

Minutes

T11.3 FC-NVME-3 ad hoc work group regular meeting

7 December 2022 – 9:00AM-10:00AM EDT

Deerfield Beach, FL USA

The FC-NVME-3 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at Deerfield Beach, FL, 7 December 2022, hosted by FCIA. Attendance was 13 people from 8 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 (Marvell) opened the regular meeting on Wednesday, 7 December 2022 at 9:1AM 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 <https://standards.incits.org/apps/org/workgroup/t11>, 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 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.

2.3 Call for 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.

2.4 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 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 Administrivia

3.1 Approval of Agenda

An agenda for the FC-NVME-3 ad hoc work group regular meeting 7 December 2022 was posted as T11/2022-00398-v000.

Motion: Howard Johnson (Broadcom) moved and Jason Rousch (Viavi Solutions) seconded to accept T11/2022-00398-v000 as the agenda for this regular meeting.
Approved by acclamation.

3.2 Approval of Minutes

The minutes for the previous meeting of Oct 4, 2022 were presented by the chair.

Motion: Roger Hathorn (IBM) moved and Dave Peterson (Broadcom) seconded to accept T11/2022-00321-v000 as the minutes for the prior meeting.

Approved by acclamation.

4.0 Review of Action Items

Action items carried forward from prior meetings:

AI-2022-4: James Smart to post T11-2022-00307-v001 on SLER Qualifier of Zero change. - Complete

AI-2022-5: Editor to incorporate T11-2022-00307-v001 in the next revision of the FC-NVMe-3 spec – Carry (incorporated, but new revision not yet posted).

New action items from this meeting:

AI-2022-6: David Peterson to post T11-2022-00381-v001 on ICDOFF setting.

AI-2022-6: Editor to incorporate T11-2022-00381-v001 (ICDOFF) into the next revision.

Completed action items from prior meetings:

AI-2022-1: Dave Peterson and Craig Carlson to review the use of NVMeoFC term within FC-NVMe-3 – Complete

AI-2022-2: Chair to forward updated project proposal T11/2022-00085-v001 to T11.3 for further processing – completed. Approved by INCITS.

AI-2022-3: Group to review usage of the platform object in terms of specific FC-4 content and determine if a definition for NVMe content is worthwhile. - Completed

5. Old business

5.1 ULP Name Mapping for NVMe

T11/2022-00028-v008 Harsha (Cisco)

Not Discussed. See 7.2.

5.2 FC-NVMe-3 Work Items (T11-2022-00319-v000)

Peterson (Broadcom)

In October 2022, David presented a list of potential work items to handle in NVMe-3 based on comments received by various folks. Some of the items in this list have been addressed and work on some of the items has been assigned owners. David will post an updated list as version v001.

James proposed we state that we support Interleaved PI metadata only – separate metadata not supported. He'll create a proposal.

James brought up a discussion on Sub-block reads (with 4K blocks, lots of wasted data transfer) and whether it should be supported. It sounded like no and it should be stated.

6. Scheduled business

None

7. Unscheduled business

7.1 ULP Names via Upper Level Object server Peterson (Broadcom) (T11-2022-00371-v000)

In FC-GS-8, the name of the server to register items related to ULPs was set to Upper Level Object Server. David proposed a document structure to include registration of ULP Names in a “Common Services” clause 7 that includes a subclause for the current Nameserver Registration content, and a new subclause for Upper Level Object server registration with content from Harsha’s ULP Name Mapping proposal (see 5.1).

No motions were made, but content is there for review.

7.1 ICDOFF Setting Peterson (Broadcom) (T11-2022-00381-v000)

FC does not support data in the command capsule, so we need to include a statement about the setting of ICDOFF (set to 0).

Motion: Dave Peterson (Broadcom) moved and Patty Driever (IBM) seconded to incorporate T11-2022-00381-v000, as modified, into the next revision of FC-NVMe-3. Motion passed by acclamation.

AI: David Peterson to post T11-2022-00381-v001 on ICDOFF setting.

AI: Editor to incorporate T11-2022-00381-v001 (ICDOFF) into the next revision.

8 Project Schedule

A project schedule was discussed, and dates remain TBD. It is anticipated to be approximately a two year project.

| Milestone | Expected Date |
|----------------------|----------------------|
| Last technical input | Dec 2023 |
| T11 RFC | Apr 2024 |
| Forward to INCITS | TBD |

9 Review of Action Items

See 4.0, Review of Action Items.

10 Meeting Schedule

The chair requested 2 hours at the T11 plenary week for FC-NVMe-3 in Tucson, AZ February, 2023.

11 Attendance Check and Adjournment

The following is the recorded attendance for this meeting.

| Company  | Name | Role |
|---|------------------|-------------|
| Broadcom Inc | Howard Johnson | Member |
| Broadcom Inc | David Peterson | Member |
| Broadcom Inc | James Smart | Member |
| Cisco Systems Inc | Harsha Bharadwaj | Member |
| Cisco Systems Inc | Mike Blair | Member |
| Cisco Systems Inc | Edward Mazurek | Member |
| Dell Inc | David Brown | Member |
| Hewlett Packard Enterprise | Barry Maskas | Member |
| IBM Corporation | Patty Driever | Member |
| IBM Corporation | Roger Hathorn | Member |
| Marvell Semiconductor Inc | Craig Carlson | Group Chair |
| NetApp Inc | Frederick Knight | Member |
| Viavi Solutions Inc | Jason Rusch | Member |

Howard Johnson (Broadcom) moved and Roger Hathorn (IBM) seconded to adjourn. Approved by acclamation.

The regular meeting was adjourned at 10:00AM EDT on 7 December 2022.