

Accredited Standards Committee
X3T10/96-274-r0
X3, Information Technology

Doc. Number

To: Membership of X3T10
From: Erich Oetting
Subject: Minutes of SSC/SMC Working Group Meeting
Palm Springs, CA, Nov. 8, 1996

Agenda

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Results of Meeting

1. Opening Remarks

Ted Lappin, the SSC Technical Editor, called the meeting to order at 9:00 a.m., Thursday, Nov. 8, 1996. He thanked Norm Harris of Adaptec for arranging and hosting the meeting.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated.

The draft agenda was approved.

3. Attendance and Membership

Attendance at working group meetings does not count toward minimum attendance requirements for X3T10 membership. Working group meetings are open to any person or organization directly and materially affected by X3T10's scope of work.

The following people attended the meeting:

Name	Organization	Email Address
Edward Lappin	Exabyte	tedl@exabyte.com
Erich Oetting	Storage Tech.	erich_oetting@stortek.com
Ken Hallam	Unisys	Ken.Hallam@mv.unisys.com
Connie Kephart	Exabyte	conniek@exabyte.com
Lee Jesionowski	IBM	jez@vnet.ibm.com
Doug Hagerman	Digital	hagerman@starch.enet.dec.com
Ralph Weber	Symbios Logic	ralph_weber@symbios.com
Rob Basham	IBM	robbyb@vnet.ibm.com
Charles Monia	Digital	MONIA@shp.dec.com
David Cressman	Quantum	dcressm@tdh.qntm.com

Total of 10 People Present

4. SSC Topics

4.1 Data Transfer and ILI.

Ted asked if data should be transferred when a fixed mode READ command encounters a record that does not match the fixed block size. The group agreed that the smaller of the actual record size or fixed block size should be transferred, and then status should be returned. Ted will clarify the wording in SSC.

4.2 Write FM buffer immediate

Ted will add language to SSC clarifying that a Write Filemarks command with a count of zero and the Immediate bit set does not necessarily flush the buffer. (The action is vendor specific.)

4.3 Write Append Only. (96-275-r0)

Erich talked about adding an append only bit to the Device Configuration page. The group had concerns about the increasing complexity of this page and the exact definition of what operations would be allowed in "append only mode". (The current proposal allows trailing tape marks to be overwritten.) Discussion of this will be continued on the SCSI reflector and at the next working group meeting.

4.4 SSC Partition Change Control. (96-265-r0)

Robert talked about his proposal to add a mode sense bit to indicate that a format command must be issued after the mode select to actually change the partition size. Robert will rework to proposal to better specify error reporting and other restrictions on using the new bit. The possibility of expanding the number of partitions beyond 256 was also discussed.

4.5 Prevent/Allow Setting Outstanding. (96-266-r0)

Robert's proposal would allow the host to determine when media removal is prevented by adding mode sense bits. The main concern is that a failing initiator could leave the drive with media removal prevented until the next reset. Doug H. felt that the entire command was broken, and should be replaced instead. The proposal will be discussed on the reflector and at the next working group meeting.

4.6 New Mode of Operation. (96-264-r0).

How to handle an "automatic" media changer that loads the next tape after an unload was discussed. Some means of detecting that such an autoloader is

attached and if a new tape is available is desired. Erich pointed out that an unload may also fail in some configurations when no room is available for the unloaded tape. Ralph suggested adding a couple of ASC/ASCQ's to cover the error conditions may solve the problem. Discussion will continue on the reflector.

4.7 Fibre Channel link error recovery.

David talked about error detection and recovery after link errors with fibre channel attached tape drives. With a class 3 connection, some errors may only be detected by an upper level timeout. With tape commands, this timeout could be orders of magnitude longer than disk devices.

A discussion was then held on how recovery from link errors could be handled at the command layer. One option is to have the upper level driver keep track of tape position, then issue READ POSITION after an error to recover position and reissue commands as needed. The second was having the drive attempt to reposition after detecting link errors. The group pointed out problems with both options. Discussion of this issue will continue on the reflector.

The group agreed that the real solution is to use class 2 for tape devices. David will create a proposal for class 2 operation of tape devices to be added to PLDA.

5. SMC Topics

5.1 Read Element Status and Reservation Conflicts. (96-267-r0)

Robert proposed that READ ELEMENT STATUS be allowed even when reserved by another host, and that a bit be added to indicate that an element is reserved by some host. This would make the discovery process easier in multiple host configurations. It was pointed out that some READ ELEMENT STATUS commands may invoke changer movement to read Volume Tags and such. Robert will modify his proposal to only allow benign READ ELEMENT STATUS commands to be executed when reserved by another host.

5.2 World Wide names.

Erich discussed adding a feature to the READ ELEMENT STATUS command to return device identification descriptors as defined in SPC along with the Data Transfer Element and Import/Export Element data. The current fields for SCSI ID, LUN, etc would be made obsolete. Erich will bring a detailed proposal to the next meeting.

6. Other Topics

No other topics were discussed.

7. Meeting Schedule

The next meeting of the SSC/SMC Working Group will be next January in Dallas, Texas. Actual meeting time will be determined by the X3T10 Plenary.

8. Adjournment

The meeting was adjourned at 12:20 am on Thursday Nov. 8, 1996.