Minutes
T11.3 FC-NVME ad hoc work group regular meeting
3 October, 2017 – 04:30PM-06:30PM and
4 October 2017 09:00am to 06:00 PM PST
Coeur D'Alene, ID, USA

The FC-NVME ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at Coeur D'Alene ID, USA on 3 October, 2017, hosted by FCIA. Attendance was 15 people from 10 organizations and is tabulated at the end of this document.

Roger Hathorn (IBM) (rhathorn@us.ibm.com) took minutes. Please report any corrections by email at fc_protocol@standards.incits.org

1 Opening Remarks

Introductions

Chairperson Craig Carlson (QLogic) opened the regular meeting on Tuesday, 3 October, 2017 at 02:42 PM EDT and led a round of introductions and thanked the host (FCIA) for organizing this week's events.

2 Meeting Policy

2.1 Attendance and Membership

The 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 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.

2.2 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.

2.3 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

3.0 Approval of Agenda

An agenda for the FC-NVME ad hoc work group regular meeting 3 October, 2017 was posted as T11/2017-00312-v000.

Patty Driever (IBM) moved and David Peterson (Brocade) seconded to accept T11/2017-0312-v000 as amended as the agenda for this regular meeting. Approved by acclamation.

4.0 Past Business

4.1 Review of Minutes

Patty Driever (IBM)) moved and Fred Night (NetApp) seconded to accept the following document as the official minutes for the regular meeting on 08 August, 2017. Approved by acclamation.

T11-2017-00262-v000.pdf
FC-NVMe Ad Hoc working group meeting Minutes for August 8, 2017

4.2 Review of Old Action Items

Action items carried forward from prior meetings:
17-0809-02: David Peterson to post the final comment resolution document T11-2017-00020-v009 and a new revision of the draft (T11-2017-00145-v003, rev 1.18) with all comments resolved – Complete
17-0809-03: Craig to post version T11-2017-00229-v001. - Complete.

New action items from this meeting:
17-1003-01: Roger Hathorn to post T11/2017-00281-v002 proposal for replacing clearing effects tables.
17-1003-02: Editor to incorporate T11/2017-00281-v002.
17-1003-03: Editor to post final comment resolution database T11/2017-00238-v002
17-1003-04: Editor to post final revision 1.19 of the FC-NVMe draft
17-1003-05: Chair to bring forwarding motion to T11.3

Completed action items from prior meetings:
17-0808-01: James Smart to post as T11-2017-00261-v000 for association recovery process. – complete
17-0803-01: James Smart to post T11-2017-00228-v001 update for Misc. Action Items Resolutions to resolve all of his open action items. – complete

For action items prior to 08/08/2017, see prior minutes of the 08/08/2017 regular meeting.

5. Old business

5.1 T11-2017- 00216-v000 Admin Command determinism

Deferred to FC-NVMe-2

6. Scheduled business

6.1 T11/2017-000288-v000 FC-NVMe-2 Queue Arbitration in an FC Fabric Bharadwaj, Blair (Cisco)

This an FC-NVMe-2 proposal that proposes use of priority field to match arbitration policies of the NVMe controller and mechanisms to obtain priority ranges from the fabric for the specific arbitration levels used by NVMe. There was opposition to the request to mandate use and some suggestions were made to reduce the complexity of the fabric query results.

No motions were made.

6.2 T11/2017-0145-v003 FC-NVMe Rev 1.18 Draft INCITS Letter Ballot Results

The INCITS letter ballot to forward revision 1.18 of the draft for public review passed 14-3-0-5. Approximately 117 comments were received.

6.3 T11/2017-0238-v001 FC-NVMe Rev 1.18 Letter Ballot Comment Resolution

The majority of the meeting was dedicated to comment resolution. Only controversial issues are recorded here. Resolution to comments is recorded in the comment database.

Comment BRCM-051 proposed to add text stating when a target can begin recovery relative to the state of the operation within the controller (after terminating the command) and also when an initiator communicates completion (error) to the Host NVMe layer relative to the recovery of the resources for the exchange. There was objection to this on the grounds that this is specifying internal product behavior that is outside the scope of the standard.

Motion: Dave Peterson (Brocade) moved and Roger Hathorn (IBM) seconded to reject comment BRCM-051. Motion passed 6-2-1.

Recess for lunch at 11:56 at comment BRCM-054.
Resumed at 2pm

Comment resolution continued and was completed!! The Editor, David Peterson, will post the resolutions in the comment database and incorporate into a new revision in time for processing at the T11.3 plenary.

Motion: David Peterson (Brocade) moved and Roger Hathorn (IBM) seconded to approve the INCITS Letter Ballot Comment resolution presented in T11-2017-00238-v002 and forward rev 1.19 of FC-NVMe (T11-2017-00145-v004) to T11.3 for further processing.
Motion passed 8-0-0.

7. Unscheduled business

None

8 Project Schedule

Milestone	**Expected Date**
Last technical input	Dec, 2016

T11 Letter Ballot	April, 2017
Forward to INCITS	August, 2017

9 Review of Action Items

See 4.2, Review of Old Action Items.

10 Meeting Schedule

The chair will request 4 hours at the T11 plenary week for FC-NVMe-2 in Santa Rosa, December 05, 2017.
There will be no interim calls.

11 Attendance Check and Adjournment

Company	Name	Role
Broadcom Limited	David Baldwin	Member
Broadcom Limited	James Smart	Member
Brocade	John Crandall	Member
Brocade	David Peterson	Member
Brocade	Steven Wilson	Member
Cisco Systems Inc	Mike Blair	Member
Dell Inc	Alan Rajapa	Member
Fujitsu America Inc	Mark Malcolm	Member
IBM Corporation	Patty Driever	Member
IBM Corporation	Roger Hathorn	Member
NetApp Inc	Frederick Knight	Member
Panduit Corporation	Jose Castro	Member
QLogic Corporation	Craig Carlson	Group Chair
QLogic Corporation	Raul Oteyza	Member
Viavi Solutions Inc	Jason Rusch	Member

Patty Driever (IBM) moved and James Smart (Broadcom) seconded to adjourn. Approved by acclamation.

The regular meeting was adjourned at 4:05 PM PDT on 4 October, 2017.