

Approved Minutes
T11.3 FC-LS-3 ad hoc work group regular meeting
4 February 2013 – 10:00AM to 12:00PM PST
Palm Springs, California, USA

The FC-LS-3 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at Palm Springs, California, USA on 4 February 2013, hosted by FCIA and Chris Lyon. Attendance was 14 people from 8 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

1.1 Introductions

Acting Chairperson Craig Carlson (QLogic) opened the regular meeting on Monday 4 February 2013 at 10:00 AM PST. A new chairperson for this working group is being sought.

1.2 Review of Minutes

Louis Ricci (EMC) moved and Roger Dickerson (Oracle) seconded to accept T11/12-480v2 as the official minutes for the regular meeting on December 3 2012. Approved by acclamation.

2 Approval of Agenda

An agenda for the FC-LS-3 ad hoc work group regular meeting 4 February 2013 was posted as T11/13-037v0.

One amendment to the agenda was made by Dave Peterson (Brocade) to add a discussion of 13-028v0, TLV usage, in fulfillment of Action Item 1212-003.

Lou Ricci (EMC) moved and Landon Noll (Cisco) seconded to accept T11/13-037v0 as amended as the agenda for this regular meeting. Approved by acclamation.

3 Meeting Policy

3.1 Attendance and Membership

The acting chair explained that attendance is recorded electronically at www.t11.org/att, 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 acting 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.

3.2 Patents

The acting 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.

3.3 Antitrust

The acting 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>

4 Review of Old Action Items

1206-002 Craig Carlson (Qlogic) to incorporate T11/12-206v1 into FC-LS-3 (**CARRY**)

1212-001 Roger Hathorn to post updated version of presentation: VN_Port Phy Type Identification (12-384v2) (**CARRY**)

1212-002 Craig Carlson (Qlogic) to incorporate T11/12-384v2 into FC-LS-3 (**CARRY**)

1212-003 Dave Peterson to provide presentation of proposed text describing TLV format and usage – **COMPLETE** – posted as 13-028v0 and added to this meeting's agenda

5 Old Business

5.1 Link Service timeout (12-207v0) Peterson (Brocade)

Deferred to future meeting by presenter.

5.3 WWPN Persistence via FLOGI (12-381v0) Smith (EMC)

Deferred to future meeting by presenter.

6 New Business

6.1 How much power do YOU have (13-030v0) Hathorn (IBM)

This was an update to the proposal originally presented in December (12-454v0 was prior version). It provides for an inband mechanism to obtain information from ends of links to assist with problem determination or pre-prediction of problems. The ELS name was changed from 'Read Optical Power' to 'Read Diagnostic Parameters', as in this proposal it provides for more than just power levels, but other useful information as well such as transceiver module temperature, bias current and voltage, transmit and receive power, Link Error Status Block (LESB), and Port Speed capability and current negotiated speed. The command can be addressed to the Domain Controller (to ask about another link on the switch), to the Fabric F_Port Controller, or to an Nx_Port. The RDP request/response needs to be converted to TLV format once we agree on how to handle TLVs, with Roger having showed a version in a TLV format as well as a 'traditional' ELS request/response format. Roger showed an SFP Diagnostic Descriptor block, and if/when FC supports QFSP support we will need a separate 'QFSP Diagnostic Descriptor'. Roger wants to get a hardware person to validate the units of measure and ranges used in this descriptor. Since FC-PI-6 is adding a bit for 32Gb, we should also do that as well. Roger Hathorn (IBM), drawing first blood (his own), made a motion to update FC-LS-3 section 4.2.36.4 to reflect 32Gb FC port speed as an option as shown in slide 11 of 13-030v0. Motion seconded by Erik Smith (EMC). Motion carried by acclamation. **(New Action items: Roger to validate units of measure and ranges used in the SFP Diagnostic Descriptor and editor to incorporate as modified)**

There was a question regarding timeliness of data reported back for the new ELS (i.e. is it read by the device at the time of the request being received vs read in certain intervals and the device

returns the last read data when the request is received). Resolution was that this is device dependent.

