

Minutes
T11.3 FC-GS-8 ad hoc work group regular meeting
08 August 2017 – 3:30PM – 4:30PM EDT
Providence, RI, USA

The FC-GS-8 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at Providence, Rhode Island on 08 August 2017, hosted by Hewlett Packard Enterprises. Attendance was 17 people from 10 organizations and is tabulated at the end of this document.

Minutes were taken by Patty Driever (IBM) (pgd@us.ibm.com). Please report any corrections by email to the T11.3 reflector at T11_3@mail.T11.org.

1 Opening remarks & Introductions

Chairperson Lou Ricci (Dell) opened the regular meeting Tuesday, 08 August 2017 at 11:06 AM EDT. He thanked our host organization, HPE, 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-GS-8 ad hoc work group regular meeting 08 August 2017 has been posted as T11-2017-00240-v000.

Jason Rusch (Viavi) moved and Mark Malcolm (Fujitsu) seconded to accept T11-2017-00104-v000 as modified as the agenda for this regular meeting. Approved unanimously.

However Howard then proposed another modification....in place of the planned Application Services presentation he will cover a YANG update. Motion to accept agenda as modified by made by Jason Rusch (Viavi) and seconded by Mark Malcolm (Fujitsu). Motion was approved unanimously.

3 Review of Past Business

3.1 Review of Minutes

Minutes for the FC-GS-8 ad hoc work group regular meeting 06 June 2017 have been posted as T11/2017-00208-v000.

Jason Rusch (Viavi) moved and Mark Malcolm (Fujitsu) seconded to accept T11/2017-00208-v000 as the minutes of the FC-FS-5 ad hoc work group meeting on 06 June 2017. Approved unanimously.

3.2 Review of Old Action Items

Action Items Carried Forward from Prior Meetings:

- 2017-04-01** Editor to make editorial changes specified in April 2017 minutes, section 5.1, relative to 1) reference subclauses, 2) value notation in tables, 3) how range values are specified in tables, and 4) making standard 'front matter' consistent with FC-LS-4.
- 2017-04-02** John Crandall to do follow-ups listed in April 2017 minutes, section 5.2, relative to 1) port type registration with IANA, 2) getting link to public landing page for T11 technical committee, 3) mailing list for T11, 4) transmitter and connector types, 5) update references to FC standard docs, 6) updating list of counters included, and 7) making updates to MIBs for all of the relevant items above

New Action Items Identified Last Meeting:

- 2017-06-01** Howard Johnson (Brocade) to define speed formula or format for GPSCE in June FC-GS-8 minutes section 5.1 T11-2017-00015-v003, preferably the newly defined seed formula will automatically work for future new speeds (**COMPLETE – see 5.1**)

4 Old Business

None

5.0 Scheduled Business

5.1 GPSC, or Get Port Speed Capabilities, Mostly (2017-00015-v004) Johnson (Brocade)

As discussed previous, there is an issue with the GPSC command running out of bits to reflect port speed capabilities and operating speeds. The proposal is to resolve the issues with the definition of a new 'Incomplete' bit to the Port Speed Capabilities Object. We also agreed to add a footnote to say that when this bit is set the complete information regarding port speed capabilities cannot be provided and another command (e.g. GPSCE) may be used to attempt to obtain the complete set of information.

For the Port Operating Speed (6.2.3.3.9) a similar solution was proposed—set bit 1 = 'unknown' and with the new 'incomplete' bit set in Port Speed Capabilities this would be defined to mean that it's unknown because it cannot be reported completely within the existing bit list. However Lou pointed out that the 'unknown' bit can stand alone to mean that it can't be reported. A footnote to indicate that GPSCE may be used to obtain this information should also be added.

Howard also proposed we call the defined (i.e. not the reserved) part of the name as 'Field' (e.g. Port Operating Speed Field and Port Speed Capabilities Field) to distinguish between the full descriptor with Reserved bytes from the defined field only.

Action Item: Howard and Jason to determine if changing Port Speed Capabilities and Port Operating Speed objects to 2-bytes (by removing the reserved fields in the Fabric Configuration Server) breaks the spec.

