

Draft Minutes

T11.3 FC-FS-2 Ad Hoc Work Group

6 December 2004 - 10 AM to noon

Indian Wells CA

version 1: Added meeting action item missing from list in clause 7.

The FC-FS-2 Ad Hoc Work Group of INCITS Technical Committee T11 Task Group T11.3 met at Indian Wells CA on 6 December 2004, hosted by Broadcom. Attendance was 22 people from 20 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 T11.3 reflector at T11_3@mail.T11.org.

1 Opening remarks and introductions

Bill Martin

Chairperson Bill Martin opened the meeting Monday, 6 December 2004 at 10:02 AM. He thanked our host company, Broadcom, and led a round of introductions.

1.1 Approval of Minutes of Prior Meetings

04-701v0 and 04-733v0

It was moved by Bill Martin and seconded by Vinod Bhat to accept 04-701v0 as the minutes of the FC-FS-2 ad hoc meeting on 5 October 2004 and 04-733v0 as the minutes of the FC-FS-2 ad hoc teleconference on 29 October 2004. Approved unanimously.

2 Approval of Agenda

04-765v1

All

Bob Nixon requested time to review changes requested for FC-FS by the ISO editor.

Bob Snively requested time to present proposal for transmit adaptive equalization (04-805v0).

It was moved by Bill Martin and seconded by Horst Truededt to accept 04-765v1 with the changes noted above as the agenda for this meeting. Approved unanimously.

3 Review of Action Items

All

3.1 Review of Old Action Items

AI 36 FC-FS-2 editor to fix figures in FC-FS-2 as directed by 04-312v0.
(Opened 7 June 2004) (Carryover)

AI 50 Claudio DeSanti to publish 04-627v1 reflecting 04-627v0 and the amendment at the FC-FS-2 meeting 6 December 2004.
(Opened 5 October 2004) (CLOSED by 04-627v1)

- AI 51 Claudio DeSanti to provide source for 04-627v1 to FC-FS-2 editor.
(Opened 5 October 2004) (CLOSED)
- AI 52 FC-FS-2 editor to incorporate 04-627v1 into FC-FS-2.
(Opened 5 October 2004) (CLOSED by 04-045v4)
- AI 53 FC-FS-2 editor to incorporate a definition of Root N_Port Name into FC-FS-2.
(Opened 5 October 2004) (CLOSED by 04-751v0)
- AI 54 FC-FS-2 facilitator to set up an interim conference call to continue review of 04-602v0.
(Opened 5 October 2004) (CLOSED by conference call 29 October 2004)
- AI 55 FC-FS-2 secretary to announce intent to obsolete NAA type 4 (based on IPv4 address).
(Opened 5 October 2004) (CLOSED by email 11 October 2004)

4 Meeting Policies

Bill Martin

4.1 Attendance and Membership

Bill Martin stated that all persons present are considered members of this meeting and may vote on questions, limited to one vote per company present. Attendance at this meeting does not count toward attendance at the plenaries of T11 and its task groups (i.e., being here will not get you out or keep you out of membership jeopardy).

4.2 Patents

Bill Martin indicated that among the rules and policies under which this working group operates is the ANSI patent policy. He directed persons wishing to make statements or ask questions relevant to this policy to do so at the T11.3 or T11 plenary meeting.

4.3 Antitrust

Bill Martin indicated that among the rules and policies under which this working group operates is the INCITS Antitrust Guidelines. Any member of the meeting is responsible for objecting if he believes discussion in the meeting violates those guidelines.

5 Old Business

5.1 Clarifying Credit Accounting

04-602v1

Nixon/Emulex

This proposal is a revision to a proposal that incorporates changes to resolve issues raised at the last work group meeting and at an interim teleconference on 29 October 2004. The members of the teleconference approved the document with the requested changes.

It was moved by Jim Coomes and seconded by Claudio DeSanti to incorporate 04-602v1 into FC-FS-2.

In discussion, it was pointed out that the first paragraph of 17.3 uses the indefinite term “here”, and that the intent was “in this standard”. An amendment to the motion was accepted.

it was also questioned whether FC-FS-2 with this proposal incorporated prevents the number of R_RDYs from exceeding the negotiated maximum credit count (this is normal in alternate credit management).

ACTION: Harry Paul will research whether FC-FS-2 as modified by 04-602v2 allows alternate credit management

The amended motion is:

It was moved by Jim Coomes and seconded by Claudio DeSanti to incorporate 04-602v2 into FC-FS-2, reflecting 04-602v1 and the agreements at the FC-FS-2 meeting 6 December 2004. Approved unanimously.

ACTION: Bob Nixon to publish 04-602v2 reflecting 04-602v1 and the agreements at the FC-FS-2 meeting 6 December 2004.

