



InterNational Committee for Information Technology Standards
(INCITS) Secretariat: Information Technology
Industry Council (ITI) 1101 K Street NW, Suite 610,
Washington, DC 20005

www.INCITS.org



T11-2019-00373-v000

**Draft Minutes
INCITS Fibre Channel (T11) Technical Committee
Regular Meeting #156
05 December 2019 – 1 PM to 4 PM CST
New Orleans, LA**

1 Opening Remarks and Introductions

1.1 Introductory Remarks

TC T11 chair Steve Wilson (Broadcom) convened regular meeting #156 of the INCITS Fibre Channel (T11) Technical Committee on Thursday, 05 December 2019 at 1:02 PM CST. He introduced himself and thanked our host SNIA/SFF for the meeting facilities and amenities.

He next introduced Craig Carlson (Marvell) as vice chair and Patty Driever (IBM) as secretary.

1.2 Self-introductions

The chair requested those present to introduce themselves, with identification of the organizations they represent.

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 ANSI 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 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 T11-2019-00330-v001. The chair presented the agenda with final updates as T11-2019-00330-v002 and made a call for any changes and new agenda items. No changes or new items were requested.

Chris Lyon (Amphenol) moved and Dave Peterson (Broadcom) seconded that T11-2019-00330-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.

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:

- Mike Davis was removed as Alternate for Amphenol Corporation. Other representation for Amphenol remains the same.
- Mark Allen was added as an Alternate for Cisco. Other representation for Cisco remains

the same.

- Gary Irwin was removed as Alternate for CommScope. Other representation for CommScope remains the same.
- Jonathan King was removed as Alternate for Finisar Corporation. Other representation for Finisar remains the same.
- William Peters was removed as Alternate for Foxconn Interconnect Technology (FIT) Ltd. Other representation for FIT remains the same.
- Adrian Butter was removed as Principal for Global Foundries US2 LLC. John Ewen became Principal. Other representation for Global Foundries remains the same.
- Vijay Rao was added as Alternate for NetApp Inc. Other representation for NetApp remains the same.
- Matt Schumacher was added as Alternate for TE Connectivity. Other representation for TE Connectivity remains the same.
- Paul Luber was removed as Alternate for Microsoft Corporation. Other representation for Microsoft remains the same.
- Hajime Takahashi was removed as Alternate for Keysight Technologies Inc.. Other representation for Keysight remains the same.
- John Petrilla was removed as an Alternate for Foxconn Interconnect Technologies and added as an Alternate for Broadcom, Inc. Other representation for Broadcom remains the same.

3.3 New Voting Memberships

- No new voting memberships were granted at this meeting.

3.4 Voting memberships in jeopardy for attendance

- **Corning** was in jeopardy for non-attendance but is present at this meeting so retains voting membership.
- **Macom** was in jeopardy for non-attendance but is present at this meeting so retains voting membership.
- **OFS** was in jeopardy for non-attendance but is present at this meeting so retains voting membership.
- **Teledyne-LeCroy** was in jeopardy for non-attendance but is present at this meeting so retains voting membership.
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Notification of membership jeopardy by T11 Chair was sent via email on October 31, 2019 (T11-2019-00329-v000).

3.5 Voting memberships in jeopardy for non-payment of dues

- No member is in jeopardy for non-payment of dues for this meeting cycle. However the Chair reminded everyone that invoices for 2020 were sent out and are due Jan 3, 2020.

3.6 Voting memberships in jeopardy for letter ballot performance

- Macom is in jeopardy for letter ballot performance for not having voted on two of last 3 T11 letter ballots.

3.7 Membership for this meeting

Technical Committee T11 had 18 voting members at the T11 regular meeting 10 October 2019. With no changes in voting membership, the voting membership of T11 remains at 18 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 membership for this meeting is 18. One third of the total membership for this meeting is 7. The number of member organizations that responded to the call for quorum was 14. This exceeds or equals one third of the total membership for this meeting and also exceeds or equals 7. A quorum is therefore present for this meeting.

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 #155

The prior regular meeting of the INCITS Fibre Channel (T11) Technical Committee was #155 on 10 October 2019. The draft Minutes of that meeting were posted as document T11/2019-00319-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.

