

Draft Minutes

T10 FCP-4 Working Group

9 May 2006 - 9 AM to 11 AM

San Jose, CA

The FCP-4 Working Group of INCITS Technical Committee T10 met at San Jose, CA on 9 May 2006, hosted by Nvidia. Attendance was 16 people from 13 companies and is tabulated at the end of this document.

Minutes were taken by Kevin Butt (kdbutt@us.ibm.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, 9 May 2006 at 9:06 AM. He thanked our host, Nvidia, and led a round of introductions.

2 Approval of Agenda

T10/06-242r0

It was moved by Dave Peterson and seconded by Roger Cummings to accept T10/06-242r0 as the agenda for this meeting. Approved unanimously.

3 Review of Minutes

T10/06-141r0

It was moved by Dave Peterson and seconded by Gerry Holder to accept T10/06-141r0 as the minutes of the FCP-4 ad hoc meeting on 9 May 2006. Approved unanimously.

4 Review of Old Action Items

FCP4-005 FCP-4 chairperson to recommend to T10 to incorporate T10/06-092r0 into FCP-4.
(Opened 7 March 2006) Closed in recently uploaded FCP-4 draft

FCP4-006 FCP-4 chairperson to reply to the DeSanti email of FCP questions, informing Claudio that the work group was unable to answer his questions on FCP and will open them for input from the community.
(Opened 7 March 2006) Closed.

FCP4-007 FCP-4 chairperson to forward the DeSanti email of FCP questions to the T10 and T11 reflectors, with emphasis on the question of continuously increasing Sequence Count.
(Opened 7 March 2006) Closed.

FCP4-008 FCP-4 chairperson to put discussion of the DeSanti email of FCP questions on the agenda for the next FCP-4 meeting.
(Opened 7 March 2006) Closed 5.1.

5 Old Business

5.1 FCP-4 email thread discussion

Peterson/McData

Claudio wants to know how class-3 error recovery is supposed to work with Bi-directional commands. I was pointed to section B1.10. It is not clear what values to put into REC. The people implementing this can only be successful if they are using continuously increasing sequence count. Many people in FC-FS assume that any class-3 sequence is an implicit streaming therefore using continuously increasing sequence count, but some are not in agreement. The FS discussion was left vague as to if class-3 is streaming and therefore continuously increasing or not. Also, why is this the answer?

B1.10 was displayed. Bob Snively stated that the original intent was that there was no intermix of reads and writes, but that all data in one direction was completed before the data in the other direction.

Gerry Houlder contested this assertion.

Dave Peterson: This example first entered in FCP-3. We prohibited error detection and recovery. Disk error recovery is to just resend the command and not use the SRR.

Bob Snively asserted that you could not successfully interleave read and write data.

Bob Snively:

- 1) Prohibit intermix write and read; or
- 2) extended SRR to indicate if in the read phase or write phase.

Arguments ensued about if disk is required to use continuously increasing sequence count or not.

There was also discussion about how R_A_TOV is to be used.

There are the following items that need addressed:

- a) Continuously increasing sequence count;
- b) Bi-directional error detection and recovery;
- c) Intermix of reads and writes.

Data overlay discussion ensued. It seems that nobody has knowledge of anybody that does data overlay.

Action Item: Dave Peterson to create an official proposal for mandating continuously increasing sequence count for class-3.

Action Item: Dave Peterson: Look at XDREAD and XDWRITE behavior regarding retries. Do we fix it here or in SBC.

6 New Business

6.1 FCP-4/FC-LS: Obsolete REC Address identifier fields T10/06-211r0 Peterson/McData

Dave discussed this. He opened by saying that after discussions he is thinking that this is not a wise thing to do. He pulled up the FC-LS text that is offending him in FC-LS 4.2.55.1 where it states that the S_ID in the payload may differ from the S_ID or the D_ID in the FC header.

Bob Snively asked questions of why this would be useful. He suggested that we not do this.

T10/06-237r0 from Qlogic was displayed with an argument why the S_ID should be kept in the payload.

Kevin Butt claims that IBM does this exact process claimed in 06-237r0.

Action Item: Each end device vendor to check on their implementations for how they use the S_ID field in the payload of a REC request.

6.2 FC-LS: Heads Up on TPRLO

Dave Peterson gave a heads up on clarifying the LS_ACC to a TPRLO and how the N_Port ID is used. Current opinion is that the payload is the same as the PRLO LS_ACC.

Action Item: All to review TPRLO implementation.

6.3 Fix race condition between REC ACC and FCP XFER RDYT10/06-236r0 Quantum/ Entzel

This proposal was discussed. There was also discussion about if the recovery can go back to zero or if it is limited to one XFER_RDY. After a search of FCP-4 it was determined that you can go back to zero.

Questions were raised as to why the target cannot allow going back to offset of zero as it should.

There was also discussion of what the FCP text states for resetting the REC_TOV timer. Does receiving data or FCP XFER_RDY reset it?

Dave Peterson: There should be some text about implied actions and what should be done.

Bob Snively: I'm still troubled that some data was transferred between 10000h and 20000h. Even if we complete the data the target should be able to go back. The issue is that the REC processing on both ends is independent of the transfers.

Paul Entzel: Please go look at this.

7 Meeting Schedule

Request 2 hours from 9:00 to 11:00 at the T10 Plenary Week July 11 in Colorado Springs, CO.

8 Review of Action Items

Action Item: Dave Peterson to create an official proposal for mandating continuously increasing sequence count for class-3.
(Opened 9 May 2006)

Action Item: Dave Peterson: Look at XDREAD and XDWRITE behavior regarding retrys. Do we fix it here or in SBC.
(Opened 9 May 2006)

Action Item: Each end device vendor to check on their implementations for how they use the S_ID field in the payload of a REC request.
(Opened 9 May 2006)

Action Item: 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.
(Opened 9 May 2006)

9 Adjournment

It was moved by Dave Peterson and seconded by Claudio DeSanti to adjourn. Approved unanimously.

The meeting was adjourned at 10:35 AM on 9 May 2006.

10 Actions on Proposals at This Meeting

Document Title	Number	Disposition

11 Attendance

Representative	Organization
Mr. Robert Snively	Brocade Comm. Systems, Inc.
Dr. Claudio DeSanti	Cisco Systems, Inc.
Mr. David Black	EMC Corp.
Mr. Kenneth Hirata	Emulex
Mr. Michael Banther	Hewlett Packard Co.
Mr. Kevin Butt	IBM Corp.
Mr. David Peterson	McDATA
Mr. Robert Lockhart	NeoScale Systems Inc.
Mr. Landon Noll	NeoScale Systems Inc.
Mr. Craig W. Carlson	QLogic Corp.
Mr. Matthew Ball	Quantum Corp.
Mr. Paul Entzel	Quantum Corp.
Dr. Paul Suhler	Quantum Corp.
Mr. Gerald Houlder	Seagate Technology
Mr. Erich Oetting	Sun Microsystems, Inc.
Mr. Roger Cummings	Symantec