ACTION: FC-FS-2 editor to incorporate 04-602v2 into FC-FS-2.

5.2 Correct Clock Synchronization primitive values 04-629v2 Coomes/Seagate

This proposal corrects some old errors and confusing terminology in the specification of the clock synchronization primitives. The corrections were verified with the original designers and current implementers of clock synchronization.

It was moved by Jim Coomes and seconded by Harry Paul to incorporate 04-629v2 into FC-FS-2. Approved unanimously.

ACTION: FC-FS-2 editor to incorporate 04-629v2 into FC-FS-2.

5.3 FC-FS-2 Document Status 04-045v4 Nixon/Emulex

Bob reported that all approved changes prior to this meeting have been incorporated. He noted that he had also removed a number of citations and definitions related to IETF RFCs that are no longer referenced from FC-FS-2. No progress was made on further translation of Visio figures into native FrameMaker figures.

6 New Business

6.1 Virtual Fabric Definitions 04-751v0 Nixon/Emulex

This proposal adds definitions and acronyms for terms used in the specification of Virtual Fabric Tagging.

It was moved by Bob Nixon and seconded by Claudio DeSanti to incorporate 04-751v0 into FC-FS-2. Approved unanimously.

ACTION: FC-FS-2 editor to incorporate 04-751v0 into FC-FS-2.

6.2 FC-AL Fairness Problem 04-762v1 Truedtedt/TrueFocus

Horst presented a case of pathological interaction between use of ARBff and use of transfer state. Bob Snively advised that the work for EMI reduction may not use ARBff alone, which may affect the eventual circumstances of this issue. It is not known that the problem has been seen in the field, but there are known implementations that are capable of causing it.

The proposal includes two possible fixes, one for the port in the role of transmitter of ARBff and the other for the port in the role of using transfer state. The two fixes could both be applied, each resolving the issue for legacy implementations of the other role.

Some concerns were raised about the fix for the port in the role of transfer state; however a fix for that role was considered most important. Resolutions for the concerns were discussed.

Horst volunteered to bring in a revised proposal.

It appears this may require a new amendment to FC-AL-2. This may be coordinated with any changes raised by 8GFC EMI controls.

6.3 Virtual Fabrics Definitions and Clarifications 04-775v0 DeSanti/Cisco

This proposal adds definitions for some constants used by Virtual Fabric Tagging.

It was agreed to drop the change to 10.2.1

It was moved by Claudio DeSanti and seconded by Bill Martin to incorporate 04-775v1 into FC-FS-2, reflecting 04-775v0 and the agreements at the FC-FS-2 meeting 6 December 2004. Approved unanimously.

ACTION: Claudio DeSanti to publish 04-775v1 reflecting 04-775v0 and the agreements at the FC-FS-2 meeting 6 December 2004.

ACTION: FC-FS-2 editor to incorporate 04-775v1 into FC-FS-2.

6.4 NAA Type 4 Obsolescence 04-776v0 DeSanti/Cisco

At the last meeting, the sense of the work group was to obsolete NAA type 4 (based on IP address). Email was sent to the T11 task group reflectors, and no objection was received.

It was moved by Claudio DeSanti and seconded by Bob Nixon to incorporate 04-776v0 into FC-FS-2. Approved unanimously.

ACTION: FC-FS-2 editor to incorporate 04-776v0 into FC-FS-2.

6.5 Security Protection for Basic Link Services 04-777v0 DeSanti/Cisco

The proposal is to enable authentication of Basic link Services by permitting a payload containing a security header (and nothing else) when ESP is negotiated for Basic Link Services.

Concerns about interoperability with legacy implementations, including early FC-SP implementations, were resolved by review of the negotiation of security.

Some rewording of the proposed revisions to FT_0 and FT_1 frame types were requested.

The specification of which DF_CTL bits apply to which frame types was felt best expressed by a new table column in the table describing the DF_CTL bits, rather than more complex text.

The proposal will be revised and brought back.

6.6 ISO editor's questions on FC-FS 04-821v0

The ISO editor has communicated to T11 that certain changes were requested for approval of FC-FS as an International Standard. Of these changes, all but one were editorial. This workgroup accepted all the editorial changes without discussion. The technical change was within an example of clock synchronization. It has been reviewed

and approved by the author and current users of clock synchronization. After reviewing email to this conclusion, this work group approved the technical change.

It was moved by Bill Martin and seconded by Bob Nixon to accept the changes to FC-FS proposed by ISO in document 04-821v0. Approved unanimously.

ACTION Bob Nixon to post the ISO editor's requests for changes to FC-FS.

ACTION: FC-FS-2 facilitator to recommend to T11.3 to approve the ISO editor's requests for changes to FC-FS.

