

T11-2022-00162-v000

Draft Minutes
INCITS/Fibre Channel Physical Variants Task Group Plenary Meeting #149
7 April 2022 – 9:00 AM to 10:05 AM (CDT)
Hybrid Meeting – New Orleans, LA

1 Opening remarks and introductions

1.1 Introductory Remarks

Task Group chair Tom Palkert (Macom) convened regular meeting #149 of the INCITS/Fibre Channel Physical Variants Task Group on Thursday, 7 April 2022 at 9:00 AM (CDT). He introduced himself as chair and thanked Broadcom Inc for hosting the meetings and Marvell for hosting the virtual Zoom meetings. The chair next introduced Dean Wallace (Marvell) as the Task Group vice-chair and Jason Rusch (VIAVI Solutions) as the Task Group secretary.

1.2 Self-introductions

The chair led a round of introductions for the members attending the meeting in person.

1.3 Meeting guidelines (Anti-Trust and IPR)

The chair stated that the meeting was operating under INCITS procedures and called attention to the INCITS patent policy by showing the INCITS Patent Policy Slides. The advice on the slides was provided and there was no discussion. For reference the slide set is available to Fibre Channel Technical Committee members as T11/08-406v0.

The chair noted that the INCITS Antitrust Guidelines applied to this committee meeting and that it was the responsibility of all attendees, and not just the Officers, to ensure that the Guidelines are followed, and to terminate discussions if they are not.

See <http://www.incits.org/standards-information/legal-info>.

1.4 INCITS Code of Conduct

The chair stated that the meeting was operating under the INCITS Code of Conduct and displayed the INCITS Code of Conduct document. The advice on the slides was provided and there was no discussion. The INCITS Code of Conduct document is available at <https://www.incits.org/standards-information/policies>.

2 Approval of the Agenda

An electronic version of the agenda was posted as T11-2022-00095-v001 and supporting documents were accessible via the TC web site. The chair made a call for any changes and new agenda items.

Dave Peterson (Broadcom Inc) moved and Patty Driever (IBM) seconded to accept that T11-2022-00095-v001 as presented at this meeting be approved as the agenda for this meeting. The motion passed by acclamation.

3 Attendance and Membership

3.1 Gaining and Losing Voting Membership

Information on how membership is gained, maintained, and lost in any INCITS Technical Committee or Task Group may be found in the INCITS Organization, Policies, and Procedures found at www.incits.org. An overview of these requirements was presented by the chair and was distributed to all attendees.

The chair presented the current list of members and representatives and invited corrections. The membership effective for this meeting, as adjusted for changes introduced at this meeting, is shown in subclause 3.6 below. Attendance for this meeting is shown in clause 14 below.

3.2 Electronic Attendance

The chair instructed those present how to register using the electronic attendance list for this meeting, found via the URL <http://standards.incits.org/login>, and informed those present of the necessary password. He reminded those present that the electronic attendance list would become the only source of attendance for formal records of this meeting.

3.3 Roll Call of Members in Jeopardy for Non-Attendance

- No company was in jeopardy for non-attendance.

3.4 Jeopardy / Membership Loss for Not Voting in INCITS/Fibre Channel Physical Variants Letter Ballots

- No company lost membership for not voting on INCITS/Fibre Channel Physical Variants letter ballots.

3.5 Members in Jeopardy for Non-Payment of Fees

- No company lost membership for non-payment of fees.

3.6 Membership Changes and Announcement of New Members

- No membership changes.

3.7 Quorum Check

- Quorum was achieved with 14 Voting member companies present.

