SCSI Stream Commands-3 Working Group Minutes – Draft (T10/04-153r1)
Date: May 4, 2004
Time: 9-11am
Location: Monterey, CA

Agenda

1. Opening remarks and introductions [Peterson]

2. Approval of agenda [Peterson]

3. Approval of meeting minutes [Peterson]

4. Review of old action items [Suhler]

5. Discussion items

    5.1. Explicit Address Commands Lessons Learned [Suhler]

    5.2. TapeAlert functionality [Group]

    5.3. Veritas Input on SSC-3 Features (04-144r0) [Cummings]

6. Unscheduled business

7. Next meeting requirements

8. Review of new action items [Suhler]

9. Adjournment

Attendance

```
Name            S        Organization        Electronic Mail Address
--------------------- -- ------------------------ ------------------------
Mr. David Peterson    AV CNT                      david_peterson at cnt dot com
Mr. Ralph O. Weber    P  ENDL Texas              roweber at ieee dot org
Mr. Gary Stephens     V  FSI Consulting Services  grsfsi at aol dot com
Mr. Michael Banther   V  Hewlett Packard Co.      michael_banther at hp dot com
Mr. Kevin Butt        V  IBM Corp.                kdbutt at us dot ibm dot com
Mr. Paul Entzel       P  Quantum Corp.            paul dot entzel at quantum dot com
Dr. Paul Suhler       V  Seagate Technology      Paul dot A dot Suhler at certance dot
                                                   com

8 People Present
Status Key:  P   -  Principal
             A,A# -  Alternate
             AV  -  Advisory Member
             L   -  Liaison
             V   -  Visitor
```

Results of Meeting

1. Opening remarks and introductions [Peterson]

Dave Peterson welcomed everybody to the meeting and thanked Brocade for hosting. Since this was the first SSC-3 meeting a call was made for volunteers to be secretary. Kevin Butt agreed to be the secretary for this meeting and to see how it worked out. If it works out he will agree to be the permanent secretary.

2. Approval of agenda [Peterson]

The following items were added to the agenda:

1.   Add Report to Report Density Support (04-104r0)[Paul Entzel]

2.   SSC-3 DTD Status Log Page (04-109r0) [Michael Banther]

3.   SSC-3 Exclude Report LUNs from resetting TEST bit (04-123r0)[Michael Banther]

3. Approval of meeting minutes [Peterson]

Since this is the first meeting there were no minutes to approve.

4. Review of old action items [Butt]

Since this is the first meeting there were no old action items to review.

5. Discussion items

5.1 Explicit Address Commands Lessons Learned [Suhler]

The question was asked if anybody had lessons learned from the explicit command set. Nobody has implemented this yet. This led to a discussion of who was planning on implementing this, why it isn't being looked at, and what it would take for companies to be interested in spending the resources required to implement it.

> Roger Cummings from Veritas: It is possible that we will in the Future. It depends on the industry. We have two products, one of which does pass-thru (i.e. Unix). The other uses the OS device driver. NBU also uses the device driver on Windows. Basically all windows applications use the device driver.

> Kevin Butt from IBM: Goal of Explicit Address is to eliminate the transport level error recovery and to have a robust tagged command environment.

Several people mentioned that the problem is that they do not see the value added by this.

Dave Peterson took an action to bring in a White Paper describing the value added with the Explicit Command Set.

The discussion then led to trying to find a way to make it more valuable

> Roger Cummings: The key to getting us interested is to get better performance with it.

This led to a discussion of using Tagged queueing with a deeper queue to get better performance.

Paul Entzel from Quantum: If we implement tagged queueing with CRN what is the value of the explicit cmd set?

Michael Banthar from HP: I would like to see if anybody is interrested in extending this to support a method to allow multiple initiators to do I/O at the same time and the drive would keep track of it.

This led to statements that the application client must be able to specify a portion of the tape for its use if this is to be useful.

5.2 TapeAlert functionality [Group]

Paul Entzel volunteered to write a proposal to fix tape alert.

Discussions into parts that are broken included:

- Tape drive remembers it told initiator and does not report what it has already reported.
- When initiator goes away and comes back there is no way to correlate the above.

The direction of the proposal will be to make them state driven like the TapeAlerts in ADI.

Roger Cummings - Veritas: Please keep in mind that we have a distributed application where each application deals with different alerts. Having them state driven would be much better.

Michael Banther - Would like to see extended info tied to each flag.

5.3 Veritas Input on SSC-3 Features (04-144r0) [Cummings]

Roger presented 04-144r0. A few items that raised discussion are:

a) Make Read/Write Attributes mandatory.

The group said this could not be done because there are technologies that do not have MAM. Gary Stephens tried to suggest using compliance levels or grandfathering but Ralph Weber jumped all over these suggestions. At the end of the discussion Roger stressed that Veritas wants these mandatory or as strongly suggested as possible for those technologies that have MAM.

b) Inventory/Media management is a real problem for Veritas. Please keep this in mind and improve Report Density Support. Make sure there is a Worl Wide Unique key in density data.

c) Attributes specifically for WORM & new devices.

Want an attribute for the age of the oldest data. Provide attribute for application to set. And keep WORM and its compliance requirements in mind.

d) Tape Alert.

Please provide "directed clear" or "sticky" bits from load.

e) Density Determination.

Would like to be able to read density code the medium is written at even if drive can't read it. The groups comments were to hilight the impossibility of this because of different technologies.

Roger Cummings took an action item to bring in a document to support the differentiation of media supported and drive supported density code.

Roger then gave counsel to those present that in the near future it will be Veritas Requirements to have support for the Only If Reserved (OIR), Persistent Reserve exceptions to Reserve/Release, and the Space command.

Some from the group made the suggestion that use use of the Locate command provides better protection from accidental mispositioning. The response from Roger is that he will take it back and report but this is not likely to be used.

6. Unscheduled business

6.1 Add Report to Report Density Support (04-104r0)[Paul Entzel]

This is to add medium codes for what it means. (i.e. Report Medium Codes)

Suggestions for modifications were made and Paul agreed to revise the document and return.

6.2 SSC-3 Exclude Report LUNs from resetting TEST bit (04-123r0)[Michael Banther]

This proposal is to exclude the Report LUNs command from resetting the TEST bit in the Informational Exceptions Log page.

Motion (Kevin Butt) Second (Michael Banther): I move to recommend to the plenary to approve 04-123r0 for inclusion into SSC-3. The vote was unanomous.

6.3 SSC-3 DTD Status Log Page (04-119r0) [Michael Banther]

Proposal to include the DTD Status Log Page from ADC into SSC-3 as an optional page.

Motion (Michael Banther) Second (Gary Stephens): I move to recommend to the plenary to approve 04-109r0 for inclusion into SSC-3. Passed on a 6:0:2 vote.

7. Next meeting requirements

The consensus of the group was to request two hours during the next T10 week.

8. Review of new action items [Butt]

1. Dave Peterson: Bring in a White Paper on the value added with Explicit Command Set.

2. Roger Cummings: Bring in document to support differentiation of media supported and drive supported density code.

3. Paul Entzel: Revise proposal 04-104r0.

9. Adjournment

The meeting was adjourned at the scheduled time.