



InterNational Committee for Information Technology Standards
(INCITS) Secretariat: Information Technology
Industry Council (ITI) 700 K Street NW, Suite 600,
Washington, DC 20001

www.INCITS.org



T11-2023-00088-v000

**Approved Minutes
INCITS Fibre Channel (T11) Technical Committee
Regular Meeting #174
08 December 2022 – 1 PM to 3 PM EST
Deerfield Beach, FL (Hybrid Meeting)**

1 Opening Remarks and Introductions

1.1 Introductory Remarks

TC T11 chair Steve Wilson (Broadcom) convened regular meeting #174 of the INCITS Fibre Channel (T11) Technical Committee on Thursday, 08 December 2022 at 1:01 PM EST. He introduced himself and thanked our host Amphenol for the physical meeting facilities as well Marvell for the virtual meeting facilities.

He next introduced Vice-Chair Craig Carlson (Marvell) and Patty Driever (IBM) as secretary.

1.2 Self-introductions

The chair then asked those present in the room to introduce themselves.

1.3 Operating under INCITS Procedures

1.3.1 Patent Information

The chair indicated that among the rules and policies under which this Technical Committee operates are the intellectual property policies as specified in pages 1-3 of INCITS patent policy slides available from <http://www.incits.org/standards-information/legal-info>. 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.

1.3.2 Antitrust Guidelines

The chair indicated that among the rules and policies under which this Technical Committee operates are the INCITS Antitrust Guidelines as specified in <http://www.incits.org/standards-information/legal-info>. Any person present at 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.

1.3.3 Code of Conduct

The chair reminded everyone that we are operating under the INCITS Code of Conduct (found at <https://www.incits.org/standards-information/policies>). The General Principles of this code include:

- Respect others
- Behave ethically
- Escalate and resolve disputes
- Work for the net benefit of the community
- Uphold consensus and governance
- Agree to a clear purpose and scope
- Participate actively and manage effective participation

1.3.4 Public access rules

The chair indicated that among the rules and policies under which this Technical Committee operates are the INCITS rules for operating in Public Access Mode, as specified in Section 3.11 of INCITS Organization, Policies, and Procedures (found at <http://www.incits.org>).

The chair encouraged those nonmembers who attend T11 meetings regularly or intend to attend T11 meetings regularly to join the organization. He further advised that nonmembers, by remaining in this meeting, acknowledge that they understand and agree to the policies of this meeting.

1.4 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>. He reminded those present that both the electronic attendance list and physical presence at the meeting will be required to qualify as attendance for formal records of this meeting.

2 Approval of the Agenda

An electronic version of the agenda was posted as T11-2022-00347-v001. The chair presented the agenda with final updates as T11-2022-00347-v002 and made a call for any changes and new agenda items. No changes or new items were requested.

Tom Palkert (Macom) moved and Howard Johnson (Broadcom) seconded that T11-2022-00347-v002 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 <http://www.incits.org>. An overview of these requirements was introduced by the chair and was available to all attendees among the electronically distributed meeting documents (entitled "**Membership Clause 2022**").

The vice 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 annex A.1. Attendance for this meeting is shown in annex A.2. Attendance for the ad hoc meetings is shown in annex A.3.

3.2 Changes in Representation Since the Last Meeting

The following changes in representation have been made since the last meeting:
Fan Fu was added as Alternate for Amphenol Corporation. All other representation for Amphenol remains the same.
Roberto Rodes was added as Alternate for II-VI Inc. All other representation for II-VI

remains the same.

Ernest Muhigana was added as Primary for Lumentum Operations, replacing David Lewis who has been changed to an Alternate.

3.3 New Voting Memberships

- No additional companies answered the vice-chair's call so none were granted voting membership at this meeting.

3.4 Voting memberships in jeopardy for attendance

- There were no companies in membership jeopardy for lack of attendance at 2 of the last 3 plenary meetings.

3.5 Voting memberships in jeopardy for non-payment of dues

- There were no companies in membership jeopardy for non-payment of dues.

3.6 Voting memberships in jeopardy for letter ballot performance

- Credo Semiconductor, Lumentum, and Corning are in membership jeopardy for letter ballot performance for not having voted on two of last three T11 letter ballots.

3.7 Membership for this meeting

Technical Committee T11 had 23 voting members at the T11 regular meeting 06 October 2022. With no members losing or gaining voting privileges voting membership of T11 remains at 23 for this meeting.

Reflecting the above changes, the voting membership of T11 for this meeting is recorded in [annex A.1.2](#).