3.8 INCITS/Fibre Channel Physical Variants Voting Memberships for this meeting

INCITS/Fibre Channel Physical Variants Task Group had 15 voting member companies at the regular meeting #149, 7 April 2022.

| Organization | Representative | Participant Class (P, A) |
|--------------|-----------------|--------------------------|
| Amphenol | Sam Kocsis | P |
| | Brad Brubaker | A |
| | Paul Coddington | A |
| | Michael Klempa | A |
| | Mike Davis | A |
| | Daniel Dillow | A |
| | Chris Lyon | A |
| | Alex Persaud | A |
| | Hu Silver | A |

| | | |
|-----------------------|-------------------------|------------|
| | Michael Wingard | A |
| Broadcom Inc | Ben Chu | P |
| | Rob Hannah | A |
| | Evan Beauprez | A |
| | Adam Healey | A |
| | Howard Johnson | A |
| | Dave Peterson | A |
| | James Smart | A |
| | Anil Mehta | A |
| | Cisco | Mike Blair |
| Edward Mazurek | | A |
| Mark Nowell | | A |
| Sai Pavan | | A |
| Kiran Ranabhor | | A |
| Xiaohong Wu | | A |
| CommScope | Yang (Sunny) Xu | P |
| | Gary Gibbs | A |
| Corning Inc. | David Kozischek | P |
| | Steven Swanson | A |
| DCS | Steve Eisele | P |
| | Rodney Jacks | A |
| Dell | David Brown | A |
| | David Black | A |
| | Gaurav Chawla | A |
| | David Piehler | A |
| | Erik Smith | P |
| | Joseph White | A |
| | Vinay Sawal | A |
| HPE | Barry Maskas | P |
| | Rupin Mohan | A |
| | Krishna Babu Puttagunta | A |
| IBM | Roger Hathorn | P |
| | Patty Driever | A |
| II-VI Inc | Vipul Bhatt | P |
| | Vera Koleva | A |
| | Lance Thompson | A |
| Marvell Semiconductor | Dean Wallace | P |
| | Anshul Agarwal | A |
| | Girish Basrur | A |
| | Craig Carlson | A |
| | Mike Dudek | A |
| | Ali Khwaja | A |
| | Stephen Lam | A |
| | Akinori Maeda | A |
| | Alan Spalding | A |
| | Darren Trapp | A |
| NetApp | Fred Knight | P |
| OFS | Roman Shubochkin | P |
| | Mabud Choudhury | A |
| Teledyne LeCroy | David Rogers | P |
| | Douglas Lee | A |
| | Henry Poelstra | A |
| Viavi Solutions | Jason Rusch | P |

The following is a list of advisory members:

| Organization | Representative | Participant Class (P, A) |
|---------------------------|-------------------|--------------------------|
| Anritsu | Ken Mochizuki | P |
| Credo Semiconductor | Phil Sun | P |
| | Yasuo Hidaka | A |
| Futurewei | Xu Qi ming | P |
| | Eddy Zhou | A |
| Lumentum | Dave Lewis | P |
| Keysight Technologies Inc | Stephen Didde | P |
| MediaTek USA | Tamer Ali | P |
| | Mau-Lin Wu | A |
| Molex | Alex Haser | P |
| | Jay H. Neer | A |
| | Tom Palkert | A |
| | Scott Sommers | A |
| Panduit | Jose Castro | P |
| | Bulent Kose | A |
| | Robert Reid | A |
| | Steve Skiest | A |
| SmartDV Technologies | Deepak Kumar Tala | P |
| TE Connectivity | Nathan Tracy | P |
| | Melissa Knox | A |
| | Jeff Mason | A |
| | Andy Nowak | A |

The following is a list of emeritus members:

| |
|-------------------|
| James Coomes |
| William Ham |
| Schelto van Doorn |

4 Anti-Trust Policies

The chair noted that among the rules and policies under which the INCITS/Fibre Channel Physical Variants Task Group operates are the INCITS Antitrust Guidelines as specified in <http://www.incits.org/standards-information/legal-info>. Any member of the meeting is responsible for objecting if he believes discussion in the meeting violates these 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.

5 Document Distribution

The chair reviewed document distribution for this task group which is available from <http://standards.incits.org>.

