

Minutes
T11.3 FC-FS-6 ad hoc work group regular meeting
03 December 2019 – 11:00AM – 12:00PM CST
New Orleans, LA, USA

The FC-FS-6 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at New Orleans, Louisiana on 03 December 2019, hosted by SNIA/SFF. Attendance was 13 people from 8 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 Tuesday, 03 December 2019 at 10:49 AM CST. He thanked our host organization, SNIA/SFF, 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 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.

1.3 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 03 December 2019 has been posted as T11-2019-00334-v000.

Mike Blair (Cisco) moved and Alan Rajapa (Dell) seconded to accept T11-2019-00334-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 October 2019 have been posted as T11/2019-00298-v001.

Howard Johnson (Broadcom) moved and Alan Rajapa (Dell) seconded to accept T11/2019-00298-v001 as the minutes of the FC-FS-6 ad hoc work group meeting on 08 October 2019. Approved unanimously.

3.2 Review of Old Action Items

Action Items Carried Forward:

1908-01 Editor to incorporate 2019-00071-v004 into FC-FS-6. **(CARRY)**

New Action Items Identified Last Meeting:

1910-01 Editor to remove Annex J and any references to it from the next draft version of FC-FS-6. **(CARRY)**

1910-02 Dave Peterson to work with Howard Johnson on best means to craft diagrams to ensure they can be incorporated by the editor using FrameMaker **(CARRY)**

4 Old Business

4.1 A Beautiful Day in the Neighborhood (2019-00083-v003 and 2019-00215-v004) Howard Johnson (Broadcom)

Howard reviewed text edit changes made based on feedback from last meeting. He then reviewed example diagrams of the behavior during transitions. We jumped back and forth between the diagram and the text to ensure they matched (and with much discussion to convince us they did). One key was understanding that what constitutes a threshold is implementation dependent. It could be exceeding a value at any point in an interval, or exceeding it for a % of the interval time, or anything else. We agreed that the

diagram examples in the annex should contain examples of a few of these to show the ‘rules’ vs the ‘implementation choice’.

Howard Johnson (Broadcom) moved to incorporate T11-2019-000215-v004 into FC-FS-6, and motion was seconded by Patty Driever (IBM). Motion carried 7-approved, 0-against, 1 abstention.

5.0 Scheduled Business

6 Unscheduled Business

6.1 Link Bring-up Times (2019-00343-v000) Dave Peterson (Broadcom)

Dave reviewed some estimates on link initialization times. For 32 GFC the times are in the 1.5-2 second range. But for 64 GFC the estimate is 5.5 seconds and for 128 GFC one estimate is 19.5 seconds. This is unacceptable for many implementations and other ULP standards. Dave asked each person to go back with this info and come back with specific examples of the issues this may cause.

This topic will be discussed in more detail in the Joint T11.2/T11.3 meeting tomorrow.

7 Project Schedule

Milestone	Expected Date
Last technical input	TBD
T11 Letter Ballot	TBD
Forward to INCITS	TBD

Once the physical layer work progresses, we will have a better sense of how to set realistic dates for this.

8 Review of Action Items

Action Items Carried Forward:

- 1908-01** Editor to incorporate 2019-00071-v004 into FC-FS-6.
- 1910-01** Editor to remove Annex J and any references to it from the next draft version of FC-FS-6.
- 1910-02** Dave Peterson to work with Howard Johnson on best means to craft diagrams to ensure they can be incorporated by the editor using FrameMaker

New Action Items:

1912-01 Editor to incorporate T11-2019-000215-v004 into FC-FS-6

9 Meeting Schedule

9.1 Next Plenary Week

Request 2 hours for FC-FS-6 at the T11 plenary week in Fort Worth, Texas 03 February – 07 February 2020.

10 Adjournment

Howard Johnson (Broadcom) moved and Mike Blair (Cisco) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 11:51 AM CST on 03 December 2019.

11 Attendance

Organization	Representative	T11.3 Member Company
BROADCOM LIMITED	David Baldwin	Y
BROADCOM LIMITED	David Peterson	Y
BROADCOM LIMITED	Howard Johnson	Y
BROADCOM LIMITED	Steven Wilson	Y
CISCO SYSTEMS INC	Mike Blair	Y
CISCO SYSTEMS INC	Mark Allen	Y
DELL INC	Alan Rajapa	Y
HEWLETT PACKARD ENTERPRISE	Barry Maskas	Y
IBM	Patty Driever	Y
IBM	Roger Hathorn	Y
MARVELL SEMICONDUCTOR	Craig W. Carlson	Y
TELEDYNE LECROY CORPORATION	David Rodgers	N
VIAVI SOLUTIONS	Jason Rusch	Y