Dave Peterson (Broadcom) moved and Chris Lyon (Amphenol) seconded to accept T11/2019-00319-v000 as the Minutes of T11 meeting #155 on 10 October 2019. The motion passed by acclamation.

See action item [19-024](#).

6 Review of Old Action Items

19-021	T11 secretary to post approved Minutes of T11 meeting #154 as agreed at T11 meeting #155. (See clause 5). Completed by posting T11-2019-00326-v000 on October 12, 2019.
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19-022	T11 chair to request INCITS Secretariat initiate a letter ballot on the FC-NVMe-2 draft standard Rev. 1.07 contained in T11-2019-00210-v002 . See Clause 11.2 . Completed by email to Rachel Porter on November 05, 2019 (T11-2019-00331-v000)
19-023	T11 chair to update T11 meeting schedule to reflect changes noted at this meeting. See Clause 19.4 . Completed by Chair on December 03, 2019.

7 Review of T11 Project and Proposal Status

7.1 Project Proposals

7.1.1 None

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 FC-NVMe-2 Closed on November 20, 2019. The results were that it passed with a vote of Yes-15, No-1, Abstentions-01, and Non-Voting-3.

9 Old Business

No old business was reopened.

10 Task Group T11.2 - Physical Interfaces

10.1 Report to T11 Plenary ([T11-2019-00377-v000](#))

Task Group chair Tom Palkert (Macom) gave the report posted as T11-2019-00377-v000 on activity at T11.2.

10.2 Actions

No actions were brought forward during this meeting cycle for TG T11.2.

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 ([T11-2019-00374-v000](#))

Task Group chair Craig Carlson (Marvell) presented the information posted as T11-2019-00374-v000 on activity at T11.3.

11.2 Actions

11.2.1 Craig Carlson made a request to T11 to accept [T11-2019-00341-v001](#) as T11 letter ballot comment resolution and forward the resulting FC-NVMe-2 draft standard Rev. 1.08 contained in [T11-2019-00210-v004](#) to T11 for further processing, including first public review. Seconded by Dave Peterson (Broadcom). Motion carried by a vote of For-14, Against-0, Abstentions-0. Steve Wilson, T11 Chair, indicated that he has received an email from Marvell stating that they have changed their letter ballot vote from a 'no' to a 'yes' based on the aforementioned comment resolution. See action item [19-025](#).

11.3 Other Items

No other items were presented for TG T11.3.

12 Joint TG T11.2 / T11.3 Items ([T11-2019-00366-v000](#))

Chair indicated that the joint Task Group meeting report has been posted as T11-2019-00307-v000 on activity at the joint T11.2/T11.3 working group. We did not review it explicitly as it was reviewed in the earlier T11.2 and T11.3 plenary meetings.

13 T11 project activities

None for this meeting cycle.

14 Review of International Activity

14.1 INCITS SC 25 / WG4 TAG Status Report ([T11-2019-00339-v000](#))

Dave Peterson (Broadcom) presented the information posted as T11-2019-00339-v000 on INCITS SC 25 / WG4 TAG project status (see [annex B.2](#)).

15 T11 New Business

No new business was presented at this meeting.

16 Call for Patents

16.1 Patent information registry

The chair indicated that the current record of responses to prior calls for patents can be found in the T11 web site at <http://www.t11.org/t11/docreg.nsf/v2t?openForm&ent=35>.

16.2 Call for Patents

16.2.1 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 T11-2010-008v0.

16.2.2 INCITS/ISO patent disclosure form

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

No company responded to the call for patents.

17 Liaison Reports

17.1 T11 report ([T11-2019-00332-v000](#)), INCITS Liaison report ([T11-2019-00362-v000](#))

Steve Wilson (Broadcom) presented the information posted as T11-2019-00332-v000 on activity at T11 as reported to other organizations, and the information posted as T11-2019-00362-v000 on activity at INCITS other than T11 project status.

17.2 TC T10 (no document)

Fred Knight (NetApp) gave a verbal report on activity at T10.

17.3 FCIA ([T11-2019-00363-v000](#))

Chris Lyon (Amphenol) gave report T11-2019-00363-v000 on activity at FCIA.