6 Approval of the Minutes of February 2022 Plenary Meeting #148

The prior regular meeting of the INCITS/Fibre Channel Physical Variants Task Group was #148 on 10 February 2022. The draft minutes of that meeting were posted as document T11-2022-00079-v000.

The minutes were reviewed as posted on the INCITS web site. Corrections may be requested either before the subsequent meeting by email to jason.rusch@viavisolutions.com or at the subsequent meeting in person.

Dave Peterson (Broadcom Inc) moved and Roger Hathorn (IBM) seconded to accept T11-2022-00079-v000 as the minutes of INCITS/Fibre Channel meeting #148 on 10 February 2022. The motion passed by acclamation.

7 Review of Old Action Items

Action items completed at this meeting:

2202-01 Steve Wilson to set up conference calls to discuss the current industry Liaisons to T11.2 and determine the dates they were first established.

Action items carried from prior meetings:

2108-01 Tom Palkert to request a CMIS Liaison from OIF to INCITS/Fibre Channel Physical Variants Task Group.

8 Review of INCITS/Fibre Channel Physical Variants Task Group Projects

8.1 Project Status Review

The chair reviewed project status of activities in the INCITS/Fibre Channel Physical Variants Task Group.

8.2 FC-PI-8 Ad Hoc Working Group (T11-2022-00135-v000)

The FC-PI-8 ad hoc chair Dean Wallace (Marvell) presented meeting report T11-2022-00135-v000.

The following presentations were given:

- 128GFC electrical link performance TX FFE fixed versus optimized, Xiaohong Wu, Cisco, T11-2022-087-v1
- 128GFC electrical link measurements, Xiaohong Wu, Cisco, T11-2022-121-v0
- FC-PI-8 cable plant specifications, Sunny Xu, CommScope, T11-2022-105-v0
- FC-PI-8 optical link training needs for 128GFC, Lance Thompson, II-VI, T11-2022-130-v0
- CMIS link training protocol, Anil Mehta, Broadcom Inc, T11-2022-xxx-v0
- Transmitter training signal for 128GFC, Anil Mehta, Broadcom Inc, T11-2021-332-v3
- FC-PI-8 issues list, Jason Rusch, Viavi solutions, T11-2022-123-v0
- FC-PI-8 working draft, Jason Rusch, Viavisolutions, T11-2022-122-v0.
- Comments to FC-FS-6 version, Raul Oteyza, Marvell, T11-2022-099-v1
- 128GFC common Alignment Marker text for FC-FS-6, Raul Oteyza, Marvell, T11-2022-100-v0

There will be two FC-PI-8 conference calls (see Future Meeting schedule below) to continue the review of the FC-PI-8. At the conclusion of the May 3 call, we will be requesting an RFC letter ballot on FC-PI-8 draft document number T11-2022-122-v0 as modified with accepted comments.

8.3 Joint INCITS/Fibre Channel Interconnection Schemes / Physical Variants Ad Hoc Working Group

There was no meeting this week.

9 Letter Ballots

No open letter ballots.

10 Old Business

There was no old business to be reviewed for this meeting cycle.

11 Review of International Activity

There was no International Activity given for this meeting cycle.

12 New Business and New Technical Items

12.1 Task Group Charter Re-Wording

Tom Palkert reviewed the text for the re-wording of the Task Group as follows:

INCITS/Fibre Channel Physical Variants is the Task Group within the INCITS/Fibre Channel Technical Committee responsible for all projects and parts of projects dealing with Physical Variants (e.g. media, connector, transmitter & receiver requirements).

Note: This task group was formerly known as INCITS/T11.2 until January 2022.

Dave Peterson (Broadcom Inc) moved and Dean Wallace (Marvell) seconded to approve the new wording for the INCITS/Fibre Channel Physical Variants Task Group charter. Motion approved by acclamation without objection.

13 Call for Patents

A template form for a patent declaration that is satisfactory to both INCITS and ISO can be found in <http://www.incits.org/standards-information/legal-info>.

