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T11/15-492v0

**Pre-Draft Minutes**  
**INCITS Fibre Channel (T11) Technical Committee regular meeting #132**  
**10 December 2015 - 1 PM to 4 PM CST**  
**Dallas, TX**

## **1 Opening remarks and Introductions**

### **1.1 Introductory Remarks**

TC T11 chair Steve Wilson (Brocade) convened regular meeting #132 of the INCITS Fibre Channel (T11) Technical Committee on Thursday, 10 December 2015 at 1:00 PM CST. He introduced himself, and thanked Todd Wheeler and our host, Data Center Systems, for the meeting facilities and amenities.

He next introduced Claudio DeSanti (Cisco) as vice chair and Richard Johnson (Finisar) 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 Anti-trust 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 subclause 2.2 of INCITS Policies and Guidelines (RD1, found at <http://www.incits.org/standards-information/reference-documents>).

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://www.t11.org/att>, 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.

## **2 Approval of the Agenda**

An electronic version of the agenda was posted as T11/15-414v1. The chair presented the agenda with final updates as T11/15-414v2 and made a call for any changes and new agenda items. No changes or new items were requested.

Joachim Vobis (Keysight) moved and Michael Roy (Oracle) seconded that T11/15-414v2 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 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 last meeting**

The following changes in member representation have been made since the last meeting:

- HP becomes HPE and loses voting membership.

- Avago: representation has been reduced, from Randy Clark as Principal and David Cunningham, Gautam Shiroor, Adam Healey, John Lohmeyer, Evan Beauprez, John Petrilla, and David Baldwin as Alternates to Gautam Shiroor as Principal and Evan Beauprez, Adam Healey, and David Baldwin as Alternates.

### **3.3 New voting memberships**

- None for this plenary meeting cycle.

### **3.4 Voting memberships in jeopardy for attendance**

- DCS, Dell, Fujitsu, OFS, Oracle, and Panduit were in jeopardy for non-attendance going into this meeting. DCS, OFS, and Oracle had members in attendance, hence retain voting rights. Dell, Fujitsu, and Panduit lose voting membership for this meeting cycle.

### **3.5 Voting memberships in jeopardy for non-payment of dues**

- OCZ loses membership for non-payment of fees.

### **3.6 Voting memberships in jeopardy for letter ballot performance**

FCI is in jeopardy for letter ballot performance this meeting cycle.

### **3.7 Membership for this meeting**

Technical Committee T11 had 26 voting members at the T11 regular meeting 8 October 2015. With no members gaining voting membership and five members losing voting membership, the voting membership of T11 becomes 21 effective 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 21. One third of the total membership for this meeting is 7. 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 4. 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.

Ralph Weber (Western Digital and T10 chair) and Roger Cummings (self) responded.

#### **4 Document Distribution**

The chair described the process for T11 document distribution via the T11 Web Site. He reminded those present how to access meeting documents via the red check mark on the T11 Web Site Center page (<http://www.t11.org/t11/docreg.nsf/center>), and that documents are also available at <ftp://ftp.t11.org/latest>.

#### **5 Approval of Minutes - Meeting #131**

The prior regular meeting of the INCITS Fibre Channel (T11) Technical Committee was #131 on 8 October 2015. The draft Minutes of that meeting were posted as document T11/15-368v0.

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 ([richard.johnson@finisar.com](mailto:richard.johnson@finisar.com)) or at the subsequent meeting in person. No corrections were requested.

Lou Ricci (EMC) moved and Roger Hathorn (IBM) seconded to accept T11/15-368v0 as the Minutes of T11 meeting #131 on 8 October 2015. The motion passed by acclamation.

See action item 15-033.

