

Minutes

T11.3 FC-FS-6 ad hoc work group regular meeting

09 February 2022 – 04:00PM – 06:00PM EST

Raleigh, NC (Hybrid)

The FC-FS-6 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting in Raleigh, NC hosted by FCIA along with virtual conferencing facilities using the Zoom platform provided by Marvell on 09 February 2022. Attendance was 13 people from 7 organizations and is tabulated at the end of this document.

Minutes were taken by Patty Driever (IBM) (pgd@us.ibm.com). Corrections may be requested either before the subsequent meeting by email to pgd@us.ibm.com or at the subsequent meeting in person.

1 Opening remarks & Introductions

Chairperson Dave Peterson (Broadcom) opened the regular meeting Wednesday, 09 February 2022 at 01:33 PM EST. He thanked our in-person host organization, FCIA, along with Marvell for setting up the Zoom meeting, and led a round of introductions.

1.1 Attendance and Membership

The chair explained that attendance is recorded electronically at www.incits.org and explained the procedure. 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). The chair stated that all persons present are considered members of this meeting and may vote on questions, limited to one vote per company present. He advised that although T11 does not limit participation in the activities of its work groups to representatives of T11 member organizations, it requires nonmembers to identify themselves as such. Nonmembers that expect they may participate in the activities of T11 regularly were encouraged to become members.

1.2 Code of Conduct

The chair referenced the INCITS Code of Conduct and suggested everyone become familiar with its content. It can be found on the INCITS website at the following link:
https://standards.incits.org/apps/group_public/document.php?document_id=124850&wg_abbrev=eb

It will be reviewed at the plenary meetings and in all Ad Hoc meetings as well.

1.3 Patents

The chair indicated that among the rules and policies under which this working group operates are the ANSI intellectual property policies as specified in pages 1-3 of http://www.incits.org/pat_slides.pdf. He displayed these pages without comment or explanation, and directed that questions about the policy should be referred to the questioner's legal counsel or the ANSI General Counsel.

1.4 Antitrust

The chair indicated that among the rules and policies under which this working group operates are the INCITS Antitrust Guidelines. Any member of the meeting is responsible for objecting if he believes discussion in the meeting violates those guidelines. As examples, there should never be discussion of the following topics at any INCITS or INCITS subgroup meeting:

- Any company's prices or pricing policies;

- Specific R&D, sales and marketing plans;
- Any company's confidential product, product development or production strategies;
- Whether certain suppliers or customers will be served;
- Prices paid to input sources; or
- Complaints about individual firms or other actions that might tend to hinder a competitor in any market.

If such discussion is not immediately terminated, it is the chairperson's responsibility to terminate the meeting. The INCITS Antitrust Guidelines are available at <http://www.incits.org/inatrust.htm>.

2 Approval of Agenda

An agenda for the FC-FS-6 ad hoc work group regular meeting 09 February 2022 has been posted as T11-2022-00018-v000.

Ed Mazurek (Cisco) moved and Barry Maskas (HPE) seconded to accept T11-2022-00018-v000 as the agenda for this regular meeting. Approved unanimously.

3 Review of Past Business

3.1 Review of Minutes

Minutes for the FC-FS-6 ad hoc work group regular meeting 08 December 2021 have been posted as T11/2021-00348-v000.

Ed Mazurek (Cisco) moved and Howard Johnson (Broadcom) seconded to accept T11/2021-00348-v000 as the minutes of the FC-FS-6 ad hoc work group meeting on 08 December 2021. Approved unanimously.

3.2 Review of Old Action Items

Action Items Carried Forward:

- | | |
|----------------|---|
| 2108-03 | Editor to incorporate T11-2021-00132-v000 (BLSs – Mandatory or Optional) for inclusion in FC-FS-6. (CARRY) |
| 2110-03 | Editor to incorporate T11-2021-00133-v000 (Platform Name) for inclusion in FC-FS-6. (CARRY) |
| 2110-05 | Editor to incorporate T11-2021-00248-v001 (Name Identifier Format) for inclusion in FC-FS-6. (CARRY) |
| 2110-07 | Editor to incorporate T11-2021-00131-v003 (In/Out of Order Cleanup) for inclusion in FC-FS-6. (CARRY) |

New Action Items Identified Last Meeting:

- | | |
|----------------|---|
| 2112-01 | Editor to incorporate T11-2021-00305-v002 (Editorial & Technical changes recommended from FC-PI-8 group) (CARRY) |
|----------------|---|

- 2112-02** Editor to incorporate T11-2021-00291-v000 (changes requested to Figures 45 and 47 recommended from FC-PI-8 group) **(CARRY)**
- 2112-03** Editor to incorporate T11-2021-00290-v000 (changes requested to Figures 44 and 46 recommended from FC-PI-8 group) **(CARRY)**

4 Old Business

4.1 Update FC-4 TYPE code 29h (2021-00274-v000) Peterson (Broadcom)

Dave presented a proposal to update the FC-4 TYPE code value in subclause 2.3 to 29h for RDMA over Fibre Channel. He made a motion to incorporate 2021-00274-v000 into FC-SP-2/AM2. Seconded by Craig Carlson (Marvell). Motion passed unanimously. See Action Item **2202-02**.

