

## **T11.3 FC-LS-5 Ad Hoc Working Group Regular Meeting Minutes**

### **2 February 2021 – 11:00 AM to 1:10 PM CDT**

#### **Virtual Meeting**

The FC-LS-5 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a virtual meeting on 8 February 2021, with Zoom meetings hosted by Marvell. Attendance was 13 people from 7 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 virtual meeting on Tuesday, 2 February 2021 at 11:10 AM CDT. She led a round of introductions and thanked our virtual host organization, Marvell.

### **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 INCITS Code of Conduct**

The chair displayed the INCITS Code of Conduct policy:

[https://standards.incits.org/apps/group\\_public/download.php/124850/INCITS-CodeOfConduct.pdf](https://standards.incits.org/apps/group_public/download.php/124850/INCITS-CodeOfConduct.pdf).

### **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 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.

### **1.4 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 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 2 February 2021 was posted as T11-2021-00027-v000.

*Dave Peterson (Broadcom Inc) moved and Mike Blair (Cisco) seconded to accept T11-2021-0027-v000 as modified 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 8 December 2020 have been posted as T11-2020-00296-v000.

*Dave Peterson (Broadcom Inc) moved and Mike Blair (Cisco) seconded to accept T11-2020-00296-v000 as the official minutes for the regular meeting on 8 December 2020. Approved by acclamation.*

### 3.2 Review of Old Action Items

Action items carried forward from prior meetings:

2006-01	Editor to incorporate T11-2020-00085-v000.	[Completed]
2008-01	Editor to incorporate T11-2020-00013-v004.	[Completed]
2008-02	Editor to incorporate T11-2020-00109-v003.	[Completed]

New action items from the previous meeting:

None.

## 4 Old Business

### 4.1 Fabric Notifications – Informative Annex A

*[T11-2021-00011-v000, T11-2021-00012-v000]*

*Johnson (Broadcom Inc)*

Howard continued the text review for Informative Annex A covering Fabric Notification information and examples. He gave an overview of the changes made in response to the previous discussion, including general editorial, and updates to Annex A clauses 3 and 4.

The group discussed the case of credit stall versus over-subscription / slow drain. Howard will differentiate between over-utilization and over-subscription and between credit stall and credit delay at the next meeting cycle. A use case example covering a device operating at 16G but requesting 32G – should it reduce to operating line rate? Howard will address the non-linear versus real world scenarios and add a first burst example in a future presentation.

## 4.2 Target Credit Stall: Tying Things Up

[T11-2021-00013-v000, T11-2021-00015-v000]

**Johnson (Broadcom Inc)**

Howard provided an overview of the changes from the December meeting, including adding a Frame Discard TOV descriptor value and the Frame Discard TOV descriptor. There was a discussion whether a F\_D\_TOV value of 0 should be reserved or implementation dependent. A review of ED\_TOV and R\_A\_TOV showed that neither describes a value of 0, and it was decided that F\_D\_TOV will be described as just the value used by the FC Port, and not define a value of 0.

The group will review the changes from this discussion and Howard will wrap up the proposal at the next meeting cycle.

## 5 New Business

### 5.1 Sequential Delivery Bit – Exchange Based Routing

[T11-2021-00039-v000]

**Peterson (Broadcom Inc)**

Dave gave an overview of Exchange Based Routing and how it applies to the Sequential Delivery bit. He requested the FC-LS-5 working group members to review how current implementations are using the Sequential Delivery bit (see section 6.6.5.4.2), and whether it can be obsoleted. The discussion will continue at the next meeting cycle.

## 6 Unscheduled Business

None.

## 7 Project Schedule

<b>Milestone</b>	<b>Expected Date</b>
Last technical input	October 2020
RFC Ballot	August 2021
T11 Letter Ballot	TBD
Forward to INCITS	TBD

## 8 Review of Action Items

### Action items carried forward from prior meetings:

2006-01 Editor to incorporate T11-2020-00085-v000. **[Completed]**  
 2008-01 Editor to incorporate T11-2020-00013-v004. **[Completed]**  
 2008-02 Editor to incorporate T11-2020-00109-v003. **[Completed]**

### New action items from this meeting:

2102-01 FC-LS-5 working group members to review how current implementations are using the Sequential Delivery bit (see section 6.6.5.4.2), and whether it can be obsoleted.

## 9 Future Meeting Schedule

### 9.1 Interim Conference Call

None.

## 9.2 Next Plenary Week

Request 3 hours for FC-LS-5 at the Virtual T11 plenary week April 5-9, 2021.

## 10 Adjournment

*Howard Johnson (Broadcom Inc) moved and Mike Blair (Cisco) seconded to adjourn. Approved by acclamation.*

The regular meeting was adjourned at 1:10 PM CDT on 2 February 2021.

## 11 Attendance

Organization	Representative	Member Company
Broadcom Inc	Howard Johnson	Member
Broadcom Inc	David Peterson	Member
Broadcom Inc	James Smart	Member
Broadcom Inc	Anil Veerabhadrapa	Member
Cisco Systems Inc	Harsha Bharadwaj	Member
Cisco Systems Inc	Mike Blair	Member
Cisco Systems Inc	Edward Mazurek	Member
Hewlett Packard Enterprise	Barry Maskas	Member
IBM Corporation	Patty Driever	Group Chair
IBM Corporation	Roger Hathorn	Member
Marvell Semiconductor Inc	Craig Carlson	Proj Editor
NetApp Inc	Frederick Knight	Member
Viavi Solutions Inc	Jason Rusch	Secretary