

# Draft Minutes

## T10 FCP-4 Work Group

### 12 September 2006 - 9 AM to 11 AM

### Nashua NH

Revision 1 Corrected some T11-style version numbering (e.g., T10/06-236v1) that should have been T10-style (e.g., T10/06-236r1).

Revision 1 Corrected the time of adjournment.

The FCP-4 Work Group of INCITS Technical Committee T10 met at Nashua NH on 12 September 2006, hosted by Hitachi Cable. Attendance was 14 people from 12 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, 12 September 2006 at 9:01 AM. He thanked our host company, Hitachi Cable, and led a round of introductions.

## 2 Meeting Policies

### 2.1 Membership

Dave Peterson advised that although T10 does not limit participation in the activities of its work groups to representatives of T10 member organizations, T10 encourages organizations that are regularly represented at T10 work group activities to become members of T10.

## 3 Approval of Agenda

T10/06-427r0

*It was moved by Dave Peterson and seconded by Bob Nixon to accept T10/06-427r0 as the agenda for this meeting. Approved unanimously.*

## 4 Review of Minutes

T10/06-340r0

*It was moved by Bob Nixon and seconded by Paul Suhler to accept T10/06-340r0 as the minutes of the FCP-4 ad hoc meeting on 11 July 2006. Approved unanimously.*

## 5 Review of Old Action Items

060509-1 Dave Peterson to create an official proposal for mandating continuously increasing sequence count for class-3.  
(Completed by T10/06-399r0)

- 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.  
(Completed, issue will be resolved in T11 FC-LS)
- 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. Carry for more community response.)
- 060711-2 HBA vendors to determine whether they need to be able to do Sequence retry from relative offset 0.  
(Email sent. Carry for more community response.)

## 6 Old Business

### 6.1 TPRLO update

T11/06-421v2

Peterson/McData

Dave reported that this proposal will be voted at the next T11 FC-LS meeting, which will be during the October T11 plenary week in Oklahoma City (see the T11 web page at [www.t11.org](http://www.t11.org) for meeting details).

### 6.2 Fix race condition between REC ACC and FCP\_XFER\_RDY T10/06-236r0 Entzel/Quantum

Paul identified a race condition in Sequence error recovery that is inconclusively resolved in FCP. Certain possible responses have been seen that cause serious issues for tape drives.

It was understood that FCP allows R\_A\_TOV to be zero in loop topologies.

It was agreed to change the "shall wait" in the proposed new text to "should wait".

*It was moved by Paul Entzel and seconded by Gerry Houlder to recommend to T10 to incorporate T10/06-236r1 into FCP-4, reflecting T10/06-236r0 and the agreements at the FCP-4 meeting 12 September 2006. Approved unanimously.*

**ACTION Paul Entzel to publish T10/06-236r1, reflecting T10/06-236r0 and the agreements at the FCP-4 meeting 12 September 2006.**

**ACTION FCP-4 chairperson to recommend to T10 to incorporate T10/06-236r1 into FCP-4.**

## 7 New Business

### 7.1 LS\_RJT for REC Conflict between FC-LS and FCP-4 T10/06-406r1

Penokie/IBM

George pointed out that T11 FC-LS has introduced a new error code for the REC ELS that exposes a weakness in FCP recovery from REC rejects. This proposal fixes FCP-4.

It was agreed that certain wording from the original FCP-4 statement was accidentally omitted from the proposed revision and will be retained.

*It was moved by George Penokie and seconded by Bob Nixon to recommend to T10 to incorporate T10/06-406r2 into FCP-4, reflecting T10/06-406r1 and the agreements at the FCP-4 meeting 12 September 2006. Approved unanimously.*

**ACTION** George Penokie to publish T10/06-406r2, reflecting T10/06-406r1 and the agreements at the FCP-4 meeting 12 September 2006.

**ACTION** FCP-4 chairperson to recommend to T10 to incorporate T10/06-406r2 into FCP-4.

## **7.2 Require continuously increasing SEQ\_CNT T10/06-399r0 Peterson/McData**

Two vendors identified products that either do not or can not support Continuously Increasing Sequence Count.

**ACTION** 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.

Dave also emphasized an open reflector request concerning the need for FCP permitting resetting the Sequence Count to zero on error recovery (see AI 060711-1), even in violation of the FC specifications for CISC.

## **8 Project Schedule**

## **9 Meeting Schedule**

### **9.1 Next Plenary Week**

Request 2 hours at the T10 Plenary Week sponsored by HGST November 6-9 in Las Vegas NV.

## **10 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. Carry for more community response.)
- 060711-2 HBA vendors to determine whether they need to be able to do Sequence retry from relative offset 0.  
(Email sent. Carry for more community response.)
- 060912-1 George Penokie to publish T10/06-406r2, reflecting T10/06-406r1 and the agreements at the FCP-4 meeting 12 September 2006.
- 060912-2 FCP-4 chairperson to recommend to T10 to incorporate T10/06-406r2 into FCP-4.
- 060912-3 Paul Entzel to publish T10/06-236r1, reflecting T10/06-236r0 and the agreements at the FCP-4 meeting 12 September 2006.
- 060912-4 FCP-4 chairperson to recommend to T10 to incorporate T10/06-236r1 into FCP-4.

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.

## **11 Adjournment**

*It was moved by Dave Peterson and seconded by Paul Suhler to adjourn. Approved unanimously.*

The meeting was adjourned at 10:08 AM on 12 September 2006.

## 12 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	T10/06-399	Open pending further vendor feedback.
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	Close. Recommended incorporating T10/06-236r1.
Relative Offset on retry	no doc	Open. Proposal pending email survey.
LS_RJT for REC Conflict between FC-LS and FCP-4	T10/06-406	Close. Recommended incorporating T10/06-406r2.

## 13 Attendance

Representative	Organization
Noud Snelder	BDT
Robert H. Nixon	Emulex
Ralph O. Weber	ENDL Texas
Walt Hubis	Engenio Information Technology
Michael Banther	Hewlett Packard
Kevin Butt	IBM
George O. Penokie	IBM
Dave Peterson	McDATA
Frederick Knight	Network Appliance
Paul Entzel	Quantum
Paul Suhler	Quantum
Gerald Houlder	Seagate Technology
William Martin	Sierra Logic
Anders Liverud	Tandberg Storage