

Minutes
T11.3 FC-FS-6 ad hoc work group regular meeting
06 October 2021 – 03:00PM – 05:00PM PDT
Coeur d’Alene, ID (Hybrid)

The FC-FS-6 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting in Couer d’Alene, ID hosted by SFF along with virtual conferencing facilities using the Zoom platform provided by Marvell on 06 October 2021. 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, 06 October 2021 at 09:51 AM PDT. He thanked our in-person host organization, SFF, 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 October 2021 has been posted as T11-2021-00249-v000.

Fred Knight (NetApp) moved and Roger Hathorn (IBM) seconded to accept T11-2021-00249-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 18 August 2021 have been posted as T11/2021-00224-v000.

Ed Mazurek (Cisco) moved and Roger Hathorn (IBM) seconded to accept T11/2021-00224-v000 as the minutes of the FC-FS-6 ad hoc work group meeting on 18 August 2021. Approved unanimously.

3.2 Review of Old Action Items

Action Items Carried Forward:

None

New Action Items Identified Last Meeting:

- | | |
|----------------|--|
| 2108-01 | Chair to request T11.3 accept the FC-NVMe-3 project proposal as documented in T11-2021-00188-v002 and forwarded for further processing. (OVERTAKEN BY EVENTS – see 4.5 below) |
| 2108-02 | Craig to created project proposal for FC-SP-2 AM2. (COMPLETED – T11-2021-00250-v000) |
| 2108-03 | Editor to incorporate T11-2021-00132-v000 (BLSs – Mandatory or Optional) for inclusion in FC-FS-6. (CARRY) |

4 Old Business

4.1 End-to-end Data Protection with Encryption - Negotiation (T11-2021-00087-v001) Carlson (Marvell)

This one is 'on-hold' until we open the FC-SP-2 AM2 project and resolve some issues there.

4.2 Sequential Delivery and FC (2021-00039-v002) Peterson (Broadcom)

This item was deferred for this session and listed for reference only.

4.3 In/Out of Order Cleanup (2021-00131-v002) Peterson (Broadcom)

Dave reviewed the text changes agreed to and previously reviewed. Fred pointed out that we still need to add some verbiage to describe what an N_Port can expect relative to in-order delivery. Dave had a proposal for this, but some modifications were made. Dave Peterson (Broadcom) made a motion, seconded by Craig Carlson (Marvell) to include T11-2021-00131-v002 as modified into FC-FS-6. Motion passed unanimously.

4.4 Platform Name (2021-00196-v000/2021-00133-v000) Peterson (Broadcom)

(2021-00133-v000): Dave shared proposed text changes relative to defining a Platform and what a Platform name is. Both referring to GS-9 for further description. Dave Peterson (Broadcom) made a motion, seconded by Roger Hathorn (IBM) to incorporate T11-2021-00133-v000 into FC-FS-6. Motion passed unanimously.

4.5 Project Proposal for FC-NVMe-3 (T11-2021-00188-v003) Peterson (Broadcom)

Dave discussed the draft project proposal for an FC-NVMe-3. Includes sequence retransmission from non-zero relative offset along with other enhancements as needed or desired. Dave Peterson (Broadcom) made a motion, seconded by Fred Knight (NetApp), to accept the project proposal for FC-NVMe-3 as documented in T11-2021-00188-v003 and forward to T11.3 for further processing. Motion passed unanimously.

5.0 New Business

5.1 Project Proposal for FC-SP-2/AM2 (T11-2021-00250-v000) Carlson (Marvell)

Craig discussed the draft project proposal for an FC-SP-2 Amendment 2 (AM2). Included consideration of adding TLS1.3 and removal of deprecated TLS versions, along with other enhancements to the protocol as deemed needed or desired.

Craig Carlson (Marvell) made a motion, seconded by Dave Peterson (Broadcom), to accept the project proposal for FC-SP-2/AM2 as documented in T11-2021-00250-v000 and forward to T11.3 for further processing. Motion passed unanimously.

5.2 Name Identifier Format (2021-00248-v000) Peterson (Broadcom)

Dave presented a new proposal for identifying the Name Identifier Format, following what T10 did in this area. A comment or two was supplied causing an update to be required.

Dave moved, and Roger Hathorn (IBM) seconded, that T11/2021-00248-v000 as modified be incorporated into FC-FS-6. Motion carried unanimously.

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

Dave presented a proposal for creating a new FC-4 TYPE code value of 29h for FC-RDMA. Since we are in the processing of renaming the FC-PM project to FC-RDMA, we agreed to hold off on approving and incorporating this proposal until after the name change is resolved.

6 Unscheduled Business

6.1 ISO/IEC FC-SP-2+AMI publication (no doc) Peterson (Broadcom)

Dave presented a list of items that the ISO group wants changed before publication. There is really only one open item that we have real concerns with. They want changes to the format of definitions in Clause 3. They view it as editorial, but Dave (and Craig) feels it is more significant, because changes in capitalization could have greater implications (i.e. affect the meaning). We're going to go back one more time with our responses to the comments and if ISO is not accepting of them we will simply pull the doc from the ISO publication process. It is already published by ANSI.

7 Project Schedule

Milestone	Expected Date
Last technical input	October 2021
RFC Ballot	February 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.

New Action Items:

- 2110-01** Chair to request T11.3 accept the FC-NVMe-3 project proposal as documented in T11-2021-00188-v003 and forwarded for further processing.
- 2110-02** Chair to request T11.3 accept the FC-SP-2 AM2 project proposal as documented in T11-2021-00250-v000 and forwarded for further processing.
- 2110-03** Editor to incorporate T11-2021-00133-v000 (Platform Name) for inclusion in FC-FS-6.
- 2110-04** Dave Peterson to post T11-2021-00248-v001 (Name Identifier Format) with modifications agreed to today.
- 2110-05** Editor to incorporate T11-2021-00248-v001 (Name Identifier Format) for inclusion in FC-FS-6.
- 2110-06** Dave Peterson to post T11-2021-00131-v003 (In/Out of Order Cleanup) with modifications agreed to today.
- 2110-07** Editor to incorporate T11-2021-00131-v003 (In/Out of Order Cleanup) for inclusion in FC-FS-6.
- 2110-08** Dave Peterson to post document of comments on FC-SP-2 AM1 from the ISO/IEC Council for group access.

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 07 December – 09 December 2021.

10 Adjournment

Ed Mazurek (Cisco) moved and Roger Hathorn (IBM) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 11:23 AM PDT on 06 October 2021.

11 Attendance

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

BROADCOM LIMITED	David Peterson	Y
BROADCOM LIMITED	James Smart	Y
BROADCOM LIMITED	Anil Veerabhadrapa	Y
CISCO SYSTEMS INC	Mike Blair	Y
CISCO SYSTEMS INC	Ed Mazurek	Y
CISCO SYSTEMS INC	Ramesh Sivakolundu	Y
DELL INC	David Brown	Y
IBM	Patty Driever	Y
IBM	Roger Hathorn	Y
MARVELL SEMICONDUCTOR	Craig W. Carlson	Y
NETAPP INC	Frederick Knight	Y
VIAVI SOLUTIONS	Jason Rusch	Y