

Minutes
T10 FCP-5 ad hoc work group regular meeting
04 February 2020 – 4:00PM – 6:00PM CST
Fort Worth, TX, USA

Document: T10-20-021r0

Attendance was 15 people from 9 organizations and is tabulated at the end of this document.

1 Opening remarks & Introductions

Dave Peterson (Broadcom) opened the regular meeting Tuesday, 04 February 2020 at 03:06 PM CST. He thanked our host organization, DCS, and led a round of introductions.

1.1 Attendance and Membership

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 T10 does not limit participation in the activities of its work groups to representatives of T10 member organizations, it requires nonmembers to identify themselves as such. Nonmembers that expect they may participate in the activities of T10 regularly were encouraged to become members.

1.2 Patents

The chair explained that this is a regular agenda item to identify any potential patent issues with developing standards and technical reports. For additional information on ANSI procedures and patent policy, please see INCITS web page at <http://www.incits.org/standards-information/legal-info>. Questions about this policy should be referred to the questioner's legal counsel or the ANSI General Counsel.

1.3 Antitrust

The Chair stated that the meeting was operating under INCITS procedures, and called special attention to the ANSI patent policies and the INCITS antitrust policies (<http://www.incits.org/standards-information/legal-info>). The Chair noted that the INCITS Antitrust Guidelines applied to this committee meeting, and that it was the responsibility of all attendees, and not just the Officers, to ensure that the Guidelines are followed, and to terminate discussions if they are not.

2 Approval of Agenda

An agenda for the FCP-5 ad hoc work group regular meeting 04 February 2020 has been posted as T10 document T10/20-021r0.

Jason Rusch (Viavi) moved and Alan Rajapa (Dell/EMC) seconded to accept T10/20-021r0 as the agenda for this regular meeting. Approved unanimously.

3 Review of Past Business

3.1 Review of Minutes

Minutes for the FCP-5 ad hoc work group meeting of 03 December 2019 have been posted as T10/19-132r0.

Howard Johnson (Broadcom) moved and Alan Rajapa (Dell) seconded to accept T10/19-132r0 as the minutes of the FCP-5 ad hoc work group meeting on 03 December 2019. Approved unanimously.

3.2 Review of Old Action Items

Action Items Carried Forward From Prior Meetings:

None

New Action Items Identified Last Meeting:

- 1912-01** Dave to post updates as T11-2019-00288-v002. **(COMPLETE)**
- 1912-02** Dave to post updates as T11-2019-00289-v002. **(COMPLETE)**
- 1912-03** Editor to incorporate T11-2019-00288-v002 into FCP-5. **(COMPLETE)**
- 1912-04** Editor to incorporate T11-2019-00289-v002 into FCP-5. **(COMPLETE)**

4 Old Business

4.1 FCP-5 Draft Standard (T10-fcp5r01) (T11-2019-00355-v000) Peterson (Broadcom)

Dave reported that this is the latest draft standard with changes to obsolete arbitrated loop and Class 2, and it is available on T11 INCITS website under this document number.

4.2 Other items for FCP-5 (no document) Peterson (Broadcom)

Nothing on this one today.

5.0 Scheduled Business

5.1 SLER into FCP-5 (T11-2020-00020-v000) Peterson (Broadcom)

Dave made updates to include SLER functionality into FCP5. One question we'll ultimately have to decide is how to name (refer to) this. Just 'SLER'? Or 'Enhanced SLER' (because FCP-4 has one existing reference to 'sequence level error recovery')?

Dave generally pulled out the affected clauses from the FC-NVMe spec, reusing existing text we had agreed to for that and modifying it accordingly here. But at least a couple of instances where the latest text wasn't picked up were observed and noted.

'Data overlay' is one area where further changes are required. Dave didn't propose much in this area yet. Also should we just not define/support SLER for bidirectional commands? We also need to define 'FCP Data Series' (definition doesn't currently exist, although term is used) or use a different term. For tape, it was raised that perhaps we don't want to retransmit the whole data series...only the last sequence. Dave doesn't like special-casing based on device type, so we'll have to give this more thought and have more discussion with the tape folk. Timers are another area requiring review and 'clean up'. Also FCP doesn't have concept of a 'connection', so we probably need to reword some areas from NVMe that referred to that.

Dave reviewed these and more changes at a high level but suggested we all review what's there in more detail.

6 Unscheduled Business

7 Project Schedule

Milestone	Expected Date
Last technical input	June 2020
RFC Letter Ballot	October 2020

8 Review of Action Items

Action Items Carried Forward:

None

New Action Items:

None

9 Meeting Schedule

9.1 Next Plenary Week

Request 4 hours for FCP-5 at the T11 plenary week in Deerfield Beach, FL, 06 April - 09 April 2020

Next T10 is in Palm Beach Gardens, FL, the week of March 8th.

10 Adjournment

Howard Johnson (Broadcom) moved and Alan Rajapa (Dell) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 03:48A PM CST on 04 February 2020.

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	Dennis Makishima	Y
CISCO SYSTEMS INC	Mike Blair	Y
CISCO SYSTEMS INC	Mark Allen	Y
CISCO SYSTEMS INC	Harsha Bharadwaj	Y
DELL INC	Alan Rajapa	Y
FUJITSU AMERICA	Mark Malcolm	Y
HEWLETT PACKARD ENTERPRISE	Barry Maskas	Y
IBM	Patty Driever	Y
IBM	Roger Hathorn	Y
MARVELL SEMICONDUCTOR	Craig Carlson	Y
NETAPP	Frederick Knight	Y
VIAVI SOLUTIONS	Jason Rusch	Y