Action Item: Group to determine if the above action 2017-08-01) breaks any known implementations

5.2 Fibre Channel Yang Update (2017-00027v003) Johnson/Crandall (Brocade)

Howard presented a single chart showing what the Name Server objects break down into from the 'pyang' output. There is a field called 'Hard Address' that will likely be eliminated because it is associated with arbitrated loop. .

5.3 What Will We Do? (2017-00235v000) Johnson (Brocade)

Howard reviewed some open questions related to GPSCE and the Extended Fabric Configuration Server.

One question was related to the new Port Speed object required for the GPSCE command (a 32-bit object). Howard reviewed two options for how this field might be broken into smaller fields—either defining them using values or defining them as bit fields. A third option of using enumeration was proposed (and favored).

Related changes are required for the GPAG (for Port Speed Attributes), to indicate usage of old format or new, because effectively at 32GFC the Fabric Configuration Server support ends and one must use the Enhanced Fabric Configuration Server. Use of the same type of 'Incomplete' flag is required to get the information requested for higher link speeds.

Another topic Howard raised was that input for Ger Port Speed includes the 'Port Name', but it's really the '**Fabric**' Port Name that is intended....we need to clarify this explicitly in the text.

Howard will take the results of this discussion back for consideration in development of required text changes.

6 Unscheduled Business

6.1 FC-4 Types Discussion (no doc) Rusch (Viavi)

Section 5.2.3.6 – the text says that an N_Port must register the FC-4 types of frames which it supports, However from our prior discussions this isn't what it really means...it's more indicative of the protocols supported (i.e. don't need to register for FC-4 type '08' to send that type of frame....NVMe ports will register '28'x but can (and will) send '08' type frames. **Action Item: Jason and Dave to work on rewording this section so that it works for all protocols.**

6.2 Editorial Question Discussion (no doc) Rusch (Viavi)

Jason reviewed Table 521, where it indicates in the control field 3 bits are defined and 5 are reserved. However the corresponding text below says that bits 5-0 are reserved. Jason will change it to indicate bit 4-0 are reserved.

7 Project Schedule

Milestone	Expected Date
Last technical input	August 2018
T11 Letter Ballot	December 2018
Forward to INCITS	April 2019

8 Review of Action Items

Action Items Carried Forward:

None

New Action Items:

2017-08-01 Howard and Jason to determine if changing Port Speed Capabilities and Port Operating Speed objects to 2-bytes (by removing the reserved fields in the Fabric Configuration Server) breaks the spec.

- 2017-08-02** Group to determine if the above action (2017-08-01) breaks any known implementations
- 2017-08-03** Jason and Dave to work on rewording section 5.2.3.6 so that it works for all protocols.

9 Meeting Schedule

9.1 Next Plenary Week

Request 3 hours for FC-GS-8 at the T11 plenary week in Couer d'Alene, ID, 02 October - 06 October 2017.

10 Adjournment

Dave Peterson (Brocade) moved and Jason Rusch (Viavi) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 02:39 PM EDT on 08 August 2017.

11 Attendance

Organization	Representative	T11.3 Member Company
BROADCOM LIMITED	James Smart	Y
BROADCOM LIMITED	David Baldwin	Y
BROCADE	David Peterson	Y
BROCADE	Howard Johnson	Y
BROCADE	Steven L. Wilson	Y
DELL INC	Louis Ricci	Y
DELL INC	Erik Smith	Y
DELL INC	Alan Rajapa	Y
FUJITSU AMERICA INC	Mark Malcolm	Y
IBM	Patty Driever	Y
IBM	Roger Hathorn	Y
HEWLETT PACKARD ENTERPRISES	Barry Maskas	Y
NETAPP	Frederick Knight	Y
OFS OPTICS	Roman Shubochkin	Y
QLOGIC CORPORATION	Raul Oteyza	Y
QLOGIC CORPORATION	Craig W. Carlson	Y
VIAVI SOLUTIONS	Jason Rusch	Y