Draft Minutes
T10 FCP-4 Work Group
11 July 2006 - 9 AM to 11 AM
Colorado Springs CO

The FCP-4 Work Group of INCITS Technical Committee T10 met at Colorado Springs CO on 11 July 2006, hosted by LSI Logic. Attendance was 16 people from 13 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, 11 July 2006 at 8:01 AM. He thanked our host company, LSI Logic, and led a round of introductions.

2 Approval of Agenda

The agenda was posted on the T10 meeting page. There were no requests for changes.

It was moved by Dave Peterson and seconded by Bob Nixon to accept the posted agenda as the agenda for this meeting. Approved unanimously.

3 Review of Minutes   T10/06-243r0

T10 document 06-243r0 was posted as the minutes for the FCP-4 meeting on 9 May 2006. There were no requests for changes.

It was moved by Dave Peterson and seconded by Bob Nixon to accept T10/06-243r0 as the minutes of the FCP-4 ad hoc meeting on 9 May 2006. Approved unanimously.

4 Review of Old Action Items

060509-1   Dave Peterson to create an official proposal for mandating continuously increasing sequence count for class-3.
(Carry)

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

060509-3   Each end device vendor to check on their implementations for how they use the S_ID field in the payload of a REC request.
(CLOSED by action at the last T11 FC-LS meeting)

060509-4   All to review TPRLO for how the LS_ACC is used. There is a desire to obsolete it. Next best thing get rid of N_Port ID in payload.
(carry pending discussion at this meeting)

5 Old Business

5.1 N_Port_IDs in REC and TPRLO   T11/06-421v2   **Peterson/McDATA**

Dave advised that as a result of discussion at the last T11 FC-LS meeting, he is no longer proposing changes to the REC ELS payload. The community should be aware that the FC_IDs in the REC payload are used.

Dave summarized recommendations regarding TPRLO from the last T11 FC-LS meeting:

a) obsolete the Third-Party N_Port_ID in TPRLO, but not TPRLO with global effect;
b) Make the TPRLO LS_ACC like the PRLO LS_ACC, not like the TPRLO payload, eliminating the Third-Party N_Port_ID from the LS_ACC even if recommendaton a is not accepted; and
c) Emphasize that multiple pages are not allowed for TPRLO, which is believed to be the intent of the standard.

Two vendors advised that they believed they use the Third-Party N_Port_ID in TPRLO. Neither had confirmed their exact requrements yet. Dave emphasized that a decision will be made at the next FC-LS meeting, and that in the absense of firm objections, the FC-LS meeting has advised that it intends to take the steps he summarized above.

5.2 Continuously Increasing Sequence Count   **Peterson/McDATA**

It was requested at a prior meeting that FCP-4 require use of Continuously Increasing Sequence Count for unacknowledged classes of service (i.e., Class 3).

Dave reported status on his action item to prepare a proposal. He has studied the issue and is not yet convinced that the value justifies the possible impact on implementations. He will be posting the question to the T10 and T11 reflectors.

It was noted that this requirement had been rejected historically, but that more recent FC-4 protocols require it.

Dave also directed the group to an inconsistency in FCP on the maintenance of the Sequence Count in the event of Sequence retry with CISC. He asked the community whether the Sequence Count "may" or "shall" restart at zero for the retry. See FCP-4 subclauses 8.2, 12.4.1.6, and 12.4.1.7 for the inconsistent statements.

ACTION: Dave Peterson to contact tape vendors to see whether they are able to force the Sequence Count to zero on Sequence retries.

5.3 Need for EMDP/data overlay   **Peterson/McDATA**

In response to a reflector query about the possibility of obsoleting either data overlay, or more generally, EDMP, it was identified that OSD requires EMDP but does not require data overlay. One vendor present assured that his products do not depend on EMDP at all.

5.4 Use of SRR for bidi commands   **Peterson/McDATA**

Dave introduced a new issue that questions the need and meaning of SRR for disk and bidi commands. He asked the community to consider it, but he will bring back more concise information on the issues before further pursuing it here.

5.5 Intermix on bidi commands   Peterson/McDATA

On this issue from a previous meeting, Dave reported that OSD requires Intermix of Reads and Writes on bidi commands. This makes Sequence retry insufficiently well defined for bidi commands (see 5.4).

5.6 REC/XFER_RDY race condition T10/06-236r0   Entzel/Quantum

This proposal offers normative text to support the informative example in figures C.5 and C.6 of recovery from a lost XFER_RDY_IU. This issue was opened at the May meeting. One member was granted an additional meeting cycle to consult with his company.

It was agreed that all were open to changing the "shall"s to "should"s in the proposal.

6 New Business

6.1 Relative Offset on retry   Peterson/McDATA

In the event of Sequence retry, is the initiator allowed to restart from Relative Offset=0, which forces the target to hold the application client buffer until confirmed completion (may be megabytes)?

Tape vendors say this is ok for reads, but a problem for writes. They are able to back up only to the last XFER_RDY point. This seems to work with all HBAs in use. It is requested to remove the allowance to go back to zero.

ACTION: HBA vendors to determine whether they need to be able to do Sequence retry from relative offset 0.

7 Meeting Schedule

Request the Tuesday 9-11 AM at the T10 Plenary Week sponsored by Hitachi Cable 11-15 September 2006 in Nashua NH.

8 Review of Action Items

060509-1   Dave Peterson to create an official proposal for mandating continuously increasing sequence count for class-3.
(Carry)

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

060509-4   All to review TPRLO for how the LS_ACC is used. There is a desire to obsolete it. Next best thing get rid of N_Port ID in payload.
(proposal posted T11/06-421v2, will vote at next T11 FC-LS meeting)

060711-1   Dave Peterson to contact tape vendors to see whether they are able to force the Sequence Count to zero on Sequence retries.

060711-2   HBA vendors to determine whether they need to be able to do Sequence retry from relative offset 0.

9 Adjournment

It was moved by Dave Peterson and seconded by Michael Banther to adjourn. Approved unanimously.

The meeting was adjourned at 9:15 AM on 11 July 2006.

10 Actions on Proposals at This Meeting

Title	Document	Status
FC-LS: Embedded N_Port_IDs	T11/06-421	Open. Lacking specific objections, will resolve at next FC-LS meeting as proposed in T11/06-421v2
Continuously Increasing Sequence Count	no doc	Open. Proposal assigned.
Need for EMDP/data overlay	no doc	Open. Proposal pending an email survey on certain details.
Use of SRR for bidi commands	no doc	Open. Possible proposal pending email survey.
Intermix on bidi commands	no doc	Open. OSD requires this. Use of Sequence retry in combination with bidi is therefore in question.
REC/XFER_RDY race condition	T10/06-236	Open. Additional vendor input time was requested. Lacking specific objections, will resolve at next meeting as proposed in T10/06-236r0.
Relative Offset on retry	no doc	Open. Proposal pending email survey.

11 Attendance

Representative	Organization
Noud Snelder	BDT
Gideon Avida	Decru
Robert H. Nixon	Emulex
Ralph O. Weber	ENDL Texas
Michael Banther	Hewlett Packard
Kevin Butt	IBM
David Peterson	McDATA
Faisal Faruqui	NeoScale Systems
Landon Noll	NeoScale Systems
Frederick Knight	Network Appliance
Matthew Ball	Quantum
Paul Entzel	Quantum
Paul Suhler	Quantum
Gerald Houlder	Seagate Technology
Erich Oetting	Sun Microsystems
Greg Wheeless	Symantec