17.4 IEEE 802.3 ([T11-2019-00367-v000](#))

This report has been posted and is available on the website for review. Questions can be directed to Tom Palkert or Steve Wilson.

17.5 INCITS TC CS1 (verbal)

Chair Steve Wilson gave a verbal update that Eric Hibbard is no longer with Hitachi Vantara and he's not sure he can continue in his liaison capacity. Nevertheless he felt T11 may want to continue activity in this area.

17.6 SNIA and DMTF ([T11-2019-00370-v000](#))

Fred Knight (NetApp) discussed report T11-2019-00370-v000 on SNIA and DMTF 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 DCS and Todd Wheeler in Fort Worth, TX, 03-07 February 2020.

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 2019–2020 meeting schedule

The chair announced the following schedule for 2019-2020.

Date	Location	Host Organization	Host Person
February 4-8, 2019	Ft. Worth, TX	Teledyne-LeCroy	Dave Rogers
April 8-12, 2019	Boca Raton, FL	Amphenol	Chris Lyon
June 3-7, 2019	La Jolla, CA	Broadcom	Steve Wilson
August 12-16, 2019	Santa Fe, NM	Marvell	Craig Carlson
October 7-11, 2019	Couer d’Alene, ID	FCIA	Shelby Laramy
December 2-6, 2019	New Orleans, LA	SFF/SNIA	Greg McSorley
February 3-7, 2020	Fort Worth, TX	DCS	Todd Wheeler
April 6-10, 2020	(tbd)	Amphenol	Chris Lyon
June 1-5, 2020	(tbd)	Broadcom	Steve Wilson
August 10-14, 2020	(tbd)	Marvell	Craig Carlson
October 5-9, 2020	(tbd)	(tbd)	
December 7-11, 2020	(tbd)	(tbd)	

19.4 Approval of Meeting Venues

19.4.1 April 2020

Chris Lyon (Amphenol) indicated that the hotel rate for the Wyndham, Deerfield Beach is \$265 per night, which is above the normal guidelines. As a result, we took a vote to approve this venue. Motion carried 10-2-3.

19.4.2 June 2020

Duluth, MN, hosted by Marvell. Rate is within the T11 guidelines.

19.4.3 October 2020

Hilton Head, SC, hosted by SNIA/SFF. Rate is within the T11 guidelines.

19.4.2 December 2020

Tucson, AZ, hosted by FCIA. Rate is within the T11 guidelines.

Steve Wilson (Broadcom) made a motion to approve the above June, October, and December venues, and motion was seconded by Chris Lyon (Amphenol). Motion carried 15-0-0.

See action item [19-026](#).

Chair also presented proposed 2021 T11 meeting dates for the group's review. He then made a motion to approve these dates, seconded by Greg McSorley (Amphenol). Motion carried 15-0-0.

19.5 Next meeting information

The chair reminded the membership that the next T11 plenary week is hosted by DCS and Todd Wheeler in Fort Worth, TX, February 03-07, 2020. He noted that detailed information about the hotel and the locale can be found on the INCITS website in the T11 Meeting Information folder under February 2020.

19.6 Letter to travel representatives on hotel rates ([T11-2017-00150-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 T11-2017-00150-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 2020 T11 meetings

The vice chair Craig Carlson (Marvell) 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 2020.

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 #156 is shown in annex A.2. 21 people from 16 member organizations were in attendance.

21 Review of Action Items

19-024	T11 secretary to post approved Minutes of T11 meeting #155 as agreed at T11 meeting #156. (See clause 5)
19-025	T11 chair to request INCITS Secretariat initiate a first public review on the FC-NVMe-2 draft standard Rev. 1.08 contained in T11-2019-00210-v004 . See Clause 11.2 .
19-026	T11 chair to update T11 meeting schedule to reflect changes noted at this meeting. See Clause 19.4 .

