Draft Minutes
T10 FCP-3 Ad Hoc Work Group
8 March 2005 - 9 AM to 1 PM
Dana Point CA

The FCP-3 Ad Hoc Work Group of INCITS Technical Committee T10 met at Dana Point CA on 8 March 2005, hosted by QLogic. Attendance was 9 people from 8 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, 8 March 2005 at 9:00 AM. He thanked our host company, QLogic.

2 Approval of Agenda   05-104r0

No changes were requested to the published agenda for this meeting.

It was moved by Paul Suhler and seconded by Kevin Butt to accept 05-104r0 as the agenda for this meeting. Approved unanimously.

3 Review of Minutes   05-045r1

No changes were requested to the published minutes for the meeting 18 January 2005.

It was moved by Dave Peterson and seconded by Bob Nixon to accept 05-045r1 as the minutes of the FCP-3 ad hoc meeting on 18 January 2005. Approved unanimously.

4 Review of Old Action Items

AI 22   Michael Banther to publish 04-383r2 reflecting 04-383r1 and the agreements at the FCP-3 meeting 18 January 2005.
            (Opened 18 January 2005) (CLOSED by 04-383r2)

AI 23   FCP-3 chairperson to recommend to T10 to incorporate 04-383r2 into FCP-3, reflecting 04-383r1 and the agreements at the FCP-3 meeting 18 January 2005.
            (Opened 18 January 2005) (CLOSED at T10 plenary meeting 20 January 2005)

AI 24   FCP-3 chairperson to recommend to T10 to incorporate 05-013r0 into FCP-3.
            (Opened 18 January 2005) (CLOSED at T10 plenary meeting 20 January 2005)

5 Old Business

5.1 Return check condition when FCP_DL too small 05-044r1   Peterson/CNT

This is a revision of a prior proposal to incorporate changes requested at prior presentations on the topic.

It was agreed to correct a reversed use of Data Out and Data In in the new definitions of read operation and write operation. Also, the reference to T3 should be I3.

It was agreed to clarify the rule about delivery of data versus FCP_DL and FCP_BIDIRECTIONAL_READ_DL for bidirectional operations.

It was agreed to replace the first two sentences of the text in 9.4.11 that was revised, by instead just refering to 9.3.2.

It was questioned whether returning ILLEGAL REQEST allowed any data to have been transfered, and if not, was that practical to implement. It was observed that it was not necessary to match the data length transferred with the FCP_DL or FCP_BIDIRECTIONAL_READ_DL value, only to match the CDB transfer length with the FCP_DL or FCP_BIDIRECTIONAL_READ_DL value.

It was agreed that the case of returning ILLEGAL REQEST will require no data to have been transferred. This implies that a device that can not determine the length of a transfer beforehand has difficulty with using the check condition. Those who raised the issues that led to the proposal accepted this interpretation.

It was debated whether the value for FCP_RESID should be the residual of the requested transfer size over FCP_DL (as in equation for FCP_RESID for overrun in 9.4.11) or the residual of the requested transfer size over the amount actually transferred (as in the first paragraph of 9.4.11).

It was agreed the equation is the desired behavior, and to change the first paragraph of 9.4.11 to match the equation.

It was pointed out that there were issues with the text in 4.3 concerning the choice of FCP_RSP_IU format and the error to be returned from a bidi-incapable target receiving a bidi command.

It was agreed that the check condition ASC in the second paragraph of 4.3 will change to INVALID COMMAND OPERATION CODE, and that a note will indicate some legacy implementations return an FCP RSP_CODE.

It was contended that the new rules proposed for 9.1.2.7 concerning logical inconsistencies between FCP_CMND_IU flags and SCSI commands should specify check conditions rather than FCP RSP_CODE because the errors required parsing the CDB.

It was agreed to require a CHECK condition for inconsistency between the FCP_CMD_IU flags and the SCSI command, but note that legacy implementations may return an FCP RSP_CODE.

