x	Returns all Current Cumulative Values starting with the specified Parameter Pointer.
0	10	0	x	Returns all Default Threshold Values starting with the specified Parameter Pointer.
0	11	0	x	Returns all Default Cumulative Values starting with the specified Parameter Pointer.
1	00	0	x	Returns only the Current Threshold Values which have changed starting with the specified Parameter Pointer.
1	01	0	x	Returns only the Current Cumulative Values which have changed starting with the specified Parameter Pointer.
1	10	0	x	Returns only the Default Threshold Values which have changed starting with the specified Parameter Pointer.
1	11	0	x	Returns only the Default Cumulative Values which have changed starting with the specified Parameter Pointer.
0	xx	1	0	Returns all the List Parameters starting with the specified Parameter Pointer. The List Parameters returned are formated as ASCII graphic codes.
1	xx	1	0	Returns only the List Parameters which have changed starting with the specified Parameter Pointer. The List Parameters returned are formated as ASCII graphic codes.
0	xx	1	1	Returns all the List Parameters starting with the specified Parameter Pointer. The List Parameters returned are formated in binary.
1	xx	1	1	Returns only the List Parameters which have changed starting with the specified Parameter

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Pointer. The List Parameters returned are formated in binary.

16- Annex A ; table A.3 ; LBIN should be added to this table as follows:

CDB Values			Log Page Parameter Control Byte Value		Target Action
SP Bit	PC Field	DS Bit	LP Bit	LBIN Bit	
0	xx	x	x	x	Do not save any of the Log Parameters into non-volatile storage.
1	00	0	0	x	Save all the Current Threshold Values of the selected Log Page into non-volatile storage.
1	01	0	0	x	Save all the Current Cumulative Values of the selected Log Page into non-volatile storage.
1	10	0	0	x	Save all the Default Threshold Values of the selected Log Page into non-volatile storage.
1	11	0	0	x	Save all the Default Cumulative Values of the selected Log Page into non-volatile storage.
1	xx	0	1	0	Save all the current List Parameter Values of the selected Log Page into non-volatile storage. The List Parameters are formated as ASCII graphic codes.
1	xx	0	1	1	Save all the current List Parameter Values of the selected Log Page into non-volatile storage. The List Parameters are formated in binary.
1	xx	1	x	x	Do not save any of the Log Parameters into non-volatile storage.

17- Annex A ; table A.5 ; LBIN should be added to this table as follows:

CDB Values			Log Page Parameter Control Byte Value		Target Action
SP Bit	PC Field	DS Bit	LP Bit	LBIN Bit	
0	xx	x	x	x	Do not save any of the Log Parameters into non-volatile storage.
1	00	0	0	x	Save all the Threshold Values of the selected Log Page into non-volatile storage.

1	01	0	0	x	Save all the Cumulative Values of the selected Log Page into non-volatile storage.
1	10	0	0	x	Save all the Default Threshold Values of the selected Log Page into non-volatile storage.
1	11	0	0	x	Save all the Default Cumulative Values of the selected Log Page into non-volatile storage.
1	xx	0	1	0	Save all the List Parameter Values of the selected Log Page into non-volatile storage. The List Paramenters are formated as ASCII graphic codes.
1	xx	0	1	1	Save all the List Parameter Values of the selected Log Page into non-volatile storage. The List Paramenters are formated in binary.
1	xx	1	x	x	Do not save any of the Log Parameters into non-volatile storage.

18- Annex A ; table A.6 ; LBIN should be added to this table as follows:

LOG SELECT CDB Values	Log Page Parameter Control Byte Value		Target Action
PC Field	LP Bit	LBIN Bit	Updated Parameter Value Usage
00	0	x	The Parameter Values for all the Log Parameters in the Log Page(s) sent to the target shall be used as Threshold Values, unless the LP bit is set.
01	0	x	The Parameter Values for all the Log Parameters in the Log Page(s) sent to the target shall be used as Cumulative Values, unless the LP bit is set.
10	0	x	The target shall set the Current Threshold Values to the Default Threshold Values for all the Log Parameters specified in the Log Page(s) sent during a LOG SELECT command, unless the LP bit is set.
11	0	x	The target shall set the Current Cumulative Values to the Default Cumulative Values for all the Log Parameters specified in the Log Page(s) sent during a LOG SELECT command, unless the LP bit is set.
xx	1	0	Replace the Current List Parameter with the List Parameter sent to the target. The List Parameters are formated as ASCII graphic codes.
xx	1	1	Replace the Current List Parameter with the List Parameter sent to the target. The List Parameters are formated in binary.

19- Annex A ; table A.8 ; LBIN should be added to this table as follows:

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Parameter Control Byte values
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DU  DS  TSD ETC TMC   LP  LBIN
Bit Bit Bit Bit Field Bit Bit   Description
--- --- --- --- ----- --- ----  ----------------------------------------------
0   -   -   -   --    -   -      Indicates that the target shall update the log
                                 parameter value to reflect all events that
                                 should be noted by that log parameter.

1   -   -   -   --    -   -      Indicates that the target shall not update the
                                 log parameter value except in response to a
                                 LOG SELECT command that specifies a new value
                                 the log parameter.

-   0   -   -   --    -   -      Indicates that the target supports saving for
                                 of the log parameter.

-   1   -   -   --    -   -      Indicates the target does not support saving
                                 of the log parameter in response to a LOG
                                 SELECT or LOG SENSE command.

-   -   0   -   --    -   -      Indicates that the target provides a target-
                                 defined method of saving log parameters.

-   -   1   -   --    -   -      Indicates that either the target does not
                                 provide a target-defined method for saving log
                                 parameters or the target- defined method has
                                 been disabled by the initiator.

-   -   -   0   --    -   -      Indicates that a comparison between the
                                 threshold value and the cumulative value is
                                 not performed.

-   -   -   1   --    -   -      Indicates that a comparison to the threshold
                                 value is performed whenever the cumulative
                                 value is updated

-   -   -   -   00    -   -      Indicates the target shall inform the
                                 initiator on every update to the cumulative
                                 value.

-   -   -   -   01    -   -      Indicates the target shall inform the
                                 initiator every time the cumulative value is
                                 equal to the threshold value.

-   -   -   -   10    -   -      Indicates the target shall inform the
                                 initiator every time the cumulative value is
                                 not equal to the threshold value.

-   -   -   -   11    -   -      Indicates the target shall inform the
                                 initiator every time the cumulative value is
                                 greater than the threshold value.
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-   -   -   -   --    0   x      Indicates the log parameter is a data counter.

-   -   -   -   --    1   0      Indicates the log parameter is a list
                          |      parameter and the list parameter is formated
                          |      as ASCII graphic codes.
                          |
-   -   -   -   --    1   1      Indicates the log parameter is a list
                          |      parameter and the list parameter is formated
                          |      in binary.
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20- Annex A ; Table A.9 ; Page 115 ; b) in IF statement - The statement 'Issue a Unit Attention Condition to all Initiators' should read ' Issue a Unit Attention Condition to all Initiators that have set the RLEC bit to one.

21- Annex A ; Table A.9 ; Page 116 ; a) after f) - The statement 'Create an Auto Contingent Allegiance Condition every time the counter should be incremented.' should read 'Do not create an Auto Contingent Allegiance Condition and do not increment the counter.'

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