4.2 ABTS/R_A_OV/RRQ Cleanup (2022-00057-v000) Peterson (Broadcom)

This discussion uncovered that Cisco does indeed use ABTS sequence variant, so Dave needs to revisit his proposed text changes in this area.

4.3 ABTS text cleanup (2022-00058-v000) Peterson (Broadcom)

This discussion is being put on hold for this meeting cycle.

4.4 End-to-end Data Protection CRC Proposal (T11-2022-00027-v000) Carlson (Marvell)

Craig presented text to add the negotiation portion in 14.3.5.1, and will also update the new ENCR_AES_AUTH_AES_GMAC and ENCR_AES_GCM names to add OPD. Craig also took an action to change the name of section to 14.3.5 to reflect our change to the ‘overlapping protection domain’ terminology. Craig also pointed out that the length of the ESP trailer is defined in FC-SP-2, but SP-2 doesn’t mention the ESP trailer. It’s really defined in one of the RFCs based on the choice of transform ID. He will address this at a later date.

Craig moved that this document, as modified with the new name changes to the transforms and related document sections, be included in FC-SP-2/AM2. Seconded by Roger Hathorn (IBM). Motion passed unanimously. See Action Item **2202-01**.

5.0 New Business

5.1 Text cleanup (2022-00059-v000) Peterson (Broadcom)

Dave presented a series of random things he came across in review of the some of the text in the standard.

Group reviewed them and made some adjustments.

Dave Peterson (Broadcom) made a motion, seconded by Roger Hathorn (IBM) to approve 2022-00059-v001 for incorporation into FC-FS-6. Motion carried unanimously. See Action Item **2202-03**.

6 Unscheduled Business

6.1 128G Alignment Marker Feedback (2021-00381-v002) Oteyza (Marvell)

Raul presented a quick overview of work going on in FC-PI-8. It's not ready for incorporation, but once the FC-PI-8 group reviews and approves it Raul will come back.

7 Project Schedule

Milestone	Expected Date
Last technical input	August 2022
RFC Ballot	October 2022
T11 Letter Ballot	TBD
Forward to INCITS	TBD

8 Review of Action Items

Action Items Carried Forward:

- 2108-03** Editor to incorporate T11-2021-00132-v000 (BLSs – Mandatory or Optional) for inclusion in FC-FS-6.
- 2110-03** Editor to incorporate T11-2021-00133-v000 (Platform Name) for inclusion in FC-FS-6.
- 2110-05** Editor to incorporate T11-2021-00248-v001 (Name Identifier Format) for inclusion in FC-FS-6.
- 2110-07** Editor to incorporate T11-2021-00131-v003 (In/Out of Order Cleanup) for inclusion in FC-FS-6.
- 2112-01** Editor to incorporate T11-2021-00305-v002 (Editorial & Technical changes recommended from FC-PI-8 group)
- 2112-02** Editor to incorporate T11-2021-00291-v000 (changes requested to Figures 45 and 47 recommended from FC-PI-8 group)
- 2112-03** Editor to incorporate T11-2021-00290-v000 (changes requested to Figures 44 and 46 recommended from FC-PI-8 group)

New Action Items:

- 2202-01** Editor to incorporate T11-2022-00027-v001 (End-to-end Data Protection CRC Proposal)
- 2202-02** Editor to incorporate 2021-00274-v000 (Update FC-4 TYPE code value of 29h) i
- 2202-03** Editor to incorporate T11-2022-00059-v001 (text changes)

9 Meeting Schedule

9.1 Next Plenary Week

Request 3 hours for FC-FS-6 at the hybrid face-to-face/virtual T11 plenary week 04 April – 08 April 2022.

10 Adjournment

Ed Mazurek (Cisco) moved and Howard Johnson (Broadcom) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 03:05 PM EST on 09 February 2022.

11 Attendance

Organization **Representative** **T11.3 Member Company**

BROADCOM LIMITED	Howard Johnson	Y
BROADCOM LIMITED	David Peterson	Y
BROADCOM LIMITED	James Smart	Y
CISCO SYSTEMS INC	Mike Blair	Y
CISCO SYSTEMS INC	Ed Mazurek	Y
DELL TECHNOLOGIES INC	David Brown	Y
HEWLETT PACKARD ENTERPRISE	Barry Maskas	Y
HEWLETT PACKARD ENTERPRISE	Krishna Babu Puttagunta	Y
IBM	Patty Driever	Y
IBM	Roger Hathorn	Y
MARVELL SEMICONDUCTOR	Craig W. Carlson	Y
MARVELL SEMICONDUCTOR	Raul Oteyza	Y
NETAPP INC	Frederick Knight	Y