

Draft Minutes

T10 FCP-4 Study Group

7 March 2006 - 9 AM to 11 AM

Hilton Head SC

The FCP-4 Study Group of INCITS Technical Committee T10 met at Hilton Head SC on 7 March 2006, hosted by SCSI Trade Association. Attendance was 11 people from 10 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 March 2006 at 9:06 AM. He thanked our host, SCSI Trade Association, and led a round of introductions.

2 Approval of Agenda

T10/06-136r0

It was moved by Dave Peterson and seconded by Paul Suhler to accept T10/06-136r0 as the agenda for this meeting. Approved unanimously.

3 Review of Minutes

T10/06-067r0

It was moved by Bob Nixon and seconded by Roger Cummings to accept T10/06-067r0 as the minutes of the FCP-4 ad hoc meeting on 10 January 2006. Approved unanimously.

4 Review of Old Action Items

FCP4-002 Bob Nixon to publish 05-435r1 reflecting 05-435r0 and the agreements at the FCP-4 meeting 10 January 2006.
(Opened 10 January 2006) (CLOSED)

FCP4-003 Dave Peterson to publish 06-032r1 reflecting 06-032r0 and the agreements at the FCP-4 meeting 10 January 2006.
(Opened 10 January 2006) (CLOSED)

FCP4-004 Dave Peterson to recommend to T10 to forward 06-032r1 to INCITS for further processing as the project proposal for FCP-4.
(Opened 10 January 2006) (CLOSED, action by T10 deferred until March 2006 to meet two-week rule)

5 Old Business

5.1 FCP-4 Project Proposal approval

06-032r1

Peterson/McData

Forwarding to INCITS was requested at the T10 plenary meeting in January. The action was accepted by T10 but because it was not on the T10 plenary agenda sufficiently in advance, approval was deferred until the T10 plenary this week. No further action is needed from the work group at this time.

6 New Business

6.1 FCP-4: Indication of REC Support T10/06-092r0 Penokie/IBM

This proposal describes a mechanism for negotiating the ability to use the REC ELS for error detection, independently of sequence level error recovery. The goal is to speed up detection of lost frames when only Exchange-level error recovery is supported. Getting an error on the REC from devices that don't support this is considered suboptimal, but still permitted.

An alternative was suggested to use the Retry flag to indicate REC support, and rely on the SRR failing on devices that don't support Sequence level retry. The group preferred the approach in the the proposal.

It was moved by George Penokie and seconded by Roger Cummings to recommend to T10 to incorporate T10/06-092r0 into FCP-4. Approved unanimously.

ACTION: FCP-4 chairperson to recommend to T10 to incorporate T10/06-092r0 into FCP-4.

6.2 Several questions on FCP behavior Email DeSanti/Cisco

The following email was received by the FCP-4 chair and secretary:

Dave, Bob,

I please ask you to discuss in the FCP-4 WG the possibility to mandate continuous increasing SEQ_CNT in FCP-4. Relying on it greatly simplifies the detection of a missing Sequence and consequently simplifies error recovery, but today is optional in FCP-x (while is mandated by IP over FC and is going to be mandated by FC-SATA).

Additional items for FCP-4 discussion follows (all due to doubts submitted to me...):

- Bidirectional Commands: I think we need to count bytes for both data-in and data-out. Which of these two counters should be put in the FC4VALUE field of the REC ELS?*
- Data Overlay: the FCP-3 definition of data overlay says "see SAM-3", but SAM-3 says nothing on data overlay.*
- Data Overlay: In which way could it be possible detecting a missing Sequence when data overlay is used and continuously increasing SEQ_CNT is not used? (it seems to us that there is no way, but others may have a different opinion...).*
- Data Overlay: how can the FC4VALUE counters can be accurate when data overlap (i.e., how to avoid to count twice the overlapping data)?*

Independently from the WG actions, your personal feedback on the above topics is very welcome.

Thanks,

Claudio.

On making continuously increasing Sequence Count mandatory, it was recalled that this question was raised, and the requirement rejected, 15 and 5 years ago. The recollection was that some hardware did not support it. The group present felt the posed advantages made it worth polling for community opinion, since it is possible that current hardware all supports continuously increasing Sequence Count.

On the remainder of the questions, the group present believed they could not be answered by the current standard, and requested polling for community opinion for potential standard resolutions.

ACTION: FCP-4 chairperson to reply to the DeSanti email of FCP questions, informing Claudio that the work group was unable to answer his questions based on FCP and will open them for input from the community.

ACTION: 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.

ACTION: FCP-4 chairperson to put discussion of the DeSanti email of FCP questions on the agenda for the next FCP-4 meeting.

7 Meeting Schedule

Request 2 hours at the T10 Plenary Week May 8-12 in San Jose CA.

8 Review of Action Items

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

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)

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)

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)

Adjournment

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

The meeting was adjourned at 9:43 AM on 7 March 2006.

9 Actions on Proposals at This Meeting

Document Title	Number	Disposition
FCP-4: Indication of REC Support	T10/06-092	Closed by approval of T10/06-092r0.

10 Attendance

Representative	Organization
Noud Snelder	BDT
Robert H. Nixon	Emulex
Eric Hibbard	Hitachi Data Systems
Kevin Butt	BM
David Peterson	McDATA
Frederick Knight	Network Appliance
Paul Entzel	Quantum
Paul Suhler	Quantum
Gerald Houlder	Seagate Technology
Roger Cummings	Symantec
Anders Liverud	Tandberg Storage