ACTION: FC-FS-2 editor to incorporate 04-821v0 into FC-FS-2.

6.7 Transmit adaptive equalization

04-805v0

Snively/Brocade

This presentation is an overview and justification for a method of in-band feedback control of transmitter equalization, primarily but not exclusively for 8GFC backplane Fibre Channel links. Bob emphasized that this is very likely to happen. It will be designed in FC-PI-4

7 Review of Action Items

Bob Nixon

- AI 36 FC-FS-2 editor to fix figures in FC-FS-2 as directed by 04-312v0.
(Opened 7 June 2004) (Carryover)
- AI 56 Harry Paul will research whether FC-FS-2 as modified by 04-602v2 allows alternate credit management.
(Opened 6 December 2004)
- AI 57 Bob Nixon to publish 04-602v2 reflecting 04-602v1 and the agreements at the FC-FS-2 meeting 6 December 2004.
(Opened 6 December 2004) (CLOSED by 04-602v2)
- AI 58 FC-FS-2 editor to incorporate 04-602v2 into FC-FS-2.
(Opened 6 December 2004)
- AI 59 FC-FS-2 editor to incorporate 04-629v2 into FC-FS-2.
(Opened 6 December 2004)
- AI 60 FC-FS-2 editor to incorporate 04-751v0 into FC-FS-2.
(Opened 6 December 2004)
- AI 61 Claudio DeSanti to publish 04-775v1 reflecting 04-775v0 and the agreements at the FC-FS-2 meeting 6 December 2004.
(Opened 6 December 2004) (CLOSED by 04-775v1)
- AI 62 FC-FS-2 editor to incorporate 04-775v1 into FC-FS-2.
(Opened 6 December 2004)
- AI 63 FC-FS-2 editor to incorporate 04-776v0 into FC-FS-2.
(Opened 6 December 2004)

- AI 64 Bob Nixon to post the ISO editor's requests for changes to FC-FS.
(Opened 6 December 2004) (Closed by 04-821v0)
- AI 65 FC-FS-2 facilitator to recommend to T11.3 to approve the ISO editor's requests for changes to FC-FS.
(Opened 6 December 2004)
- AI 66 FC-FS-2 editor to incorporate 04-821v0 into FC-FS-2.
(Opened 6 December 2004)
- AI 67 Next AI

8 Meeting Schedule

Bill Martin

Request 2 hours at the T11 Plenary Week beginning 31 January 2005 in Dana Point CA.

9 Adjournment

It was moved by Bill Martin and seconded by Claudio DeSanti to adjourn. Approved unanimously.

The meeting was adjourned at 12:16 PM on 6 December 2004.

10 Actions on Proposals at This Meeting

Document Title	Number	Disposition
Clarifying Credit Accounting	<u>04-602v0</u>	Closed by approval of 04-602v2
Transmit Active Equalization	<u>04-625v0</u>	Closed by introduction of 04-805v0
Correct Clock Synchronization primitive values	<u>04-629v0</u>	Closed by approval of 04-629v2
Obsolescence of NAA 4	doc pending	Closed by approval of 04-776v0
Virtual Fabric Definitions	04-751v0	Closed by approval of 04-751v0
FC-AL Fairness Problem	04-762v1	Carry for further revision.
Virtual Fabrics Definitions and Clarifications	04-775v0	Closed by approval of 04-775v1
NAA Type 4 Obsolescence	04-776v0	Closed by approval of 04-776v0
Security Protection for Basic Link Services	04-777v0	Carry for further revision.
ISO Editor's changes to FC-FS	04-821v0	Closed by approval of 04-821v0
Transmit adaptive equalization	04-805v0	Carry pending technical specification.

11 Attendance

Name	Organization Represented
Vinod Bhat	HEWLETT PACKARD
Craig Carlson	QLOGIC CORP.
James Coomes	SEAGATE TECHNOLOGY
Claudio DeSanti	CISCO
Matt Gaffney	STORAGETEK
Mike Glass	DATA DEVICE CORP.
Joe Gruba	STORAGETEK
Ken Hirata	EMULEX
John Lohmeyer	LSI LOGIC
William R. Martin	SIERRA LOGIC
Jun Ma	WAVECREST
James Nelson	NORTHROP GRUMMAN
Bob Nixon	EMULEX
Vit Novak	SUN MICROSYSTEMS
Harry V. Paul	CNT CORPORATION
George Penokie	IBM TIVOLI SYSTEMS
Koby Resheff	Packetlight Networks
Robert Snively	BROCADE COMMUNICATIONS
Sashi Thiagarajan	CIENA CORPORATION
Horst Truestedt	TRUE FOCUS, INC
Neil Wanamaker	FINISAR CORP.
Ralph Weber	ENDL TEXAS