## 6 Review of Old Action Items

- 15-005 T11 International Representative to advise INCITS that INCITS TC T11 recommends the INCITS Executive Board approve the New Work Item Proposal (T11/15-062v0) for Fibre Channel - Single-Byte Command Code Sets Mapping Protocol - 5 (FC-SB-5) as a US contribution to JTC 1 / SC 25 and name David Peterson as project editor. Open.
- 15-006 T11 International Representative to advise INCITS that INCITS TC T11 recommends the INCITS Executive Board approve the New Work Item Proposal (T11/15-063v0) for Fibre Channel - Backbone - 6 (FC-BB-6) as a US contribution to JTC 1 / SC 25 and name David Peterson as project editor. Open.
- 15-023 T11 Chair to send email to INCITS (Lynn) to request we officially establish a liaison relationship with the Consortium for On-Board Optics. Closed, overtaken by events.
- 15-024 T11 secretary to post approved Minutes of T11 meeting #130 as agreed at T11 meeting #131. Carry over. See action item 15-034.
- 15-025 T11 Chair to forward FC-FS-4 to INCITS for further processing and first public review. Completed by email to Rachel Porter on November 3, 2015. (T11/15-405v0)
- 15-026 T11 International representative to inform INCITS that INCITS TC T11 recommends to approve NWIP 14165-432, Information Technology - Fibre Channel - Security Protocols-2 (FC-SP-2). Completed by email to Rachel Porter on October 19, 2015. (T11/15-385v0)
- 15-027 T11 International representative to inform INCITS that INCITS TC T11 recommends to stabilize ISO/IEC 14165-114:2005 (vers 2) Information Technology - Fibre Channel - Part 114: 100 MB/s balanced copper physical interface (FC-100-DF-EL-S). Completed by email to Rachel Porter on October 27, 2015. (T11/15-397v0)
- 15-028 T11 International representative to inform INCITS that INCITS TC T11 recommends to stabilize ISO/IEC 14165-222:2005 (vers 2) Information Technology - Fibre Channel - Part 222: Single-byte command code 2 mapping protocol (FC-SB-2). Completed by email to Rachel Porter on October 27, 2015. (T11/15-398v0)
- 15-029 T11 International representative to inform INCITS that INCITS TC T11 recommends to stabilize ISO/IEC 14165-241:2005 (vers 2) Information Technology - Fibre Channel - Part 241: Backbone 2 (FC-BB-2). Completed by email to Rachel Porter on October 27, 2015. (T11/15-399v0)
- 15-030 T11 Chair to send a letter to INCITS notifying T11 interest in COBO liaison. Completed by email to Lynn Barra on November 4, 2015. (T11/15-420v0)
- 15-031 Lou Ricci (EMC) to update guide to hosts. Carry over.
- 15-032 T11 Chair to discuss FC-EE disposition with INCITS. Completed.

## 7 Review of T11 Project and Proposal Status

### 7.1 Projects Proposals

#### 7.1.1 FC-GS-8

The FC-GS-8 project proposal has been approved, INCITS BSR 548.

### 7.1.2 FC-SW-7

The FC-SW-7 project proposal has been approved, INCITS BSR 547.

## 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 [www.t11.org](http://www.t11.org), by selecting either member or guest access, then using the button "Projects".

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

There were no new non-ISO letter ballots during this plenary meeting cycle.

## 9 Old Business

Because of the critical nature of recent activities concerning the T11 website, Roger Cumming's report T11/15-476v1 from its normal sequence (clause 18.2.1) was moved forward in the agenda so that the maximum number of members could hear it.

## 10 Task Group T11.2 - Physical Interfaces

### 10.1 Report to T11 Plenary (T11/15-471v1)

Task Group vice chair Dean Wallace (Qlogic) presented the information posted as T11/15-471v1 on activity at T11.2.

### 10.2 Actions

#### 10.2.1 FC-MSQS-3 Project Proposal (T11/15-336v3)

Dean Wallace (Qlogic) moved and Dave Peterson (Brocade) seconded the motion that FC-MSQS-3 project proposal T11/15-336v3 be forwarded to INCITS for further processing.

A show-of-hands vote was taken, with 18 favoring, 0 opposing, and 1 abstaining. Motion passes.

See action item 15-035.

#### 10.2.2 FC-PI-5/AM1 comment resolution (T11/15-473v0)

Dean Wallace (Qlogic) moved and Dave Peterson (Brocade) seconded the motion to accept T11/15-473v0 as the resolution of the letter ballot comments on FC-PI-5/AM1 and to forward Revision 1.0 of FC-PI-5/AM1 (T11/15-222v1), INCITS 479-2011/AM1-201x, to INCITS for further processing including public review.