Reflecting the above changes, the advisory (i.e., nonvoting) membership of T11 for this meeting is recorded in [annex A.1.3](#).

3.8 Call for members of the press and journalists

The chair requested members of the press and journalists to introduce themselves. No person attending the meeting made such an introduction.

3.9 Call for Quorum

The total voting membership for this meeting is 23. One third of the total membership for this meeting is 8. The number of member organizations that responded to the call for quorum was 20. This exceeds or equals one third of the total membership for this meeting and also exceeds or equals 8. A quorum is therefore present for this meeting.

It should be noted that of the 20 voting member companies present at this plenary meeting, 12 were in attendance in-person during this plenary meeting and 12 member companies had representatives present during the week at the ad-hoc meetings.

3.10 Call for Guests

The chair requested those associated with organizations that are not members of T11 to introduce themselves. No one responded.

4 Document Distribution

The chair described the process for T11 document distribution via <http://standards.incits.org>.

5 Approval of Minutes - Meeting #173

The prior regular meeting of the INCITS Fibre Channel (T11) Technical Committee was #173 on 06 October 2022. The draft Minutes of that meeting were posted as document T11/2022-00316-v000.

T11 minutes are reviewed as posted on the T11 web site. Corrections may be requested either before the subsequent meeting by email to the T11 secretary (pgd@us.ibm.com) or at the subsequent meeting in person.

Roger Hathorn (IBM) moved and Chris Lyon (Amphenol) seconded to accept T11/2022-00316-v000 as the Minutes of T11 meeting #173 on 06 October 2022. The motion passed by acclamation.

See action item [22-022](#).

6 Review of Old Action Items

22-017	T11 secretary to post approved Minutes of T11 meeting #172 as agreed at T11 meeting #173. Completed by posting T11/2022-00338-v000 on October 06, 2022
22-018	Chair to forward FC-PI-8 Rev1.4 as documented in T11-2022-00168-v004 (comment database document T11-2022-00287-v003) to INCITS for initiation of 1 st public review. Completed by email to Rachel Porter on October 24, 2022 as documented in T11-2022-342-v000 .
22-019	Chair to forward the FC-PI-9 project proposal as documented in T11-2022-246-v003 to INCITS for further processing. Completed by email to Rachel Porter on October 24, 2022 as documented in T11-2022-344-v000
22-020	Chair to forward FC-SP-2/AM2 Rev1.01 as documented in T11-2022-00020-v007 (comment database document T11-2022-00288-v001) to INCITS for further processing. Completed by email to Rachel Porter on October 24, 2022 as documented in T11-2022-343-v000 .
22-021	Chair to update the 2023 meeting schedule to reflect the current planned locations and hosts companies. Completed by Chair posting the new meeting schedule to ICMS on November 02, 2022.

7 Review of T11 Project and Proposal Status

7.1 Project Proposals

7.1.1 FC-PI-9

This project was approved as INCITS 581 and has been added to the T11 Project Status Matrix.

7.2 Project Status Review

The T11 Project status sheet was displayed (see [annex B.1](#)). The current version can be viewed at any time at <http://standards.incits.org>, in the “T11 Projects” folder in the documents section.

The chair reminded all TG chairs to assure the project status sheet is maintained to reflect changes in status of their projects.

8 Results of non-ISO Letter Ballots

8.1 None

9 Old Business

No old business was reopened.

10 Task Group T11.2 - Physical Interfaces

10.1 Report to T11 Plenary ([T11-2022-00405-v000](#))

Task Group Chair Tom Palkert (Macom) gave the report posted as T11-2022-00405-v000 on activity at T11.2.

10.2 Actions

10.2.1 There were no actions this meeting cycle.

10.3 Other Items

No other items were presented for TG T11.2.

11 Task Group T11.3 - Interconnection Schemes

11.1 Report to T11 Plenary ([T11-2022-00410-v000](#))

Task Group Chair Craig Carlson (Marvell) presented the information posted as T11-2022-00410-v000 on activity at T11.3.

11.2 Actions

11.2.1 There were no actions this meeting cycle.

11.3 Other Items

No other items were presented for TG T11.3.

12 Joint TG T11.2 / T11.3 Items

12.1 Report to T11 Plenary

There was no meeting during this plenary meeting cycle for the Joint T11.2/T11.3 TG.

12.2 Actions

12.2.1 There were no actions.

12.3 Other Items

No other items were presented for Joint T11.2/T11.3.

13 T11 project activities

None for this meeting cycle.

