Draft Minutes
T10 FCP-4 Work Group
7 November 2006 - 5 to 7 PM
Las Vegas NV

The FCP-4 Work Group of the INCITS SCSI (T10) Technical Committee met at Las Vegas NV on 7 November 2006, hosted by Hitachi Global Storage Technologies. Attendance was 9 people from 9 companies and is tabulated at the end of this document.

Minutes were taken by Bob Nixon (bob.nixon@emulex.com). Please report any corrections by email to the T10 reflector at T10@T10.org.

1 Opening remarks and introductions

Chairperson Dave Peterson opened the meeting Tuesday, 7 November 2006 at 5:01 PM. He thanked our host company, Hitachi Global Storage Technologies, and led a round of introductions.

2 Approval of Agenda T10/06-495r0

It was moved by Paul Suhler and seconded by Paul Entzel to accept T10/06-495v0 as the agenda for this meeting. Approved unanimously.

3 Review of Minutes T10/06-428r2

It was moved by Bob Nixon and seconded by Paul Suhler to accept T10/06-428r2 as the minutes of the FCP-4 ad hoc meeting on 12 September 2006. Approved unanimously.

4 Review of Old Action Items

060509-2 Dave Peterson: Look at XDREAD and XDWRITE behavior regarding retrys. Do we fix it here or in SBC.
(Carry)

060711-1 Dave Peterson to contact tape vendors to see whether they are able to force the Sequence Count to zero on Sequence retries.
(Email sent, Peterson to known tape vendors, 25 August 2006. Minimal response. Carry for resend.)

060711-2 HBA vendors to determine whether they need to be able to do Sequence retry from relative offset 0.
(Email sent. Minimal response. Carry for resend.)

060912-1 George Penokie to publish T10/06-406r2, reflecting T10/06-406r1 and the agreements at the FCP-4 meeting 7 November 2006.
(Completed by T10/06-406r2)

060912-2 FCP-4 chairperson to recommend to T10 to incorporate T10/06-406r2 into FCP-4.
(Completed at T10 plenary 14 September 2006)

060912-3 Paul Entzel to publish T10/06-236r1, reflecting T10/06-236r0 and the agreements at the FCP-4 meeting 7 November 2006.
(Completed by T10/06-236r1)

060912-4 FCP-4 chairperson to recommend to T10 to incorporate T10/06-236r1 into FCP-4.
(Completed at T10 plenary 14 September 2006)

060912--5 Dave Peterson to send email to emphasize the need for vendors to identify their interests either for or against requiring the use of Continuously Increasing Sequence Count.
(Completed by email, Peterson to T10 and T11.3, 8 October 2006)

5 Old Business

5.1 Continuously Increasing Sequence Count email DeSanti, Coomes, et al

In an email to the T10 reflector on 3 November 2006, Claudio DeSanti proposed alternatives to requiring use of Continuously Increasing Sequence Count (CISC). These alternatives included requiring support, but not use, of CISC. This recognized the reported existence of a large established base of devices that exhibit faults when presented with CISC.

Others including Jim Coomes (Coomes to T10 and T11.3, 6 November 2006) indicated that no significant advantage to FCP had been posed, due to the interlocked nature of FCP. Others pointed out that in multiSequence read operations, FCP is not fully interlocked.

Dave Peterson requested a roll call straw poll on whether FCP-4 should change its current specification concerning use of CISC:

Representative	Organization	Response
Mr. Robert H. Nixon	Emulex	no change
Mr. Michael Banther	Hewlett Packard Co.	no change
Mr. Paul Wassenberg	Marvell Semiconductor, Inc.	no change
Mr. David Peterson	McDATA	no change
Mr. Frederick Knight	Network Appliance	no change
Mr. Craig W. Carlson	QLogic Corp.	no change
Dr. Paul Suhler	Quantum Corp.	no change
Mr. Gerald Houlder	Seagate Technology	no change
Mr. Erich Oetting	Sun Microsystems, Inc.	no change

It was moved by Dave Peterson and seconded by Paul Suhler to make no change to FCP-4 concerning CISC requirement. The motion passed 9 favoring, none opposed, none abstaining.

