

Meeting Notes

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

06 February 2024 – 9:00AM-10:30AM ET

Tampa, FL

The FC-RDMA expert group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting in Tampa, FL on 06 February 2024, hosted by FCIA. Attendance was 12 people from 7 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 06 February 2024 at 09:05 AM ET and led a round of introductions and thanked the host (SNIA-SFF) for providing the meeting facilities. Meeting Policy

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 indicated that among the rules and policies under which this working group operates is the INCITS Code of Conduct policy:

https://standards.incits.org/apps/group_public/download.php/124850/INCITS-CodeOfConduct.pdf.

1.3 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 [Patent Policy Overview](#)

1.4 Antitrust

The chair indicated that among the rules and policies under which this working group operates are the INCITS Antitrust Guidelines.

The INCITS Antitrust Guidelines are available at <http://www.incits.org/inatrust.htm>

2 Review of Agenda

An agenda for the FC-RDMA ad hoc work group regular meeting 06 February 2024 was posted as T11-024-00014-v002.

Reviewed and approved by acclamation.

3 Review of past business

3.1 Review of Minutes

Minutes from the prior meeting were posted as T11-2023-00408-v000.pdf
FC-RDMA Dec 5, 2023 Expert Group Meeting Minutes

Minutes were reviewed Approved by acclamation.

3.2 Review of Action Items

Action items carried forward from prior meetings:

None

New action items from this meeting:

AI 2024-1: Dave Peterson to define the Communication Management RDMA_LS as a sequence that opens and closes an exchange. There is no LS_ACC or LS_RJT response and they cannot be aborted at the Fibre Channel layer.

Completed action items from prior meetings:

2021-1: David Peterson to forward project proposal for FC-RDMA name change to T11 for further processing. – Closed

2022-2: Dave to put together an RDMA tutorial, or find an existing one, including terminology for those not familiar with RDMA protocol

- Complete in Dec, 2022 but deferred to Feb. '23

AI 2022-3: Dave Peterson (Broadcom) to post a draft a copy of T11/2022-00374-v000 as initial draft of FC-RDMA. – Complete

AI 2023-1: Dave Peterson (Broadcom) to post an update to T11/2023-00042-v000 to fix the provided links to tutorials – complete.

AI-2023-3: Dave to spin a new revision of the standard with updates from this Aug 1, 2023 discussion (cleanup NVME content, Update FC-4 LS clause 4. – Done (see 2023-000284-v000)

AI-2023-2: Group to read chapter 12 of Infiniband spec rev 1.7 (www.infinibandta.org) to understand Communication Management. – Closed

AI 2023-4: Dave Peterson to send template of agenda to other chairs (to get consistent format across expert groups) – Closed

AI 2023-5: Dave Peterson to create 32K read and 32K write scenario demonstrating any limits put forth by the connection management and first burst size on packet sizes with and without first burst. – Closed

4. Old business

4.1 FC-RDMA Draft Standard Development T11-2023-00043-v003 Peterson (Broadcom)

These charts outline the scope of work for the development of the standard.
No discussion on this document today.

5. New business

5.1 Communications Management (T11-2024-00062-v000) David Peterson (Broadcom)

David added/updated the Communication Management clause 4.3.
Will work on 4.4 for data transfer.

AI: Dave to define the Communication Management RDMA_LS as a sequence that opens and closes an exchange. There is no LS_ACC or LS_RJT response and they cannot be aborted at the Fibre Channel layer.

Dave will update a new revision containing some of the new documentation discussed.

6. Unscheduled business

There was a short discussion about last meeting and action items about how data transfer works.

Note from Patty:

Dave agreed to revise/expand his read/write examples to more closely align with how FCP works today, while also showing the relevant RDMA concepts (such as where the in the Connect IU the target indicates the max size transfer it can accept, and how the BTH/RTH headers would look and how the IUs and FC headers would look and where xfer readies happen, etc.).

7 Project Schedule

A project schedule was discussed, and results follow.

Milestone	Expected Date
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Last technical input	June, 2024
T11 RFC	Oct, 2024
Forward to INCITS (PR)	June, 2025

8 Review of New Action Items


See 3.2, Review of Action Items.

9 Meeting Schedule

9.1 Next Plenary Week

The chair will request 2 hours at the T11 plenary week for FC-RDMA in Savannah, GA. No interim conference calls will be scheduled.

10 Attendance Check and Adjournment

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	Mike Blair	Member
Cisco Systems Inc	Edward Mazurek	Member
Dell Inc	David Brown	Member
IBM Corporation	Patty Driever	Member
IBM Corporation	Roger Hathorn	Member
Marvell Semiconductor Inc	Raul Oteyza	Member
NetApp Inc	Madhu Pai	Member
Viavi Solutions Inc	Jason Rusch	Member

The regular meeting was adjourned by the chair at 10:30 AM ET on 06 February 2024.