14 Review of International Activity

14.1 INCITS Computer Systems Interconnect (SC 25 / WG4 TAG) Status Report ([T11-2022-00362-v001](#))

Dave Peterson (Broadcom) presented the information posted as T11-2022-00362-v001 on INCITS Computer Systems Interconnect (SC 25 / WG4 TAG) project status (see [annex B.2](#)).

15 T11 New Business

15.1 2023 National Maintenance Review ([eb-2022-00732](#))

The T11 community was informed of the 2023 National Maintenance review by INCITS following the October 2022 T11 plenary meeting. The Chair proposed that we will vote in February on which of the following standards/technical reports will be either stabilized, reaffirmed, or withdrawn in motions to be crafted for the February 2023 meeting.

INCITS 462-2010/AM1-2012[R2017]	Information technology - Fibre Channel - Backbone - 5 (FC-BB-5) - Amendment 1
INCITS 540-2018	Information technology - Fibre Channel - Non-Volatile Memory Express (FC-NVMe)
INCITS 544-2018	Information technology - Fibre Channel - Single Byte Command Code Sets Mapping Protocol - 6 (FC-SB-6)
INCITS 487-2018	Information technology - Fibre Channel - Link Services - 3 (FC-LS-3)
INCITS/TR-32-2003[R2018]	INCITS Technical Report for Information technology - Fibre Channel - Management Information Base-FA (MIB-FA)
INCITS/TR-33-2003[R2018]	INCITS Technical Report for Information Technology - Fibre Channel Signal Modeling (FC-SM)
INCITS/TR-44-2008[R2018]	INCITS Technical Report for Information technology - Fibre Channel Signal Modeling - 2 (FCSM-2)
INCITS/TR-53-2018	INCITS Technical Report for Information technology - Fibre Channel - Energy Efficiency (FC-EE)
INCITS 528-2013[R2018]	Information Technology - Common Building Blocks Specification
INCITS 530-2013[R2018]	Information Technology - Architecture for Managed Computing Systems
INCITS 531-2013[R2018]	Information Technology - Systems Management Discovery for Managed Computer Systems

15.2 2023 Continued Stabilization Review ([eb-2022-00762](#))

The T11 community was informed of the 2023 Continued Stabilization review by INCITS following the October 2022 T11 plenary meeting. A vote will take place at the February 2023 T11 plenary meeting to address the review request of the following documents.

INCITS 210-1998[S2013]	Information technology - High-Performance Parallel Interface - Framing Protocol (HIPPI-FP)
INCITS 303-1998[S2013]	Information technology - Fibre Channel Physical and Signaling Interface-3 (FC-PH-3)
INCITS 323-1998[S2013]	Information technology - High-Performance Parallel Interface - 6400 Mbit/s Physical Layer (HIPPI-6400-PH)

INCITS 338-2003[S2013]	Information technology - High-Performance Parallel Interface - 6400 Mbit/s Optical Specifications (HIPPI-6400-OPT)
INCITS 332-1999/AM 1-2003[S2013]	Information technology - Fibre Channel Arbitrated Loop (FC-AL-2) - Amendment 1
INCITS 373-2003[S2013]	Information technology - Fibre Channel Framing and Signaling Interface (FC-FS)
INCITS 374-2003[S2013]	Information technology - Fibre Channel Single - Byte Command Set-3 (FC-SB-3)

15.1 T11 Project Organization in ICMS ([T11-2022-00359-v000](#))

Dave Peterson (Broadcom) presented some current 'anomalies' of the T11 Fibre Channel website structure as it relates to projects and subgroups and how T11.2 and T11.3 use them. We agreed at a high level that the only projects/subgroups that should be under T11 are the Joint T11.2/T11.3 and the FC Interconnection Schemes (T11.3) and FC Physical Variants (T11.2). Currently T11.3 projects are under T11, but consensus is that they should be under T11.3. But consensus also is that documents are and should be under the T11 scope. Dave proposed that we assign the subgroups and projects as appropriate to T11.2 and T11.3 as noted above.

However we're not sure that if we move the projects to T11.2 and T11.3 we can still post documents under T11. Dave will talk with Lynn Barra and ensure things will work as desired if we make these changes.

16 Call for Patents

16.1 Call for Patents

16.1.1 Patent Information Overview

The chair reminded the meeting that among the rules and policies under which T11 operates are the INCITS intellectual property policies. An overview of patent information relevant to T11 may be found in the INCITS patent policy, which is publicly available at [INCITS Patent Policy](#).

16.1.2 INCITS/ISO patent disclosure form

A template form for a patent declaration that is satisfactory to both INCITS and ISO can be found

in [INCITS Patent Declaration Form](#).

No company responded to the call for patents.