A show-of-hands vote was taken, with 20 favoring, 0 opposing, and 0 abstaining. Motion passes.

See action item 15-036.

### **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 (T11/15-486v0)**

Task Group chair Craig Carlson (QLogic) presented the information posted as T11/15-486v0 on activity at T11.3.

### **11.2 Actions**

#### **11.2.1 Request for FC-GS-7 Letter Ballot**

Craig Carlson (Qlogic) moved and Dave Peterson (Brocade) seconded the motion that T11 accept document T11/15-016vA as the resolution to FC-GS-7 advisory letter ballot comments and to forward document T11/15-252v3, T11/Project 2204-D/Rev 10.7 to INCITS for further processing including first public review.

A show of hands vote was taken, with 20 favoring, 0 opposing, and 0 abstaining. Motion passes.

See action item 15-037.

### **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 (T11/15-466v0)**

Task Group vice chair Dean Wallace (Qlogic) presented the information posted as T11/15-466v0 on activity at the joint T11.2 / T11.3 meeting.

### **12.2 Actions**

#### **12.2.1 FC-EE-TR Project Proposal (T11/15-421v0)**

Steve Wilson (Brocade) moved and Jay Neer (Molex) seconded the motion to forward FC-EE-TR project proposal T11/15-421v0 to INCITS.

A show of hands vote was taken, with 17 favoring, 0 opposing, and 2 abstaining. Motion passes.

See action item 15-038.

### **12.3 Other items**

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

## **13 T11 project activities**

No T11 project activities were reviewed during this plenary meeting cycle.

## 14 Review of International Activity

### 14.1 ISO Status Report (T11/15-469v0)

The T11 International Representative Dave Peterson (Brocade) presented the information posted as T11/15-469v0 on project status at ISO (see annex B.2).

### 14.2 ISO Motion (US roll call votes) (T11/15-453v0)

#### 14.2.1 ISO Motion 1

Dave Peterson (Brocade) moved and Lou Ricci (EMC) seconded the following motion (T11/15-453v0):

INCITS TC T11 recommends to Stabilize the following International Standard:

ISO/IEC 14165-122:2005, Information Technology -- Fibre Channel - Part 122: Arbitrated Loop-2 (FC-AL-2)

A show-of-hands vote was taken, with 20 favoring, 0 opposing, and 0 abstaining. Motion passes.

See action item 15-028.

#### 14.2.2 Answers to US systematic review questions:

		ISO/IEC 14165-122:2005
1	Recommended action Withdraw* Revise/Amend* Confirm  Abstain due to lack of consensus Abstain due to lack of access to national expertise Stabilize	Stabilize
2	Has this International Standard been adopted or is it intended to be adopted in the future as a national standard or other publication?	Yes, the US will be adoption this international standard
3	Is the national publication identical to the International Standard or was it modified? 1. Reply only if the answer to Question 2 is "Yes"	Identical
4	If this International Standard has not been nationally adopted, is it applied or used in your country without national adoption or are products/processes/services used in your country based on this standard?	No; unknown
5	Is this International Standard, or its national adoption, referenced in regulations in your country?	No; unknown
6	In case the committee decides to Revise/Amend, will/are you committed to participate actively in the development of the project?	David Peterson (dpeterso@Brocade.com)

## 15 T11 New Business

There was no new business brought forward for this meeting cycle.



## **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/patentdoc?OpenView>.

### **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 T11/10-008v0.

#### **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 (T11/15-400v0), INCITS Liaison report (T11/15-428v0)**

Steve Wilson (Brocade) presented the information posted as T11/15-400v0 on activity at T11 as reported to other organizations, and the information posted as T11/15-428v0 on activity at INCITS other than T11 project status.

### **17.2 TC T10 (T11/15-101v4)**

Ralph Weber (Western Digital) presented the information posted as T11/15-101v4 on activity at INCITS Technical Committee T10.

### **17.3 FCIA (T11/15-462v0)**

Jay Neer (Molex) gave report T11/15-462v0 on activity at FCIA.

### **17.4 IEEE 802.3 (T11/15-487v0)**

The IEEE liaison report T11/15-487v0 was not presented. Members were directed to consult the report on the meeting disk.