The chair made the call for patents - no member responded.

14 List of Meeting Attendees

The electronic attendance record for this Task Group plenary meeting showed 28 attendees (13 in-person, 15 virtual) representing 14 voting companies:

| Company | Name | Attendance |
|----------------------------|--------------------|-------------|
| Amphenol Corporation | Paul Coddington | Member |
| Amphenol Corporation | Michael Klempa | Member |
| Broadcom Inc | Howard Johnson | Member |
| Broadcom Inc | David Peterson | Member |
| Broadcom Inc | Steven Wilson | Member |
| Cisco Systems Inc | Mike Blair | Member |
| Cisco Systems Inc | Ramesh Sivakolundu | Member |
| Cisco Systems Inc | Xiaohong Wu | Member |
| CommScope | Sunny Xu | Member |
| Corning Inc | David Kozischek | Member |
| Credo Semiconductor | Phil Sun | Member |
| Data Center Systems | Steve Eisele | Member |
| Dell Technologies Inc | Jai Bansal | Member |
| Hewlett Packard Enterprise | Barry Maskas | Member |
| IBM Corporation | Patty Driever | Member |
| IBM Corporation | Roger Hathorn | Member |
| II-VI Inc | Vera Koleva | Member |
| II-VI Inc | Lance Thompson | Member |
| Keysight Technologies Inc | Stephen Didde | Member |
| Macom | Thomas Palkert | Group Chair |
| Marvell Semiconductor Inc | Craig Carlson | Member |
| Marvell Semiconductor Inc | Raul Oteyza | Member |
| Marvell Semiconductor Inc | Dean Wallace | Vice Chair |

| | | |
|-----------------------------|------------------|-----------|
| NetApp Inc | Frederick Knight | Member |
| Panduit Corporation | Jose Castro | Member |
| Teledyne LeCroy Corporation | Henry Poelstra | Member |
| Teledyne LeCroy Corporation | Jim Yasueda | Member |
| Viavi Solutions Inc | Jason Rusch | Secretary |

15 Liaison Reports

15.1 INCITS and Fibre Channel Technical Committee Liaison reports

The INCITS and Fibre Channel Technical Committee Liaison reports were deferred to the Fibre Channel Technical Committee Plenary meeting.

15.2 SFF Transceiver Liaison

The SFF liaison report was a verbal report presented by Tom Palkert.

15.3 ISO WG3/TIA

No liaison report was provided at this meeting.

15.4 IEEE Liaison

The IEEE Liaison report was deferred to the Fibre Channel Technical Committee Plenary meeting.

15.5 OIF

Tom Palkert shared the OIF Liaison letter and gave a verbal report.

16 Future Meeting Schedule

The next plenary meeting week will be a hybrid meeting at Duluth, MN, June 13-16, 2022.

Authorization of Ad Hoc groups and study groups for the plenary week:

- FC-PI-8 ad hoc requests Tuesday 6/14/22 9:00 to 6:00 CDT and Wednesday 6/15/22 from 9:00 to 3:00 CDT.
- Joint INCITS/Fibre Channel Interconnection Schemes / Physical Variants ad hoc: no meeting request

Authorization of Telephone Conference Calls:

- Request two conference calls for FC-PI-8.
 - 4/26/22 1:00 to 3:00 CDT
 - 5/03/22 1:00 to 3:00 CDT

Jason Rusch (Viavi Solutions) moved and Dean Wallace (Marvell) seconded to accept the Future Meeting Schedule presented at this meeting be approved for the next plenary meeting week. The motion passed by acclamation.

17 Action Items

Action items carried from prior meetings:

- 2108-01** Tom Palkert to request a CMIS Liaison from OIF to INCITS/Fibre Channel Physical Variants Task Group

18 Adjournment

Paul Coddington (Amphenol) moved to adjourn at 10:05 AM CDT.