17 Liaison Reports

17.1 T11 report ([T11-2022-00345-v000](#)), INCITS Liaison report ([T11-2022-00367-v000](#))

Steve Wilson (Broadcom) presented the information posted as T11-2022-00345-v000 on activity at T11 as reported to other organizations, and the information posted as T11-2022-00367-v000 on activity at INCITS other than T11 project status.

17.2 TC T10 ([T11-2022-00390-v000](#))

Fred Knight (NetApp) gave report T11-2022-00390-v000 on activity at T10.

17.3 FCIA ([T11-2022-00411-v000](#))

Mark Jones (Broadcom) gave report T11-2022-00411-v000 on activity at FCIA.

17.4 IEEE 802.3 ([T11-2022-00404-v000](#))

Tom Palkert (Macom) and Mabud Choudhury (OFS) gave report T11-2022-00404-v000 on activity at IEEE 802.3.

17.5 INCITS TC CS1 (No doc)

Dave Peterson gave a verbal update on activity in the security space that affects Fibre Channel.

17.6 SNIA and SFF ([T11-2022-00409-v000](#))

Fred Knight (NetApp) discussed report T11-2022-00409-v000 on SNIA activities.

17.7 NVMe (verbal)

Craig Carlson (Marvell) gave a brief verbal report on recent NVMe activities.

18 Administrative Matters

18.1 Officer Appointments

Officers of this Technical Committee and its Task Groups are:

T11 Chairman	Steve Wilson (Broadcom)
T11 International Representative	David Peterson (Broadcom)
T11 Vice Chairman	Craig Carlson (Marvell)
T11 Secretary	Patty Driever (IBM)
T11.2 Chairman	Tom Palkert (Macom)
T11.2 Vice-Chairman	Dean Wallace (Marvell)
T11.2 Secretary	Jason Rusch (Viavi)
T11.3 Chairman	Craig Carlson (Marvell)
T11.3 Vice-chairman	Roger Hathorn (IBM)
T11.3 Secretary	Patty Driever (IBM)

19 Future Meeting Schedule

19.1 Authorization of adhoc meetings

The chair directed members to the ICMS T11 calendar located at the T11 section of the web site <http://standards.incits.org> the latest announcements of pending work group interim meetings and teleconferences. He advised that authorization of ad hoc work group meetings is delegated to the appropriate TG, if any.

The vice chair will account for these requests in the schedule for the T11 plenary week hosted by FCIA in Tucson, AZ area and by Marvell via Zoom for the hybrid-format conference 6-10 February 2023.

19.2 Guidelines for hosting T11 meetings ([T11-2017-00151-v000](#))

For members who are considering hosting future plenary meetings, the chair directed their attention to “Guidelines for hosting T11 Plenary Weeks” T11-2017-00151-v000. This information includes guidelines for hosting a T11 meeting week and room night histories of past meeting weeks. This is required reading for those who are considering hosting because it

summarizes the needs of the committee for meeting facilities and gives considerations that may reduce costs for the host.

Groups arranging to meet with T11 were strongly advised to confirm with the host any changes in their needs for meeting space well before the meeting. Failure to do so could easily cause serious inconvenience to the host and/or the group.

19.3 Request for hosts and 2022–2023 meeting schedule

The chair announced the following schedule for 2022-2023.

Date	Location	Host Organization	Host Person
February 7-11, 2022	Raleigh, NC	FCIA	Chris Lyon
April 4-8, 2022	New Orleans, LA	Broadcom	Steve Wilson
June 6-10, 2022	Duluth, MN	Marvell	Craig Carlson
August 8-12, 2022	Itasca (Chicago), IL	Cisco	Kiran Ranabhor
October 3-7, 2022	Fort Worth, TX	SFF	Paul Coddington
December 5-9, 2022	Deerfield Beach, FL	Amphenol	Chris Lyon
February 6-10, 2023	Tucson, AZ	FCIA	Chris Lyon
April 3-7, 2023	tbd	Broadcom	Howard Johnson
June 5-9, 2023	Reno/Tahoe, NV	Marvell	Craig Carlson
August 7-11, 2023	tbd	Cisco	Kiran Ranabhor
October 2-6, 2023	tbd	SNIA/SFF	Paul Coddington
December 4-8, 2023	Deerfield Beach, FL	Amphenol	Chris Lyon

19.4 Approval of Meeting Venues

19.4.1 2023 Dates and Venues

We changed the Broadcom host to Howard Johnson from Steve Wilson.

June is targeted for the Reno/Tahoe area, but not yet confirmed.