### **17.5 INCITS TC CS1 (none)**

No reports on INCITS TC CS1 activity were given during this plenary meeting cycle.

### **17.6 SNIA and DMTF (T11/15-485v0)**

Fred Knight (Netapp) gave the information posted as T11/15-485v0 on SNIA and DMTF activities.

## 17.7 NVMe

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

## 17.8 COBO (T11/15-460v0)

Dave Lewis (Lumentum) discussed T11/15-460v0 on the Consortium for On-Board Optics (COBO) standards development.

## 18 Administrative Matters

### 18.1 Officer Appointments

Officers of this Technical Committee and its Task Groups are:

T11 Chair	Steve Wilson (Brocade)
T11 International Representative	David Peterson (Brocade)
T11 Secretary	Richard Johnson (Finisar)
T11 Vice chair	Claudio DeSanti (Cisco)
T11.2 Chair	Tom Palkert (Luxtera)
T11.2 Secretary	Richard Johnson (Finisar)
T11.2 Vice-chair	Dean Wallace (QLogic)
T11.3 Chair	Craig Carlson (QLogic)
T11.3 Secretary	Patty Driever (IBM)
T11.3 Vice-chair	Lou Ricci (EMC)

### 18.2 T11 Information Technology

#### 18.2.1 Web site status (T11/15-476v1)

Roger Cummings (self) presented the web site status report T11/15-476v1 during the old business segment of the agenda.

## 19 Future Meeting Schedule

### 19.1 Authorization of adhoc meetings

The chair directed members to the T11 web site at <http://www.t11.org/t11/meet.nsf/intmeet> for 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 Avago and Shiroor Gautam in Huntington Beach, CA, 1-5 February 2016.

## 19.2 Guidelines for hosting T11 meetings

The chair advised that important information for those considering hosting a T11 meeting week may be found on the T11 web site at <http://www.t11.org/t11/meet.nsf/host>. 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 - 2015-2016 future meeting plans

The chair announced the following schedule for 2016 meetings.

Feb 1-5, 2016	Huntington Beach, CA	Emulex	Gautam Shiroor
April 4-8, 2016	Deerfield Beach, FL	Luxtera	Tom Palkert
June 6-10, 2016	(tbd)		
Aug 1-5, 2016	(tbd)	Qlogic	Craig Carlson
Oct 3-7, 2016	New Orleans, LA	Brocade	Steve Wilson
Dec 5-9, 2016	(tbd)		

## 19.4 Approval of meeting venues

### 19.4.1 Proposed December 2016 meeting venue

Steve Wilson (Brocade) moved and Jay Neer (Molex) seconded to approve the December 2016 meeting venue of Savannah, GA, to be hosted by FCIA.

A show-of-hands vote was taken, with 19 favoring, 0 opposing, and 0 abstaining. Motion carries.

## 19.5 Next meeting information, hosted by Avago and Gautam Shiroor in Huntington Beach, CA 1-5 February

The chair reminded the membership that the next T11 plenary week is hosted by Avago and Gautam Shiroor in Huntington Beach, CA, 1-5 February 2016. He noted that detailed information about the hotel and the locale can be found on the T11 web pages at [http://www.t11.org/t11/meet.nsf/sch/\\$first](http://www.t11.org/t11/meet.nsf/sch/$first).

## 19.6 Letter to travel representatives on hotel rates (T11/10-009v0)

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, reduce 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 T11/10-009v0 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 2016 T11 meetings**

The vice chair Claudio DeSanti (Cisco) presented the tentative meeting map of the next T11 meeting week. He advised members to refer to the T11 web site, [http://www.t11.org/t11/docreg.nsf/umap/\\$first](http://www.t11.org/t11/docreg.nsf/umap/$first), for the most recent meeting map of the next T11 regular meeting.

## **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 #132 is shown in annex A.2. 23 people from 21 member organizations were in attendance.