22 Adjournment

Greg McSorley (Amphenol) moved to adjourn at 1:58 PM. 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:

Mr. James Coomes

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 #155 of the INCITS Fibre Channel (T11) Technical Committee, including the recognized representatives of each member organization:

Organization	Representative Type	Representative
Amphenol	Principal	Gregory McSorley
	Alternate	Brad Brubaker
	Alternate	Daniel Dillow
	Alternate	Chris Lyon
	Alternate	Alex Persaud
	Alternate	Hu Silver
Broadcom	Principal	Steven L. Wilson
	Alternate	David Baldwin

	Alternate	Evan Beauprez
	Alternate	Ben Chu
	Alternate	Adam Healey
	Alternate	Howard Johnson
	Alternate	Mark Jones
	Alternate	Anil Mehta
	Alternate	David Peterson
	Alternate	John Petrilla
	Alternate	Rob Peterson
	Alternate	James Smart
Cisco	Principal	Mike Blair
	Alternate	Mark Allen
	Alternate	Harsha Bharadwaj
	Alternate	Rajesh L G
	Alternate	Fabio Maino
	Alternate	J Metz
	Alternate	Joe Pelissier
Commscope	Principal	Yang (Sunny) Xu
	Alternate	Gary Gibbs
	Alternate	Paul Kolesar
Corning	Principal	Doug Coleman
	Alternate	Steven E. Swanson
DCS	Principal	Todd Wheeler
	Alternate	Steve Eisele
Dell	Principal	Alan Rajapa
	Alternate	David Black
	Alternate	David Brown
	Alternate	Gaurav Chawla
	Alternate	Erik Smith
	Alternate	Joseph White

	Alternate	Jeff Young
Finisar	Principal	Vipul Bhatt
	Alternate	Vera Koleva
	Alternate	Lance Thompson
Fujitsu America Inc	Principal	Mark Malcolm
	Alternate	Kun Katsumata
	Alternate	Osamu Kimura
	Alternate	Eugene Owens
Global Foundries	Principal	John Ewen
	Alternate	Jon Garlett
Hewlett Packard Enterprise	Principal	Barry Maskas
	Alternate	Curtis Ballard
	Alternate	Rupin Mohan
	Alternate	Krishna Babu Puttagunta
IBM	Principal	Roger Hathorn
	Alternate	Patty Driever
	Alternate	Stephen Guendert
Macom	Principal	Tom Palkert
Marvell Semiconductor Inc	Principal	Craig W. Carlson
	Alternate	Anshul Agarwal
	Alternate	Sanjaya Anand
	Alternate	Girish Basrur
	Alternate	Kathy Caballero
	Alternate	Michael Dudek
	Alternate	Arun Easi
	Alternate	Robert Friend
	Alternate	Duane Grigsby
	Alternate	Rick Hicksted Jr.
	Alternate	Ali Khwaja
	Alternate	Stephen Lam
	Alternate	Ray Leung

	Alternate	Akinori Maeda
	Alternate	Praveen Midha
	Alternate	Trinh Nguyen
	Alternate	Raul Oteyza
	Alternate	Eddy Soetjahja
	Alternate	Alan Spalding
	Alternate	Gourangadoss Sundar
	Alternate	Darren Trapp
	Alternate	Andrew Vasquez
	Alternate	Dean Wallace
NetApp	Principal	Frederick Knight
	Alternate	John Meneghini
	Alternate	Urmi Misra
	Alternate	Vijay Rao
OFS	Principal	Roman Shubochkin
	Alternate	Mabud Choudhury
Teledyne LeCroy	Principal	David Rodgers
	Alternate	Douglas Lee
	Alternate	Henry Poelstra
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 #155 of the INCITS Fibre Channel (T11) Technical Committee, including the recognized representatives of each member organization:

Organization	Representative Type	Representative
Anritsu	Principal	Tadanori Nishikobara
Ciena	Principal	Stephen Shew

	Alternate	Sebastien Gareau
Futurewei	Principal	Timothy Jeffries
	Alternate	Lei Wang
Hitachi Vantara	Principal	Eric Hibbard
	Alternate	Vincent Franceschini
	Alternate	Akinobu Shimada
	Alternate	Erwin van Londen
	Alternate	Ken Wood
Keysight Technologies	Principal	Stephen Didde
	Alternate	Steve Sekel
	Alternate	Joachim Vobis
Lumentum Operations	Principal	David Lewis
MediaTek	Principal	Tamer Ali
	Alternate	Mau-Lin Wu
Microsoft	Principal	Lee Prewitt
	Alternate	Steve Olsson
Molex	Principal	Alexandra Haser
	Alternate	Jay Neer
	Alternate	Tom Palkert
	Alternate	Scott Sommers
Panduit	Principal	Jose Castro
	Alternate	Bulent Kose
	Alternate	Robert Reid
	Alternate	Steve Skiest
TE Connectivity	Principal	Nathan Tracy
	Alternate	Jeff Mason
	Alternate	Matt Schumacher
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 #155 of the INCITS Fibre Channel (T11) Technical Committee:

Organization	Representative(s)
AMPHENOL CORP	Chris Lyon
	Gregory McSorley
BROADCOM INC	Steven L. Wilson
	David Peterson
	John Petrilla
CISCO SYSTEMS INC	Mark Allen
	Mike Blair
COMMSCOPE	Sunny Xu
CORNING INC	Doug Coleman
DELL INC	Alan Rajapa
FINISAR CORPORATION	Lance Thompson
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORP	Patty Driever
	Roger Hathorn
KEYSIGHT TECHNOLOGIES INC	Stephen Didde
MACOM	Thomas Palkert
MARVELL SEMICONDUCTOR INC	Craig W. Carlson
NETAPP INC	Frederick Knight
OFS FITEL LLC	Mabud Choudhury

TELEDYNE LECROY CORPORATION	David Rodgers
VIAVI SOLUTIONS INC	Jason Rusch

A.2.2 Ad hoc meeting attendance

FC-NVMe-2 ad hoc, members

Organization	Representative(s)
BROADCOM INC	David Baldwin
	David Peterson
	Steven Wilson
CISCO SYSTEMS INC	Mike Blair
	J Metz
DELL INC	Alan Rajapa
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORP	Patty Driever
	Roger Hathorn
MARVELL SEMICONDUCTOR	Craig Carlson
TELEDYNE LECROY CORPORATION	David Rodgers
VIAVI SOLUTIONS	Jason Rusch

FC-SW-8 ad hoc, members

Organization	Representative(s)
BROADCOM	David Baldwin
	Howard Johnson
	David Peterson
	Steven Wilson
CISCO SYSTEMS INC	Mike Blair
	Mark Allen
DELL INC	Alan Rajapa

FINISAR CORPORATION	Lance Thompson
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORP	Patty Driever
	Roger Hathorn
MARVELL SEMICONDUCTOR INC	Craig Carlson
VIAVI SOLUTIONS	Jason Rusch

FC-PI-8 ad hoc, members

Organization	Representative(s)
AMPHENOL CORPORATION	Gregory McSorley
BROADCOM INC	Ben Chu
	Anil Mehta
CISCO SYSTEMS INC	Mark Allen
COMMSCOPE	Sunny Xu
CORNING INC	Doug Coleman
FINISAR CORPORATION	Lance Thompson
FOXCONN INTERCONNECT TECHNOLOGY LTD (FIT)	John Petrilla
HEWLETT PACKARD ENTERPRISE	Barry Maskas
KEYSIGHT TECHNOLOGIES INC	Stephen Didde
MACOM	Thomas Palkert
MARVELL SEMICONDUCTOR INC	Dean Wallace
OFS FITEL LLC	Mabud Choudhury

FC-GS-9 ad hoc, members

Organization	Representative(s)
BROADCOM INC	David Baldwin
	Howard Johnson
	David Peterson
	Steven Wilson

CISCO SYSTEMS INC	Mike Blair
	Mark Allen
DELL INC	Alan Rajapa
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORP	Patty Driever
	Roger Hathorn
VIAVI SOLUTIONS	Jason Rusch

FC-LS-5 ad hoc, members

Organization	Representative(s)
BROADCOM INC	David Baldwin
	Howard Johnson
	Dave Peterson
	Steven Wilson
CISCO SYSTEMS INC	Mike Blair
	J Metz
DELL INC	Alan Rajapa
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM CORP	Patty Driever
	Roger Hathorn
KEYSIGHT TECHNOLOGIES INC	Stephen Didde
MARVELL SEMICONDUCTOR INC	Craig Carlson
TELEDYNE LECROY CORPORATION	David Rodgers
VIAVI SOLUTIONS	Jason Rusch

