

## **T11.3 FC-LS-5 Ad Hoc Working Group Regular Meeting Minutes 4 December 2019 – 9:00 AM to 12:00 PM, 3:10 PM to 4:00 CST New Orleans, LA, USA**

The FC-LS-5 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at New Orleans, LA, USA on 4 December 2019, hosted by SNIA/SFF. Attendance was 14 people from 9 organizations and is tabulated at the end of this document.

Minutes were taken by Jason Rusch (Viavi Solutions) ([jason.rusch@viavisolutions.com](mailto:jason.rusch@viavisolutions.com)). Please report any corrections by email to the T11.3 reflector at [T11\\_3@mail.T11.org](mailto:T11_3@mail.T11.org).

### **1 Opening Remarks and Introductions**

Chairperson Patty Driever (IBM) opened the regular meeting on Wednesday, 4 December 2019 at 9:00 AM CST. She led a round of introductions and thanked our host organization, SNIA/SFF.

#### **1.1 Attendance and Membership**

The chair explained that attendance is recorded electronically at <http://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. She 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 slides 1-3 of [http://www.incits.org/patent\\_slides.pdf](http://www.incits.org/patent_slides.pdf). She 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 she 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/standards-information/legal-info>.

## 2.0 Approval of Agenda

An agenda for the FC-LS-5 ad hoc work group regular meeting 4 December 2019 was posted as T11-2019-00358-v000.

*Howard Johnson (Broadcom Inc) moved and Alan Rajapa (Dell) seconded to accept T11-2019-00358-v000 as the agenda for this regular meeting. Approved by acclamation.*

## 3.0 Review of Past Business

### 3.1 Review of Minutes

Minutes for the FC-LS-5 ad hoc work group regular meeting 9 October 2019 have been posted as T11-2019-00320-v000.

*Howard Johnson (Broadcom Inc) moved and Alan Rajapa (Dell) seconded to accept T11-2019-00320-v000 as the official minutes for the regular meeting on 9 October 2019. Approved by acclamation.*

### 3.2 Review of Old Action Items

Action items carried forward from prior meetings:  
None.

New action items from the previous meeting:

1910-01 FC-LS-5 Editor to incorporate T11-2019-00098-v002 as modified into the FC-LS-5 draft standard. [CARRY]

## 4 Old Business

### 4.1 Fabric Notification – Is There Anybody Out There?

*[T11-2019-00017-v006, T11-2019-00214-v003] Johnson (Broadcom Inc)*

Howard led a discussion continuing the review of the text proposal. He summarized the changes made as a result of the previous discussion, including renaming the descriptors to Congestion Signaling Capability and Registered Diagnostic function, and replacing transmission/reception with support. The text for these changes were then reviewed, and the group provided feedback.

A discussion regarding whether NPort Login was required for Register Diagnostic Functions (RDF). RDF was modeled after RFCN, which led us down a rabbit hole trying to determine how a device registers to receive RFCN. After a lengthy discussion, the group worked out text limiting the size of the frame based on whether the device is logged in or not.

The FC-LS-5 meeting recessed at 12:00 PM CST and resumed at 3:00 PM CST. Howard yielded the floor for Mike Blair's presentation.

Howard resumed his discussion, reviewing examples of how and when Warning Signals and Alarm Signals would be sent. It was questioned whether the Alarm Signal could be used as the only supported signal. After discussion, it was decided to not change the text – every condition is a warning, but not

every condition is an alarm. It was also noted that the standards do not define the usage of Signals versus FPINs. Howard will review this topic in FC-SW.

Time did not permit to finish the text proposal review. Howard will update the text based on the working group feedback and present an update at a future meeting.

## 4.2 Adding Determinism to Congestion Notification

[T11-2019-00242-v001] Blair (Cisco)

The FC-LS-5 meeting resumed at 3:00 PM CST.

Mike introduced new descriptors which add detected flow information along with the Peer Congestion and Congestion notifications. These descriptors contain fields for Detected Source FC\_ID, Detected Destination FC\_ID, and LUN\_ID. It was discussed if these descriptors should be sent on their own or in conjunction with the descriptors in Howard's proposal, and whether a device could register to specify what it expects.

Topics of discussion also included how a fabric notifies end devices it is requesting a new RDF, via RSCN or FPIN? Should RDF be made available for point-to-point or should it be restricted to a Fabric.

Mike will continue these discussions at a future meeting, in conjunction with the evolving changes to the Fabric Notifications proposal.

## 5 New Business

None.

## 6 Unscheduled Business

None.

## 7 Project Schedule

Milestone	Expected Date
Last technical input	October 2020
RFC Ballot	TBD
T11 Letter Ballot	TBD
Forward to INCITS	TBD

## 8 Review of Action Items

### Action items carried forward from prior meetings:

**1910-01** FC-LS-5 Editor to incorporate T11-2019-00098-v002 as modified into the FC-LS-5 draft standard.

### New action items from this meeting:

None.

## 9 Future Meeting Schedule

### 9.1 Interim Conference Call

None.

### 9.2 Next Plenary Week

Request 4 hours for FC-LS-5 at the T11 plenary week in Fort Worth, Tx, February 3 – 7, 2020.

## 10 Adjournment

*Dave Johnson (Broadcom Inc) moved and Alan Rajapa (Dell) seconded to adjourn. Approved by acclamation.*

The regular meeting was adjourned at 4:00 PM PT on 4 December 2019.

## 11 Attendance

Organization	Representative	Member Company
Broadcom Inc	David Baldwin	Member
Broadcom Inc	Howard Johnson	Member
Broadcom Inc	David Peterson	Member
Broadcom Inc	Steven Wilson	Member
Cisco Systems Inc	Mark Allen	Member
Cisco Systems Inc	Mike Blair	Member
Dell Inc	Alan Rajapa	Member
Hewlett Packard Enterprise	Barry Maskas	Member
IBM Corporation	Patty Driever	Group Chair
IBM Corporation	Roger Hathorn	Member
Keysight Technologies Inc	Stephen Didde	Member
Marvell Semiconductor Inc	Craig Carlson	Member
Teledyne LeCroy Corporation	David Rodgers	Member
Viavi Solutions Inc	Jason Rusch	Secretary