## **21 Review of Action Items**

- 15-033 T11 secretary to upload October T11 approved minutes. (see clause 5)
- 15-034 T11 secretary to upload August T11 approved minutes. (see clause 6)
- 15-035 T11 chair to forward FC-MSQS-3 project proposal to INCITS. (see clause 10.2.1)
- 15-036 T11 chair to forward FC-PI-5/AM1 to INCITS for further processing. (see clause 10.2.2)
- 15-037 T11 chair to kick off T11 IGNIS letter ballot for FC-GS-7. (see clause 11.2.1)
- 15-038 T11 chair to send FC-EE technical report project proposal to INCITS. (see clause 12.2.1)

## **22 Adjournment**

Chris Lyon (Amphenol) moved to adjourn at 2:35 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. Joseph Mathis**

**Mr. Schelto Van Doorn**

**Mr. Gary Stephens**

**Mr. Horst Truededt**

#### A.1.2 Voting Members

The following is the list of organizations that are voting members of record for regular meeting #132 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	Michael Wingard
	Alternate	Alex Persaud
	Alternate	Chris Lyon
Avago	Principal	Gautam Shiroor
	Alternate	Evan Beauprez
	Alternate	Adam Healey
	Alternate	David Baldwin
Broadcom	Principal	Pat Thaler
	Alternate	Vivek Venkatraman

Organization	Representative Type	Representative
Brocade	Principal	Steven L. Wilson
	Alternate	David Peterson
	Alternate	Scott Kipp
	Alternate	John Crandall
Cisco	Principal	Claudio DeSanti
	Alternate	Landon Noll
	Alternate	Fabio Maino
	Alternate	Joe Pelissier
Commscope	Principal	Richard Baca
	Alternate	Yang Xu
	Alternate	Richard Case
	Alternate	Paul Kolesar
	Alternate	Joe Livingston
Corning	Principal	Doug Coleman
	Alternate	Steven E. Swanson
DCS	Principal	Kevin Ehringer
	Alternate	Todd Wheeler
EMC	Principal	Gary S. Robinson
	Alternate	David Black
	Alternate	Erik Smith
	Alternate	Louis Ricci
Finisar	Principal	Chris Yien
	Alternate	Richard Johnson
IBM	Principal	Roger Hathorn
	Alternate	Patty Driever
Keysight Technologies	Principal	Joachim Vobis
	Alternate	Stephen Didde
	Alternate	Steve Sekel
Lumentum	Principal	Dave Lewis
Luxtera	Principal	Tom Palkert

Organization	Representative Type	Representative
Molex	Principal	Jay Neer
	Alternate	Mark Bugg
NetApp	Principal	Frederick Knight
OFS	Principal	Roman Shubochkin
Oracle	Principal	Roger Dickerson
	Alternate	Matt Gaffney
	Alternate	Michael Roy
QLogic	Principal	Craig W. Carlson
	Alternate	Alan Spalding
	Alternate	Dean Wallace
TE Connectivity	Principal	Nathan Tracey
	Alternate	Melissa Knox
	Alternate	Jeff Mason
Viavi	Principal	Jason Rusch

### A.1.3 Advisory Members

The following is the list of organizations that are advisory (i.e., nonvoting) members of record for regular meeting #132 of the INCITS Fibre Channel (T11) Technical Committee, including the recognized representatives of each member organization:

Organization	Representative Type	Representative
Adva	Principal	Ulrich Schlegel
Crossroads Systems	Principal	Bill Moody
Dell	Principal	Joseph White
	Alternate	Gaurav Chawla
	Alternate	Jeff Young
DSI A*STAR	Principal	Khin Mi Mi Aung
FCI	Principal	Daniel Dillow
	Alternate	David Sideck
	Alternate	Mike Davis

Organization	Representative Type	Representative
Fujitsu	Principal	Sandy Wilson
	Alternate	Eugene Owens
	Alternate	Kun Katsumata
	Alternate	Osamu Kimura
	Alternate	Mark Malcolm
Futurewei	Principal	Hao Chen
	Alternate	Wei Song
	Alternate	Alan Yoder
Hitachi DS	Principal	Eric Hibbard
	Alternate	Vincent Franceschini
	Alternate	Michael Hay
HPE	Principal	Barry Maskas
	Alternate	Krishna Babu Puttagunta
	Alternate	Rupin Mohan
	Alternate	Siamack Ayandeh
Microsoft	Principal	Steve Olsson
	Alternate	James Borden
	Alternate	Paul Luber
OCZ	Principal	Tom Friend
Panduit	Principal	Robert Elliot
	Alternate	Jose Castro
	Alternate	Steve Skiest
	Alternate	Robert Reid
Pegatron	Principal	Michael Hsu
Solution Technology	Principal	David Deming
	Alternate	David Deming Jr
Teradyne	Principal	Eracar Yonet
Texas Instruments	Principal	Rajeev Jain
	Alternate	Stephen Hubbins
UNH-IOL	Principal	Tim Sheehan