Our February meeting is at the Embassy Suites Paloma Village. If you want to book outside of our meeting dates you can book at the same rate, but will need to call them to do this. There will be a reception, possibly off-site.

For June, the current dates are on top of the INCITS officers meeting. So Craig Carlson (Marvell) proposed we move them to June 12-16. Seconded by Dave Peterson (Broadcom). Motion passed: In favor – 20, Opposed – 0, Abstain – 0, No-Response - 3

Our August dates conflict with FMS. Fred Knight (NetApp) proposed we move our August meeting to the week of July 31 – August 4. Motion seconded by Craig Carlson (Marvell). Motion passed: In favor – 20, Opposed – 0, Abstain – 0, No-Response - 3

Chris Lyon (Amphenol) also proposed that we return to Deerfield Beach in December 2023. Seconded by Howard Johnson (Broadcom). Motion passed: In favor – 20, Opposed – 0, Abstain – 0, No-Response – 3

The Chair also presented proposed dates for 2024 meetings. Steve Wilson (Broadcom) made a motion to accept the 2024 dates as shown in the meeting. Seconded by Dean Wallace (Marvell). Motion passed: In favor – 20, Opposed – 0, Abstain – 0, No-Response – 3

See action item [22-023](#).

19.5 Next meeting information

The chair reminded the membership that the next T11 plenary week, February 06-10, is planned to be a hybrid meeting with the face-to-face meeting in Tucson, AZ hosted by FCIA and the virtual meeting will be using Marvell Zoom facilities.

19.6 Letter to travel representatives on hotel rates ([T11-2022-00091-v000](#))

The chair reminded the membership that

- T11 plenary meetings are hosted by volunteer organizations;
- A plenary host receives no reimbursement from T11 or INCITS for any expenses of hosting;
- A plenary host may depend on agreements with the meeting hotel in order to reduce the

expenses of the host and also possibly, though not necessarily, reduced the room rates for the members; and

- A hotel may charge punitive extra fees to a host if the meeting does not achieve an agreed number of room nights identified with group members.

Therefore, T11 expects those attending meetings during a plenary week to stay at the meeting hotel and identify themselves as members of the T11 group, even though less expensive lodging may be found in the area, or even at the same hotel. Document T11-2022-00091-v000 has been posted which contains a letter to those with budget responsibilities for member organizations justifying this obligation.

19.7 Plenary week meeting map for February 2023 T11 meetings

The vice chair Craig Carlson (Marvell) created and the chair presented the tentative meeting map of the next T11 meeting week. He advised members for the most recent meeting map of the next T11 regular meeting to go to the INCITS website, search the T11 Meeting Information folder under February 2023.

20 Final Attendance Notice / Check

The chair reviewed the electronically registered attendance list, advised that the list was about to close, and reminded those who had not registered that the list would then become the only source of attendance for formal records of this meeting.

Final registered attendance for T11 regular meeting #174 is shown in annex A.2. 35 people from 20 member (20 voting) organizations were in attendance.

21 Review of Action Items

22-022	T11 secretary to post approved Minutes of T11 meeting #173 as agreed at T11 meeting #174. (See clause 5)
22-023	Chair to update the 2023-2024 meeting schedule to reflect the current changes voted on in this plenary meeting. (See Clause 19.4.1)

22 Adjournment

Chris Lyon (Amphenol) moved to adjourn at 2:30 PM EST. The motion passed by acclamation.

Annex A Membership and Attendance

A.1 Membership for this meeting

A.1.1 Emeritus Members

These people have been granted Emeritus membership in INCITS Fibre Channel (T11) Technical Committee, recognizing their many years of skilled leadership and high quality technical contribution:

Dr. William Ham

Mr. Robert Kembel

Mr. Bob Nixon

Mr. Schelto Van Doorn

A.1.2 Voting Members

The following is the list of organizations that are voting members of record for regular meeting #174 of the INCITS Fibre Channel (T11) Technical Committee, including the recognized representatives of each member organization:

Organization	Representative Type	Representative
Amphenol	Principal	Chris Lyon
	Alternate	Brad Brubaker
	Alternate	Paul Coddington
	Alternate	Daniel Dillow
	Alternate	Fan Fu
	Alternate	Sam Kocsis
	Alternate	Alex Persaud
	Alternate	Hu Silver
	Alternate	Michael Wingard
Broadcom	Principal	Steven L. Wilson
	Alternate	Evan Beauprez