Action FCP-4 chair to notify Claudio DeSanti that the FCP-4 work group will take no action concerning CISC at this time.

An anonymous straw poll indicated an interest in seeing a proposal to negotiate use of CISC, allowing protection for those devices that do not gracefully tolerate it.

Action **Bob Nixon to present a proposal for negotiating use of CISC in FCP-4, allowing protection for those devices that do not gracefully tolerate it.**

5.2 Continuously Increasing Sequence Count T10/06-399r0 Peterson/McData

In the light of the discussion of the emails on this topic, proposal T10/06-399r0 was withdrawn.

5.3 Need for EMDP/data overlay

This topic was opened based on email at a prior meeting. Based on that email and responses to it, the FCP-4 work group agreed to make no change to the current FCP-4 specification for EMDP or data overlay at this time.

5.4 Use of SRR for bidi commands

This topic was opened based on email at a prior meeting. That email included the observation that the behavior of SRR is not well-defined for bidirectional commands. Responses to the email noted that SRR is used only for Sequence-level error recovery, which, although not technically impractical, is prohibited by FCP-4 at this time. The FCP-4 work group agreed to make no change to the current FCP-4 specification for SRR or bidirectional command support at this time.

5.5 Intermix on bidi commands: no motivation for change.

This topic was opened based on email at a prior meeting. That email included the observation that the support for intermix of multiple read and write phases in a bidirectional command is not well specified in FCP-4. Responses to the email noted that SAM could be interpreted to prohibit intermix of multiple read and write phases in a bidirectional command, and that the original proposed need for it had been obviated by an alternate design the OSD-2 draft standard. The FCP-4 work group agreed to make no change to the current FCP-4 specification for intermix of multiple read and write phases in a bidirectional command at this time.

6 New Business

No new business was presented.

7 Review of Action Items

060509-2 Dave Peterson: Look at XDREAD and XDWRITE behavior regarding retrys. Do we fix it here or in SBC.
(Carry)

060711-1 Dave Peterson to contact tape vendors to see whether they are able to force the Sequence Count to zero on Sequence retries.
(Email sent, Peterson to known tape vendors 25 August 2006. Minimal response. Carry for resend.)

060711-2 HBA vendors to determine whether they need to be able to do Sequence retry from relative offset 0.
(Email sent. Minimal response. Carry for resend.)

061107-1 FCP-4 chair to notify Claudio DeSanti that the FCP-4 work group will take no action concerning CISC at this time.

061107-2 Bob Nixon to present a proposal for negotiating use of CISC in FCP-4, allowing protection for those devices that do not gracefully tolerate it.

8 Meeting Schedule

Request 2 hours at the T10 Plenary Week 15-19 January 2007 near Orlando FL.

9 Adjournment

It was moved by Dave Peterson and seconded by Bob Nixon to adjourn. Approved unanimously.

The meeting was adjourned at 5:35 PM on 7 November 2006.

10 Actions on Proposals at this meeting

Title	Document	Status
FC-LS: Embedded N_Port_IDs	T11/06-421	Close. Elements of this proposal relevant to FCP-4 have been accepted. Its remaining content will be resolved in the T11 FC-LS work group.
Continuously Increasing Sequence Count	T10/06-399	Close. Withdrawn.
Need for EMDP/data overlay	no doc	Close. The work group agreed there was currently insufficient justification to act on this.
Use of SRR for bidi commands	no doc	Close. The work group agreed there was currently insufficient justification to act on this.
Intermix on bidi commands	no doc	Close. The work group agreed there was currently insufficient justification to act on this.
Relative Offset on retry	no doc	Open. Proposal may be made pending results of an email survey.
Negotiating Continuously Increasing Sequence Count	no doc	Open. An action is pending for a proposal on this topic.

11 Attendance

Representative	Organization
Bob Nixon	Emulex
Michael Banther	Hewlett Packard
Paul Wassenberg	Marvell Semiconductor
David Peterson	McDATA
Frederick Knight	Network Appliance
Craig W. Carlson	QLogic
Paul Suhler	Quantum
Gerald Houlder	Seagate Technology
Erich Oetting	Sun Microsystems