Organization	Representative Type	Representative
Unisys	Principal	Jeffrey Dremann
	Alternate	Diep Nguyen
	Alternate	Jose Macias
	Alternate	Phil Shelton
VMWare	Principal	Neil MacLean
	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 #132 of the INCITS Fibre Channel (T11) Technical Committee:

Organization	Representative(s)
AMPHENOL INTERCONNECT	Chris Lyon
AVAGO TECHNOLOGIES	Gautam Shiroor
	James Smart
BROADCOM	Pat Thaler
BROCADE	Steven L. Wilson
	David Peterson
CISCO SYSTEMS, INC.	Claudio DeSanti
COMMSCOPE	Yang Xu
CORNING	Doug Coleman
DATA CENTER SYSTEMS	Todd Wheeler
EMC	Louis Ricci
FINISAR CORPORATION	Richard Johnson
HPE	Siamack Ayandeh
IBM	Roger Hathorn
KEYSIGHT TECHNOLOGIES	Joachim Vobis
LUMENTUM	Dave Lewis

Organization	Representative(s)
MOLEX	Jay Neer
NETAPP	Frederick Knight
OFS FITEL	Roman Shubochkin
ORACLE	Michael Roy
QLOGIC	Craig W. Carlson
TE CONNECTIVITY	Jeff Mason
VIAVI	Jason Rusch

### A.2.2 Nonmember organizations

The following is the list of nonmember organizations and their representatives recorded in the online attendance registry as attending regular meeting #132 of the INCITS Fibre Channel (T11) Technical Committee:

Organization	Representative(s)
OCZ STORAGE SYSTEMS	Tom Friend
SELF	Roger Cummings

### A.2.3 Ad hoc meeting attendance

FC-NVMe ad hoc, members

Organization	Representative(s)
AMPHENOL	Chris Lyon
AVAGO TECHNOLOGIES	Gautam Shiroom
BROADCOM	Pat Thaler
BROCADE	Howard Johnson
	John Crandall
	David Peterson
	Steven L. Wilson
CISCO SYSTEMS, INC.	J Metz
EMC	Louis Ricci
HEWLETT-PACKARD ENTERPRISE	Siamack Ayandeh
IBM	Roger Hathorn

Organization	Representative(s)
NETAPP	Frederick Knight
ORACLE	Michael Roy
QLOGIC	Raul Oteyza
	Craig W. Carlson
VIAVI SOLUTIONS	Jason Rusch

FC-NVMe ad hoc, guests

Organization	Representative(s)
OCZ STORAGE SOLUTIONS	Tom Friend

FC-SB-6 ad hoc, members

Organization	Representative(s)
AVAGO TECHNOLOGIES	Gautam Shiroor
BROCADE	Howard Johnson
EMC	Louis Ricci
IBM	Roger Hathorn
NETAPP	Frederick Knight
ORACLE	Michael Roy

FC-SB-6 ad hoc, guests

Organization	Representative(s)
OCZ STORAGE SOLUTIONS	Tom Friend

FC-SW-7 ad hoc, members

Organization	Representative(s)
AMPHENOL	Chris Lyon
AVAGO TECHNOLOGIES	Gautam Shiroor

Organization	Representative(s)
BROCADE	Howard Johnson
	David Peterson
	John Crandall
	Steven L. Wilson
CISCO SYSTEMS, INC.	Claudio DeSanti
EMC	Louis Ricci
HEWLETT PACKARD ENTERPRISE	Siamack Ayandeh
IBM	Roger Hathorn
NETAPP	Frederick Knight
QLOGIC	Craig W. Carlson
VIAVI SOLUTIONS	Jason Rusch

