

Minutes
T11.3 FC-FS-6 ad hoc work group regular meeting
06 April 2022 – 02:30PM – 06:00PM CDT
New Orleans, LA (Hybrid)

The FC-FS-6 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting in New Orleans, LA hosted by Broadcom along with virtual conferencing facilities using the Zoom platform provided by Marvell on 06 April 2022. Attendance was 10 people from 6 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, 06 April 2022 at 01:04 PM CDT. He thanked our in-person host organization, Broadcom, 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 06 April 2022 has been posted as T11-2022-00108-v000.

Howard Johnson (Broadcom) moved and Roger Hathorn (IBM) seconded to accept T11-2022-00108-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 09 February 2022 have been posted as T11/2022-00041-v000.

Howard Johnson (Broadcom) moved and Roger Hathorn (IBM) seconded to accept T11/2022-00041-v000 as the minutes of the FC-FS-6 ad hoc work group meeting on 09 February 2022. 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. (COMPLETE) |
| 2110-03 | Editor to incorporate T11-2021-00133-v000 (Platform Name) for inclusion in FC-FS-6. (COMPLETE) |
| 2110-05 | Editor to incorporate T11-2021-00248-v001 (Name Identifier Format) for inclusion in FC-FS-6. (COMPLETE) |
| 2110-07 | Editor to incorporate T11-2021-00131-v003 (In/Out of Order Cleanup) for inclusion in FC-FS-6. (COMPLETE) |
| 2112-01 | Editor to incorporate T11-2021-00305-v002 (Editorial & Technical changes recommended from FC-PI-8 group) (COMPLETE) |
| 2112-02 | Editor to incorporate T11-2021-00291-v000 (changes requested to Figures 45 and 47 recommended from FC-PI-8 group) (COMPLETE) |
| 2112-03 | Editor to incorporate T11-2021-00290-v000 (changes requested to Figures 44 and 46 recommended from FC-PI-8 group) (COMPLETE) |

New Action Items Identified Last Meeting:

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

4 Old Business

4.1 ABTS/R_A_OV/RRQ Cleanup (2022-00057-v001) Peterson (Broadcom)

Dave showed text changes to try to get the text around ABTS/RRQ consistent in FC-FS-6 and other standards (such as FC-LS-5) that reference these things. He highlighted some of the inconsistencies for people's awareness.

The consensus is that this will yield fairly significant changes that will impact multiple standards, so we will not try to do this in FC-FS-6 and will instead defer it to FC-FS-7.

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

This is work in progress, and hence will discussion is being put on hold for this meeting cycle.

5.0 New Business

5.1 Comments to FC-FS-6 rev0.4 (T11-2022-00099-v002) Oteyza (Marvell)

Raul presented additional comments, mostly editorial, that have been developed as a result of the review of the FC-PI-8 group. We reviewed them all and accepted or made changes to them.

5.2 128 GFC common Alignment Marker text (T11-2022-00100-v001) Oteyza (Marvell)

Raul indicated that in FC-PI-8 there has been much discussion about methods for single lane 128GFC to transmit a common alignment marker on the wire. The changes are due to having identified alignment marker patterns for each transmission mode such that ultimately a common alignment marker pattern will flow on the wire for all of the transmission modes. It's common with 64GFC and hence provides a reduction in complexity for the receiver. The receive path doesn't change, avoiding complexity at the receiver. At this morning's FC-PI-8 they agreed that they want this change incorporated into FC-FS-6.

Raul reviewed the text changes required to incorporate this (with modifications made during the meeting).

Raul motioned that we incorporate T11-2022-00099-v002 as modified and T11-2022-00100-v001 as modified into FC-LS-6. Motion was seconded by Howard Johnson (Broadcom). Motion passed unanimously.

6 Unscheduled Business

6.1

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:

None

New Action Items:

2204-01 Editor to incorporate T11-2022-00099-v003 and T11-2022-00100-v002 into FC-LS-6

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 13 June – 17 June 2022.

10 Adjournment

Roger Hathorn (IBM) moved and Howard Johnson (Broadcom) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 02:19 PM CDT on 06 April 2022.

11 Attendance

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

BROADCOM LIMITED	Howard Johnson	Y
BROADCOM LIMITED	David Peterson	Y
CISCO SYSTEMS INC	Mike Blair	Y
CISCO SYSTEMS INC	Ed Mazurek	Y
HEWLETT PACKARD ENTERPRISE	Barry Maskas	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