6.2 Login/Logout ABTS (13-035v0) Santi (Cisco)

This was a proposal to clarify the current wording regarding the rules for issuing an abort as part of ELS exchange management. In section 4.2.2, clause f, Claudio proposed adding the words ‘unless otherwise specified’ to cover the cases where aborts may not be issued for exchange management for LOGOs, LOGIs, and FDISCs. Craig Carlson (QLogic) suggested pointing to the specific sections of the standard that provide for such exceptions by using forward references, and Claudio agreed to make such an update. The group also agreed to adding text to section 4.2.8.1 on Logout (for both fabric and N_Port logout) that indicates if the originator of a logout detects a timeout, the logout may be retried on a different exchange without aborting the previous exchange. Similar text to be added to 4.2.7.1 regarding Login exchange management. There was much discussion regarding the last sentence in this section that calls for the termination of ‘sequences’ instead of ‘exchanges’. Some remembered this was due to a situation in FCP that drove this distinction, but no one could recall the specific rationale. Decision was to leave wording as is for now. Similar text regarding retry after a timeout condition was also added to section 4.2.26.4 for the FDISC ELS when the S_ID equals zero (keeping same N_Port name causes an implicit logout). The group also agreed that text should be added to section 6.4.1 to more clearly define what occurs on a logout (i.e. includes abnormal termination of all open sequences and exchanges between the two involved entities). Claudio made a motion to incorporate these changes into FC-LS-3. Lou Ricci (EMC) seconded the motion. Motion passed with no objections, 5 in favor, and one abstention. (**New Action items: Claudio to post amended 13-035 and editor to incorporate as modified**)

6.3 Type, Length, Value (TLV) usage (13-028v0) Peterson (Brocade)

Dave presented a proposal for a structure for standardizing usage of TLVs in FC-LS-3, along with associated text. The goal is for extensibility of the structures. First important decision made was that T is for Tag, not Type. For the length field, Dave proposed using a measure of words, but the group decided to use bytes instead. It was noted that a descriptor length value of zero is valid and should not be treated as an error. Also decided to strike the text stating that if an unknown descriptor type is received the TLV descriptor shall be rejected with a LS_RJT – this is true for some ELSs, but not others. Leave it to each ELS to describe appropriate behavior. Much discussion on the question of whether or not the length of a specific tag value could legitimately change? The answer was ‘yes’, as the length is used for two purposes: 1) so it is known how far to go to skip to the next descriptor and 2) to indicate how big variable length fields are. It was agreed that no global statement could be made regarding how to detect invalid length values for descriptors, and as for ‘type’ this should be left to the individual ELSs to describe.

Instead of sub-TLVs as proposed by Dave, the group consensus was to use nested TLVs. One other key point of discussion was whether an ELS message is a TLV itself, or a list of descriptors. Group consensus was that it’s not a TLV, but it does have a list of descriptors. The LS_ACC has a total descriptor length value, followed by a list of descriptors also. Dave agreed

to provide an example of an LS_ACC payload in the revised doc. (**Action Item: Dave to prepare update based on group discussion and decisions**).

7 Project Schedule

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

8 Review of Action Items

1206-002 Craig Carlson (Qlogic) to incorporate T11/12-206v1 into FC-LS-3 (**CARRY**)

1212-001 Roger Hathorn to post updated version of presentation: VN_Port Phy Type Identification (12-384v2) (**CARRY**)

1212-002 Craig Carlson (Qlogic) to incorporate T11/12-384v2 into FC-LS-3 (**CARRY**)

Five new action items:

1302-001 Roger Hathorn (IBM) to follow up on units of measure and ranges for values in the SFP Diagnostic Descriptor (13-030v0)

1302-002 Editor to incorporate T11/13-030v0 slide 11 changes (regarding bit definitions for 32Gb FC) into FC-LS-3 section 4.2.36.4

1302-003 Claudio Santi (Cisco) to post amended 13-035v0 as 13-035v1

1302-004 Editor to incorporate T11/13-035v1 text changes into FC-LS-3

1313-005 Dave Peterson (Brocade) to provide updated presentation describing TLV format and usage incorporating group discussion and decisions.

9 Meeting Schedule

Request 2 hours at the T11 plenary week in Albuquerque, NM, 1-4 April 2013

10 Adjournment

Claudio Santi (Cisco) moved and Lou Ricci (EMC) seconded to adjourn. Approved by acclamation.

The regular meeting was adjourned at 11:55 AM PST on 4 February 2013.

Organization	Representative
BROCADE	David Peterson
BROCADE	Howard Johnson
CISCO SYSTEMS	Landon Noll
CISCO SYSTEMS, INC.	Claudio DeSanti
EMC	Erik Smith
EMC	Louis Ricci
EMULEX	David Baldwin
EMULEX CORPORATION	Gautam Shiroor
IBM	Henry May
IBM	Patty Driever
IBM	Roger Hathorn
JUNIPER	Joseph White
ORACLE	Roger Dickerson
QLOGIC CORP.	Craig W. Carlson