FC-FS-6 ad hoc, members

Organization	Representative(s)
BROADCOM	David Baldwin
	Howard Johnson

	David Peterson
	Steven Wilson
CISCO	Mike Blair
	Mark Allen
DELL INC	Alan Rajapa
HEWLETT PACKARD ENTERPRISE	Barry Maskas
IBM	Patty Driever
	Roger Hathorn
MARVELL SEMICONDUCTOR INC	Craig Carlson
TELEDYNE LECROY CORPORATION	David Rodgers
VIAVI SOLUTIONS	Jason Rusch

FC-RDMA ad hoc, members

Organization	Representative(s)
NO MEETING	

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

Organization	Representative(s)
AMPHENOL CORP	Gregory McSorley
BROADCOM INC	David Baldwin
	Ben Chu
	Howard Johnson
	John Petrilla
	Steven Wilson
CISCO SYSTEMS INC	Mark Allen

	Mike Blair
DELL INC	Alan Rajapa
FINISAR CORPORATION	Lance Thompson
HEWLETT PACKARD ENTERPRISE	Barry Maskas
MACOM	Thomas Palkert
MARVELL SEMICONDUCTOR INC	Craig Carlson
OFS FITEL LLC	Mabud Choudhury
TELEDYNE LECROY CORPORATION	David Rodgers
VIAMI SOLUTIONS	Jason Rusch

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 #156 held on 05 December 2019.

Standard	Status	Action	Target or Reaffirm Date	Editor	Ad Hoc Chair	Secretary
Projects in Development Stage						
FC-FS-6	In dev.	To T11	Dec-19	Carlson	Peterson	Driever
FC-GS-9	In dev.	To T11	Dec-20	Rusch	Peterson	Driever
FC-LS-5	In dev.	To T11	Jun-20	Carlson	Driever	Rusch
FC-PI-7P	In dev.	ToT11	Dec-19	Castro	Wallace	Wallace

FC-PI-8	In dev.	ToT11	Dec-20	Castro	Wallace	Wallace
FC-MSQS-3	In dev.	To T11	Dec-19	Castro	Wallace	Wallace
FC-NVMe-2	In dev.	To T11	Oct-19	Peterson	Carlson	Hathorn
FC-RDMA	In dev.	To T11.	Oct.20	Peterson	Carlson	Peterson
FC-SW-8	In dev	ToT11	Jun 20	Peterson	Carlson	Peterson
Projects in Approval Stage						
FC-PI-7	At INCITS	2 nd PR	Oct-19	Castro	Wallace	Wallace
FC-SW-7	At INCITS	Pre-Edit	Oct-10	Peterson	Carlson	Peterson
FC-LS-4	At INCITS	1 st PR	Feb-20	Carlson	Driever	Rusch
FC-GS-8	At INCITS	1 st PR	Feb-20	Rusch	Peterson	Driever

B.2 INCITS SC 25 / WG4 project status

The following tables indicates the status of all active INCITS SC 25 / WG4 TAG projects. It reflects the official status as reported at the T11 regular meeting #156, 05 December 2019 in document T11-2019-00339-v000. The SC 25/WG 4 TAG project database is available in document [sc25-wg4-2018-00011-TAG-Project-Database](#).

B.2.1 Active T11 SC25 WG4 TAG Projects

	ISO/IEC # (T11 allocated)	Status
FC-SP-2+AM1 NWIP	14165-432	Submitted in July 2018. Resubmission email from INCITS/TIA on January 18, 2019 Feb 22 – email from Juergen indicates IEC project was started JTC1-SC25/2860/NP ballot opened 3/1/2019 and closed 05/24/2019 – Stage: ACD – Approved for CD 9/16/19 – CD circulated on 9/13/19 <ul style="list-style-type: none"> - International (comments) due date: 12/06/2019 - TAG (comments) Deadline: 11/06/2019 Stage: CD – Draft circulated as CD
FC-BB-6 Fast Track	14165-246	ISO ballot opened 3/21/2019 and closed 6/13/2019 Source and PDF in A4 format requested and provided PDF generated using Word source
FC-SB-6 Fast Track	14165-225	ISO ballot opened 3/21/2019 and closed 6/13/2019 Source and PDF in A4 format requested and provided PDF generated using Word source