	Alternate	Ben Chu
	Alternate	Robert Hannah
	Alternate	Adam Healey
	Alternate	Howard Johnson
	Alternate	Mark Jones
	Alternate	Anil Mehta
	Alternate	Dr. Ramana Murty
	Alternate	David Peterson
	Alternate	James Smart
	Alternate	Anil Veerabhadrappe
Cisco	Principal	Mike Blair
	Alternate	Harsha Bharadwaj
	Alternate	Rajesh L.G.
	Alternate	Fabio Maino
	Alternate	Edward Mazurek
	Alternate	Mark Nowell
	Alternate	Sai Pavan
	Alternate	Kiran Ranabhor
	Alternate	Christian Schmutzer
	Alternate	Shalom Shefa
	Alternate	Sumanth Sindiri
	Alternate	Ramesh Sivakolundu
	Alternate	Yi Tang
	Alternate	Xiaohong Wu
Alternate	Xiaokang Zhu	
CommScope	Principal	Yang (Sunny) Xu
	Alternate	Gary Gibbs
	Alternate	Earl Parsons
Corning	Principal	David Kozischek
Credo Semiconductor	Principal	Phil Sun
	Alternate	Dr. Fang Cai

	Alternate	Yasuo Hidaka
Data Center Systems	Principal	Steve Eisele
	Alternate	Eddie Taylor
Dell	Principal	Erik Smith
	Alternate	Jai Bansai
	Alternate	David Black
	Alternate	David Brown
	Alternate	Doug Farley
	Alternate	David Piehler
	Alternate	Vinay Sawal
	Alternate	Joseph White
	Hewlett Packard Enterprise	Principal
Alternate		Curtis Ballard
Alternate		Rupin Mohan
Alternate		Krishna Babu Puttagunta
IBM	Principal	Roger Hathorn
	Alternate	Patty Driever
	Alternate	Stephen Guendert
II-VI Inc	Principal	Vipul Bhatt
	Alternate	Vera Koleva
	Alternate	Roberto Rodes
	Alternate	Lance Thompson
Keysight Technologies	Principal	Stephen Didde
	Alternate	Joachim Vobis
Lumentum Operations	Principal	Ernest Muhigana
	Alternate	David Lewis
Macom	Principal	Thomas Palkert
Marvell Semiconductor Inc	Principal	Craig W. Carlson
	Alternate	Anshul Agarwal
	Alternate	Sanjaya Anand
	Alternate	Qian Banglong

	Alternate	Girish Basrur
	Alternate	Kathy Caballero
	Alternate	Mike Dudek
	Alternate	Arun Easi
	Alternate	Robert Friend
	Alternate	Duane Grigsby
	Alternate	Anil Gurumurthy
	Alternate	James Hamada
	Alternate	Andrew Joy
	Alternate	Ali Khwaja
	Alternate	Stephen Lam
	Alternate	Ray Leung
	Alternate	Raymond Liang
	Alternate	Akinori Maeda
	Alternate	Praveen Midhag
	Alternate	Trinh Nguyen
	Alternate	Raul Oteyza
	Alternate	Arun Patil
	Alternate	Eddy Soetjahja
	Alternate	Alan Spalding
	Alternate	Gourangadoss Sundar
	Alternate	Andrew Vasquez
	Alternate	Dean Wallace
MediaTek	Principal	Tamer Ali
	Alternate	Chihlong Dai
	Alternate	Henry Park
	Alternate	Herbert Wang
	Alternate	Mau-Lin Wu
Molex	Principal	Scott Sommers
	Alternate	Egide Murisa
NetApp	Principal	Frederick Knight

OFS	Principal	Roman Shubochkin
	Alternate	Mabud Choudhury
Panduit	Principal	Jose Castro
	Alternate	Bulent Kose
	Alternate	Robert Reid
TE Connectivity	Principal	Nathan Tracy
	Alternate	Dwayne Crawford
	Alternate	Daniel Gorenc
	Alternate	Jeff Mason
	Alternate	Matt Schumacher
Teledyne LeCroy	Principal	Henry Poelstra
	Alternate	Amit Bakshi
	Alternate	Craig Foster
	Alternate	Rakesh Kathiresan Natarajan
	Alternate	Nick Kriczky
	Alternate	Douglas Lee
	Alternate	Srikant Tadigadapa
	Alternate	Jim Yasueda
Viavi	Principal	Jason Rusch
	Alternate	Scott Baxter
	Alternate	George Bullis
	Alternate	Paul Gentieu

A.1.3 Advisory Members

The following is the list of organizations that are advisory (i.e., nonvoting) members of record for regular meeting #174 of the INCITS Fibre Channel (T11) Technical Committee, including the recognized representatives of each member organization:

Organization	Representative Type	Representative
Anritsu	Principal	Tadanori Nishikobara
	Alternate	Yuji Sekine
Ciena	Principal	Stephen Shew

	Alternate	Sebastien Gareau
Futurewei	Principal	Timothy Jeffries
	Alternate	Victor Cao
Unisys	Principal	Jeffrey Dremann
	Alternate	Phil Shelton
VMWare	Principal	Neil MacLean
	Alternate	Wenchao Cui
	Alternate	Wenhua Liu
	Alternate	Murali Rajagopal
	Alternate	Ahmad Tawil

A.2 Attendance at this meeting

A.2.1 Member organizations

The following is the list of member organizations and their representatives recorded in the online attendance registry as attending regular meeting #174 of the INCITS Fibre Channel (T11) Technical Committee:

Organization	Representative(s)	In Person
AMPHENOL CORP	Paul Coddington	Y
	Chris Lyon	Y
BROADCOM INC	Ben Chu	N
	Howard Johnson	Y
	Mark Jones	N
	Ramana Murty	N
	David Peterson	Y
	Steven L. Wilson	Y
CISCO SYSTEMS INC	Harsha Bharadwaj	Y
	Mike Blair	Y
	Edward Mazurek	Y
	Ramesh Sivakolundu	Y
	Xiaohong Wu	Y

COMMSCOPE	Earl Parsons	N
CORNING INC	David Kozischek	N
DATA CENTER SYSTEMS	Steve Eisele	N
DELL INC	David Brown	Y
	David Piehler	N
HEWLETT PACKARD ENTERPRISE	Barry Maskas	N
	Krishna Babu Puttagunta	N
IBM CORP	Patty Driever	Y
	Roger Hathorn	N
II-VI INC	Vera Koleva	N
KEYSIGHT TECHNOLOGIES INC	Stephen Didde	Y
MACOM	Thomas Palkert	Y
MARVELL SEMICONDUCTOR	Craig Carlson	Y
	Dean Wallace	Y
MOLEX INC	Egide Murisa	N
NETAPP INC	Frederick Knight	Y
OFS FITEL LLC	Mabud Choudhury	Y
PANDUIT CORPORATION	Jose Castro	N
TE CONNECTIVITY	Daniel Gorenc	N
TELEDYNE LECROY CORPORATION	Henry Poelstra	Y
	Jim Yaseuda	Y
VIAMI SOLUTIONS INC	Jason Rusch	Y

A.2.2 Ad hoc meeting attendance

FC-SW-8 ad hoc, members

Organization	Representative(s)
BROADCOM INC	Howard Johnson

	David Peterson
	James Smart
CISCO SYSTEMS INC	Harsha Bharadwaj
	Mike Blair
	Edward Mazurek
DELL INC	David Brown
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORP	Patty Driever
	Roger Hathorn
MARVELL SEMICONDUCTOR INC	Craig Carlson
NETAPP INC	Frederick Knight

FC-PI-8 ad hoc, members

Organization	Representative(s)
AMPHENOL CORPORATION	Paul Coddington
BROADCOM INC	Ben Chu
	Anil Mehta
	Ramana Murty
CISCO SYSTEMS INC	Ramesh Sivakolundu
	Xiaohong Wu
COMMSCOPE	Earl Parsons
CORNING INC	David Kozischek
CREDO SEMICONDUCTOR	Fang Cai
DATA CENTER SYSTEMS	Steve Eisele
DELL TECHNOLOGIES INC	David Piehler
II-VI INC	Vera Koleva
	Roberto Rodes
KEYSIGHT TECHNOLOGIES INC	Stephen Didde
MACOM	Thomas Palkert
MARVELL SEMICONDUCTOR INC	Raul Oteyza
	Dean Wallace

MEDIATEK USA INC	Henry Park
MOLEX INC	Egide Murisa
OFS FITEL LLC	Mabud Choudhury
PANDUIT CORPORATION	Jose Castro
TE CONNECTIVITY	Daniel Gorenc
TELEDYNE LECROY CORPORATION	Henry Poelstra

FC-GS-9 ad hoc, members

Organization	Representative(s)
BROADCOM INC	Howard Johnson
	David Peterson
	James Smart
CISCO SYSTEMS INC	Harsha Bharadwaj
	Mike Blair
	Edward Mazurek
DELL INC	David Brown
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORPORATION	Patty Driever
	Roger Hathorn
NETAPP INC	Frederick Knight
VIAVI SOLUTIONS INC	Jason Rusch

FC-LS-5 ad hoc, members

Organization	Representative(s)
BROADCOM INC	Howard Johnson
	David Peterson
	James Smart
CISCO SYSTEMS INC	Harsha Bharadwaj
	Mike Blair
	Edward Mazurek

HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORP	Patty Driever
	Roger Hathorn
NETAPP INC	Frederick Knight
VIAVI SOLUTIONS INC	Jason Rusch

FC-FS-6 ad hoc, members

Organization	Representative(s)
BROADCOM	Howard Johnson
	Anil Mehta
	David Peterson
	James Smart
	Steven Wilson
CISCO SYSTEMS INC	Harsha Bharadwaj
	Mike Blair
	Ed Mazurek
	Xiaohong Wu
DELL INC	David Brown
HEWLET PACKARD ENTERPRISE	Barry Maskas
IBM	Patty Driever
	Roger Hathorn
MARVELL SEMICONDUCTOR INC	Craig Carlson
	Raul Oteyza
	Dean Wallace
NETAPP INC	Frederick Knight

FC-RDMA ad hoc, members

Organization	Representative(s)
BROADCOM INC	Howard Johnson

	David Peterson
	James Smart
CISCO SYSTEMS INC	Harsha Bharadwaj
	Mike Blair
	Edward Mazurek
DELL INC	David Brown
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORPORATION	Roger Hathorn
MARVELL SEMICONDUCTOR INC	Craig Carlson
NETAPP INC	Frederick Knight
VIAVI SOLUTIONS INC	Jason Rusch

FC-NVMe-3 ad hoc, members

Organization	Representative(s)
BROADCOM INC	Howard Johnson
	David Peterson
	James Smart
CISCO SYSTEMS INC	Harsha Bharadwaj
	Mike Blair
	Edward Mazurek
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORPORATION	Patty Driever
	Roger Hathorn
MARVELL SEMICONDUCTOR INC	Craig Carlson
NETAPP INC	Frederick Knight
VIAVI SOLUTIONS INC	Jason Rusch

FC-SP-3 ad hoc, members

Organization	Representative(s)
BROADCOM INC	Howard Johnson
	David Peterson
	James Smart
CISCO SYSTEMS INC	Harsha Bharadwaj
	Edward Mazurek
DELL INC	David Brown
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORPORATION	Patty Driever
	Roger Hathorn
MARVELL SEMICONDUCTOR INC	Craig Carlson
NETAPP INC	Frederick Knight
VIAVI SOLUTIONS INC	Jason Rusch

Joint T11.2/T11.3 ad hoc, members

Organization	Representative(s)
---------------------	--------------------------

Annex B Supporting Documents

B.1 T11 Project Status

The following table indicates the status of all active T11 projects. It reflects the official status as reported on the T11 web site as of the T11 regular meeting #174 held on 08 December 2022.

Standard	Status	Action	Target or Reaffirm Date	Editor	Ad Hoc Chair	Secretary
Projects in Development Stage						
FC-FS-6	In dev.	T11 LB	Apr-22	Carlson	Peterson	Driever
FC-GS-9	In dev.	To T11	Apr-23	Rusch	Peterson	Johnson
FC-LS-5	In dev.	To T11	Jun-23	Carlson	Driever	Rusch
FC-MSQS-3	In dev.	To T11	Jun-23	Castro	Wallace	Wallace
FC-PI-8	In dev.	1 st PR	Feb-23	Rusch	Wallace	Wallace
FC-RDMA	In dev.	To T11.	Jun.23	Peterson	Carlson	Peterson
FC-SW-8	In dev	To T11	Apr 23	Peterson	Carlson	Peterson
FC-NVMe-3	In dev.	To T11	Oct 23	Peterson	Carlson	Hathorn
FC-SP-2/AM2	In dev	1 st PR	Feb 23	Peterson	Hathorn	Peterson
FC-SP-3	In dev	ToT11	Dec 23	Peterson	Hathorn	Peterson
FC-PI-9	In dev	ToT11	Dec 25	Rusch	Wallace	Wallace
Projects in Approval Stage						

B.2 INCITS Computer Systems Interconnect (SC 25 / WG4) project status

The following tables indicates the status of all active INCITS Computer Systems Interconnect (SC 25 / WG4) TAG projects. It reflects the official status as reported at the Fibre Channel (T11) regular meeting #174, 08 December 2022 in document T11-2022-00362-v000. The SC 25/WG 4 TAG project database is available in document [sc25-wg4-2018-00011-TAG-Project-Database](#).

B.2.1 Active Fibre Channel (T11) Computer Systems Interconnection (SC25 WG4 TAG) Projects

	ISO/IEC # (T11 allocated)	Status
No items at this time		