ACTION: Dave Peterson to publish 05-044r2 reflecting 05-044r1 and the agreements at the FCP-3 meeting 8 March 2005.

ACTION: Dave Peterson to schedule a conference call to review 05-044r2.

6 New Business

6.1 Use of fill bytes in FCP_DATA IUs   05-080r0   Houlder/Seagate

This proposal captures a requirement formerly specified in FC-PLDA and FC-FLA, but not carried into FC-DA.

It was pointed out that the requirement in 5.4.2.12 for the Parameter Field to be a multiple of 4 mathemetically forces the desired behavior. It was generally agreed that the proposed text made the requirement much clearer and was therefore still desirable.

It was moved by Dave Peterson and seconded by Gerry Houlder to recommend to the T11 plenary to incorporate 05-080r0 into FCP-3.

In discussion of the motion, issues were raised concerning lack of obvious reqirements (i.e., no "shall"s) and improper behavior in the presense of EMDP or linked commands. The following rewording was developed:

> During transfer of data in response to an FCP_CMND_IU with RDDATA set to one and WRDATA set to zero, all frames of FCP_DATA_IUs except the frame with the highest relative offset within the Data-In Buffer shall have no fill bytes.

> During transfer of data in response to an FCP_CMND_IU with WRDATA set to one and RDDATA set to zero, all frames of FCP_DATA_IUs except the frame with the highest relative offset within the Data-Out Buffer shall have no fill bytes.

> During transfer of data in response to an FCP_CMND_IU with WRDATA set to one and RDDATA set to one, all frames of FCP_DATA_IUs except the frame with the highest relative offset within the Data-In Buffer and the frame with the highest relative offset within the Data-Out Buffer shall have no fill bytes.

These changes were accepted as a friendly amendment.

Approved unanimously.

ACTION: Gerry Houlder to publish 05-080r1 reflecting 05-080r0 and the agreements at the FCP-3 meeting 8 March 2005.

ACTION: FCP-3 chairperson to recommend to T10 to incorporate 05-080r1 into FCP-3.

7 Meeting Schedule

7.1 Interim request

A 2 hour conference call will be requested at 8 AM PDT Tuesday March 22 to review the revisions to 05-044r1.

7.2 Next Plenary Week

4 hours will be requested at the T11 Plenary Week beginning 2 May 2005 in Oklahoma City.

8 Project Schedule

Milestone	ExpectedDate
Last technical input	March 2005
Request to forward for letter ballot	May 2005

9 Review of Action Items

AI 25   Dave Peterson to publish 05-044r2 reflecting 05-044r1 and the agreements at the FCP-3 meeting 8 March 2005.
(Opened 8 March 2005)

AI 25   Dave Peterson to schedule a conference call to review 05-044r2.
(Opened 8 March 2005)

AI 25   Gerry Houlder to publish 05-080r1 reflecting 05-080r0 and the agreements at the FCP-3 meeting 8 March 2005.
(Opened 8 March 2005)

AI 25   FCP-3 chairperson to recommend to T10 to incorporate 05-080r1 into FCP-3.
(Opened 8 March 2005)

AI 25   Next AI

10 Adjournment

The meeting was adjourned at 12:35 PM on 8 March 2005.

11 Actions on Proposals at This Meeting

Document Title	Number	Disposition
An issue with lost FCP_RSP	nodoc	Document(s) will be provided. CARRY.
Check Condition when FCP_DL too small	05-044	Carry. Expect a revision. Current version is 05-044r1
Use of fill bytes in FCP_DATA IUs	05-080	Close. Accepted 05-080r1

12 Attendance

Person	Company
Robert Snively	Brocade Comm. Systems, Inc.
David Peterson	CNT
Robert H. Nixon	Emulex
Michael Banther	Hewlett Packard Co.
Kevin Butt	IBM Corp.
Paul Entzel	Quantum Corp.
Paul Suhler	Quantum Corp.
Gerald Houlder	Seagate Technology
William Martin	Sierra Logic, Inc.