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Minutes
T11.3 FC-NVME-3 ad hoc work group regular meeting
06 Dec 2023 – 2:30-3:30 pm ET
Deerfield Beach, FL USA

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The FC-NVME-3 Expert Group of the Fibre Channel Interconnection Schemes (T11.3) Task Group held a regular meeting at Deerfield Beach, FL 06 Dec 2023, hosted by Amphenol. Attendance was 10 people from 6 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 David Brown (Dell) opened the regular meeting on Wednesday, 06 Dec 2023 at 2:40 PM ET and led a round of introductions and thanked the host (Amphenol) for organizing this week's events.

1.1 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.

1.2 Code of Conduct

The chair displayed the INCITS Code of Conduct policy:

[Code of Conduct](#)

1.3 Patents and Antitrust

The chair indicated that among the rules and policies under which this working group operates are the ANSI intellectual property policies as specified at
[Patents & Antitrust](#)

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. Approval of Agenda

An agenda for the FC-NVME-3 ad hoc work group regular meeting 06 Dec 2023 was posted as T11/2023-00368-v004.

Motion: Patty Driever (IBM) moved and David Peterson (Broadcom) seconded to accept T11/2023-00368-v004 as the agenda for this regular meeting.
Approved by acclamation.

2. Review of Past Business

3.1 Approval of Minutes

The minutes for the previous meeting of Oct 4, 2023 were presented by the chair.

Motion: Patty Driever (IBM) moved and David Peterson (Broadcom) seconded to accept T11/2023-00345-v000 as the minutes for the prior meeting.

Approved by acclamation.

3.2 Review of Action Items

Action items carried forward from prior meetings:
None

New action items from this meeting:
None

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

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

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

AI-2023-2: Harsha Bharadwaj to Look at FC-4 feature addition to ULP object.
– complete (see FC-GS-9)

AI-2023-3: Fred Knight to post T11-2023-00060-v002 (RSCN text changes). - posted

AI-2023-5: Dave Peterson to investigate if the exchange recovery associated with NVMe Abort recovery is adequately covered in the normative text (see T11-2023-00145-v000, D.2, D.3) – Complete (see work items T11-0145-v001)

AI-2023-6: Dave Peterson and Harsha Bharadwaj to investigate use of something other than FC-4 features to identify the NQN type to avoid confusion. – Complete (ULP Name Object)

AI-2022-5: Editor to incorporate T11-2022-00307-v001 in the next revision of the FC-NVMe-3 spec
-Complete. See T11- 2023- 00164-v001 Rev 0.03 June 16.

AI-2022-6: Editor to incorporate T11-2022-00381-v001 (ICDOFF) into the next revision
-Complete. See T11- 2023- 00164-v001 Rev 0.03 June 16.

AI-2023-1: Editor to incorporate T11/2023-00034-v000 (ULP Name Mapping)
-Complete. See T11- 2023- 00164-v001 Rev 0.03 June 16.

AI-2023-4: Editor to incorporate T11-2023-00060-v002 on RSCN text
-Complete. See T11- 2023- 00164-v001 Rev 0.03 June 16.

AI-2023-7: Dave Peterson to post T11-00179-v002 for definition of ULP Name Types.
-Complete.

AI-2023-8: Editor to incorporate T11-00179-v002 for definition of ULP Name Types.
 -Complete. See T11- 2023- 00164-v001 Rev 0.03 June 16.

AI-2023-9: Editor to post T11-2023-0145-v002 with the results of this discussion. - Complete

AI-2023-10: Editor to remove figures D3 and D4 from the annex in the next revision – Complete (not yet posted)

4.   Old business

4.1 FC-NVMe-3 Work Items   Peterson (Broadcom)
(T11-2023-00145-v002)

This is a running document "to do" list.
There were no proposals presented this time.

5.   New business

5.1 Add First Transfer Buffer Credits functionality (T11-2023-00388-v000)

This is a proposal to add the First Transfer Buffer Credit functionality from FC-SB-6 to this standard.   It allows for initiators to send more than one "buffer" worth of data as first burst data to a target. This improves performance of large writes, especially at distance, by eliminating XFER RDY handshakes between initiator and target.

David will update v001 with updates from our discussion. No motions at this time.

6.   Unscheduled business

6.1 FC-NVMe-3 Work Group Items T11-00419-v000   Smart

James presented a list of recent TPARs from NVMe group. This was mostly tpo update the group on changes in the NVMe specs and determine if any affect this work.

James proposed that we should eliminate DIF PI hints that we put in NVMe until such time as we can properly implement changes to PI info in NVMe realm.

James went through NVMe 2.0 spec and there are some things transport specs are supposed to cover. There are some we cover, but about 8 we don't cover. James will provide future actions to address these down the road.

7   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 -> April 2024
T11 RFC	Apr 2024 -> Aug 2024
Forward to INCITS	TBD -> Feb 2025

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 Tampa FL in Februrary.

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	Group Chair
Broadcom Inc	James Smart	Member
Cisco Systems Inc	Harsha Bharadwaj	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	Raul Oteyza	Member

Dave Peterson (Broadcom) moved and Raul Orteza (Marvell) seconded to adjourn. Approved by acclamation.

The regular meeting was adjourned at 4:03 PM ET on 06 Dec 2023.