FC-SW-6 ad hoc, guests

Organization	Representative(s)
None	

FC-PI-7 ad hoc, members

Organization	Representative(s)
AMPHENOL CORP.	Chris Lyon
BROCADE	Scott Kipp
COMMSCOPE	Rich Baca
CORNING	Doug Coleman
DATA CENTER SYSTEMS	Todd Wheeler
FINISAR CORPORATION	Richard Johnson
KEYSIGHT TECHNOLOGIES	Joachim Vobis
LUMENTUM	Dave Lewis
LUXTERA	Tom Palkert
OFS FITEL	Roman Shubochkin
PANDUIT	Jose Castro
TE CONNECTIVITY	Jeff Mason

FC-PI-7 ad hoc, guests

Organization	Representative(s)
None	

FC-GS-8 ad hoc, members

Organization	Representative(s)
AVAGO TECHNOLOGIES	Gautam Shiroor
BROADCOM	Pat Thaler
BROCADE	Howard Johnson
	David Peterson
	John Crandall
CISCO SYSTEMS	Claudio DeSanti
EMC	Louis Ricci
HEWLETT PACKAGE ENTERPRISE	Siamack Ayandeh
IBM	Roger Hathorn
NETAPP	Frederick Knight
ORACLE	Michael Roy
VIAVI SOLUTIONS	Jason Rusch

FC-GS-8 ad hoc, guests

Organization	Representative(s)
None	

FC-LS-3 ad hoc, members

Organization	Representative(s)
AVAGO TECHNOLOGIES	Gautam Shiroor
BROADCOM	Pat Thaler
BROCADE	David Peterson
	Howard Johnson
	John Crandall
CISCO SYSTEMS	Claudio DeSanti

Organization	Representative(s)
EMC	Louis Ricci
HEWLETT PACKARD ENTERPRISE	Siamack Ayandeh
IBM	Roger Hathorn
NETAPP	Frederick Knight
ORACLE	Michael Roy
QLOGIC	Raul Oteyza
	Craig W. Carlson
VIAVI SOLUTIONS	Jason Rusch

FC-LS-3 ad hoc, guests

Organization	Representative(s)
OCZ STORAGE SOLUTIONS	Tom Friend

FC-FS-5 ad hoc

Organization	Representative(s)
AVAGO TECHNOLOGIES	Gautam Shiroor
BROADCOM	Pat Thaler
BROCADE	David Peterson
	Howard Johnson
	John Crandall
	Steven L. Wilson
CISCO SYSTEMS	Claudio DeSanti
EMC	Louis Ricci
HEWLETT PACKAGE ENTERPRISE	Siamack Ayandeh
IBM	Roger Hathorn
NETAPP	Frederick Knight
QLOGIC	Raul Oteyza
VIAVI SOLUTIONS	Jason Rusch

FC-FS-8 ad hoc, guests

Organization	Representative(s)
None	

Joint T11.2 / T11.3 ad hoc

Organization	Representative(s)
AMPHENOL	Chris Lyon
AVAGO TECHNOLOGIES	Gautam Shiroor
BROADCOM	Pat Thaler
BROCADE	David Peterson
	Howard Johnson
	John Crandall
	Steven L. Wilson
DATA CENTER SYSTEMS	Todd Wheeler
EMC	Louis Ricci
FINISAR	Richard Johnson
KEYSIGHT	Joachim Vobis
LUXTERA	Tom Palkert
NETAPP	Frederick Knight
OFS FITEL	Roman Shubochkin
ORACLE	Michael Roy
QLOGIC	Craig W. Carlson
VIAVI SOLUTIONS	Jason Rusch

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

Organization	Representative(s)
OCZ Storage Solutions	Tom Friend

## 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 10 December 2015.

Standard	Status	Action	Target or Reaffirm Date	Editor	Ad Hoc Chair
Projects in Development Stage					
FC-EE	At T11	To T11	Dec-14		Wallace
FC-FS-5	In dev.	To T11.3	Feb-17	Carlson	Peterson
FC-GS-8	In dev.	To T11.3	Aug-17	Rusch	Ricci
FC-LS-3	In dev.	last technical input	Apr-14	Carlson	Ricci
FC-NVMe	In dev.	To T11.3	Aug-15	Peterson	Carlson
FC-PI-7	In dev.	To T11.2	Jun-17	Castro	Wallace
FC-SB-6	In dev.	To T11.3	Apr-16	Driever	Hathorn
FC-SW-7	In dev.	To T11.3	Aug-17	Peterson	Carlson
Projects in Approval Stage					
FC-FS-4	At INCITS	End 1PR	Jan-16	Carlson	Peterson
FC-GS-7	LB Res	To T11.3	Dec-15	Rusch	Ricci
FC-PI-5/AM1	In dev	Res T11 LB Cmts	Feb-16	Johnson	Wallace
FC-PI-6P	At INCITS	End 1st PR	Dec-15	Johnson	Wallace
FC-SW-6	At INCITS	End 1st PR	Dec-15	Peterson	Carlson

### B.2 T11 project status at ISO

The following tables indicates the status of all active T11 projects at ISO. It reflects the official status as reported at the T11 regular meeting #132, 10 December 2015 in document T11/15-364v0.



### B.2.1 Active T11 SC25 WG4 Projects

JTC1/SC25 Project	Document	ISO/IEC # (T11 allocated)	Step	Status
1.25.13.19.x	FC-BaseT	14165-151	30.99	In process
1.25.13.19.x	FC-SP-2+AM1	14165-432	10.60	In process
1.25.13.19.x	FC-BB-6	14165-246		Working on CD
1.25.13.19.x	FC-SB-5	14165-225		Working on CD

### B.2.2 Active Miscellaneous WG4 Projects

JTC1/SC25 Project Num	Document	ISO/IEC # (T11 allocated)	Step	Status

### B.2.3 Published WG4 Projects

JTC1/SC25 Project Num	Document	ISO/IEC #	Step	Status	Maintenance
1.25.13.13.x	SMI-S v1.5	24775:2012	60.60	Published	
1.25.13.13.49	FC-AE-ASM	14165-313	60.60	Published	
1.25.13.13.50	FC-AE-RDMA	14165-314	60.60	Published	
1.25.13.13.30	FC-BB-3	14165-243	60.60	Published	
1.25.13.22	Server Management Command Line Protocol (SM-CLP)	13187	60.60	Published	
1.25.13.19.01	Storage Management	24775	60.60	Published	
1.25.13.13.47	FC-MI-2	14165-372	60.60	Published	
1.25.13.21	iSCSI Management API (IMA)	11989	60.60	Published	
1.25.13.13.25	FC-SW-3	14165-133	60.60	Published	
1.25.13.13.18	FC-AV	14165-321	60.60	Published.	
1.25.13.13.19	FC-AE-1553	14165-312	60.60	Published.	
1.25.13.13.29	FAIS	14165-521	60.60	Published.	
1.25.13.13.15	FC-GS-4	14165-414	60.60	Published	
1.25.13.13.22	FC-FS	14165-251	60.60	Published	Withdrawn - Feb. 2013

JTC1/SC25 Project Num	Document	ISO/IEC #	Step	Status	Maintenance
1.25.13.13.26	FC-VI	14165-331	60.60	Published	
1.25.13.13.27	10GFC	14165-116	60.60	Published	
1.15.13.13.28	MJSQ	14165-117	60.60	Published	
1.25.13.10.18	RL	24740	60.60	Published	
1.25.13.19	SMS (was SMI-S)	24775	60.60	Published	
1.25.13.20	SNIA MMA	11002	60.60	Published	Confirm - Aug. 2013
1.25.13.13.27-1	10GFC-Amend- ment 1	14165-116-1	60.60	Published	
1.25.13.13.06-1	FC-AL-2-1	14165-122	60.60	Published.	
1.25.13.13.06-2	FC-AL-2-2	14165-122	60.60	Published	

### B.2.4 ISO step codes

The following explains the ISO step codes (ISC), which are two numbers separated by a dot. The first number is described in the table. The second part is percent complete.

Stage	NWIP	Convert to ISO	FCD	Edit/DoC	FDIS	Edit/DoC	Publish
Ballot Time	2 months		4 months		2 months		
first number of ISC	10	20	40		50	60	60.60