



**InterNational Committee for Information Technology Standards (INCITS)**  
Secretariat: Information Technology Industry Council (ITI)  
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[www.INCITS.org](http://www.INCITS.org)



**T11-2020-00282-v001**

**Minutes Fibre Channel Protocol  
(T11.3) Task Group plenary meeting #137  
2020 December 10 – 11:30 to 12:00 CDT  
Virtual Meeting**

## **1 Opening remarks and introductions**

The chair convened plenary meeting #137 of the Fibre Channel Protocol (T11.3) Task Group on 2020 December 10 at 11:33 CDT. He introduced himself as Craig Carlson (Marvell), and the group thanked Marvell for the virtual meeting facility. Roger Hathorn introduced himself as Vice-Chair and Patty Driever (IBM) introduced herself as secretary. Members then introduced themselves.

## **2 Approval of the Agenda**

An electronic version of the agenda, [T11-2020-00253-v000](#), and supporting documents were made available among the documents for this meeting. The agenda was in HTML format with links to the appropriate supporting documents. The chair presented the agenda and made a call for any new agenda items. No new items were requested.

David Peterson (Broadcom) moved and Barry Maskas (HPE) seconded that [T11-2020-00253-v000](#) be approved as posted as the agenda for this meeting. The motion passed unanimously.

## **3 Administrative Matters**

### **3.1 T11.3 Admin Is Trivia**

The chair, Craig Carlson (Marvell), stated that T11.3 administrative information is available among the documents for this meeting: Starting with the web page <https://standards.incits.org/apps/org/workgroup/t11.3/> links lead to contact information for T11.3 officers, membership rules, project information, procedures and operating rules, patent rules, and internet resources. The chair recommended that members familiarize with these rules so the business of the Task Group may be conducted expeditiously.

Members were advised to see any of the officers if they require additional assistance.

### **3.2 Document Distribution**

The chair instructed those present how to access meeting documents via the INCITS T11 Web Site Center page <https://standards.incits.org/apps/org/workgroup/t11/documents.php> The chair uploaded a zip file document containing all documents reviewed at this meeting: [T11-2020-00298-v000](#).

### **3.3 Other matters of grave concern**

The chair instructed those present how to register using the electronic attendance list for this meeting. He reminded those present that the electronic attendance list would become the only formal record of attendance at this meeting.

## **4 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

## **5 Patents**

The chair presented an overview of INCITS patent policies and guidelines, as found in INCITS Policies and Guidelines (<http://www.incits.org/standards-information/legal-info>), sub clause 8.4. In accordance with those policies, the chair made a call for patents that related to the standards being developed by this task group. Those companies wishing to file a patent declaration should send it to the chair of TC T11, with copies to Lynn Barra at INCITS ([lbarra@itic.org](mailto:lbarra@itic.org)).

## **6 Antitrust Policies**

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

The INCITS Antitrust Guidelines are available on the INCITS web site (<http://www.incits.org/standards-information/legal-info>).

## **7 Attendance and Membership**

### **7.1 *Current membership list***

The chair encouraged those who attend T11 meetings regularly or intend to attend T11 meetings regularly and are not T11 members to consider joining the organization.

Information on how membership is gained, maintained, and lost in any INCITS Technical Committee or Task Group may be found in INCITS Organization and Procedures (<http://www.incits.org/standards-information/policies>) sub clause 3.8. An overview of these requirements was introduced by the chair and was available to all attendees in 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. Attendance for this meeting is shown in Annex B.

### **7.2 *Voting memberships in jeopardy***

No company was in jeopardy for this meeting cycle.

### **7.3 *Changes in Membership***

#### **7.3.1 Changes in representation since last meeting**

Paul Coddington was added as Alternate for Amphenol, Corp. Other representation for Amphenol remains the same.

Mark Allen was removed as Alternate for Cisco Systems, Inc. Other representation for Cisco remains the same.

Andrew Joy was added as Alternate for Marvell Semiconductor, Inc. Other representation for Marvell remains the same.

John Meneghini was added as Alternate for NetApp, Inc. Other representation for NetApp remains the same.

Chaohong (Henry) Hu and Victor Cao were added as Alternates for Futurewei Technologies, Inc. Also Lei Wang was removed as Alternate for Futurewei. All other representation for Futurewei remains the same.

Fujitsu has cancelled their membership.

### **7.3.2 New voting memberships**

No new voting memberships were granted at this meeting.

### **7.3.3 Voting memberships changed for other reasons**

No changes to voting memberships were made at this meeting.

### **7.3.4 Changes in advisory membership**

No changes to advisory memberships were made at this meeting.

### **7.3.5 Changes in emeritus membership**

None

### **7.3.6 Membership for this meeting and call for quorum**

Task Group T11.3 had 11 voting members at the previous T11.3 plenary meeting (October 08, 2020). At this meeting, December 10, 2020:

- 0 new voting member organizations (see 7.3.2);
- 0 reinstated voting member organization (see 7.3.3)
- 0 voting member organizations losing voting membership for not attending the required number of meetings (see 7.2); and
- 1 voting member organizations losing voting membership for other reasons (see 7.3.1), the voting membership of T11.3 now stands at 10 members.

### **7.3.7 Quorum Call**

10 voting members responded to the call for quorum. A quorum of one third of the voting membership for this meeting requires at least 4 voting members present. The number 10 exceeds or equals one third of the voting membership for this meeting and also exceeds or equals 4. A quorum is therefore present for this meeting.

## **8 Approval of Minutes - Meetings #136**

The prior plenary meeting of the Fibre Channel Protocol (T11.3) Task Group was #136 on 2020 October 08. The draft minutes of that meeting were posted as document [T11-2020-00227-v000](#).

You may review the T11.3 minutes by reviewing the version that is posted on the web site and requesting corrections either before the subsequent meeting using the Internet mail reflector ([fc\\_protocol@standards.incits.org](mailto:fc_protocol@standards.incits.org)) or at the subsequent meeting in person. Non-editorial and/or substantial requests for corrections will be noted in detail at the next plenary meeting prior to the plenary body voting on the minutes. Until approved by the plenary body, these minutes are unofficial draft minutes only.

Dave Peterson (Broadcom) moved and Roger Hathorn (IBM) seconded to accept at this meeting [T11-](#)

[2020-00227-v000](#) as posted as the minutes of T11.3 meeting #136 on 2020 October 08. The motion passed unanimously.

See Action Item [20-012](#).

## 9 Review of Old Action Items

|               |  |
|---------------|--|
| ACTION 20-010 | T11.3 secretary to post <a href="#">T11-2020-00179-v001</a> as the approved minutes of T11.3 meeting #135. See Clause 7. |
| ACTION 20-011 | T11.3 secretary to post <a href="#">T11-2020-00227-v000</a> as the draft minutes of T11.3 meeting #136.                  |

All of the above action items were completed.

## 10 Liaison Reports

### 10.1 *TC T11 and INCITS*

T11 chair Steve Wilson (Brocade) has posted the T11 TC report to other committees (posted as [T11-2020-00248-v000](#) along with the INCITS Report to T11 posted as [T11-2020-00276-v000](#). Since these will be reviewed in the T11 plenary we did not review them during this meeting but they are available online for review.

### 10.2 *Other liaison reports*

No other liaison reports were presented.

## 11 Project Status

### 10.1 *FC-FS-6*

[Dave Peterson \(Broadcom\)](#) presented the information posted as [T11-2020-00255-v000](#) about FC-FS-6 ad hoc activity since the last plenary meeting of this Task Group.

### 10.2 *FC-GS-9*

[Dave Peterson \(Broadcom\)](#) presented the information posted as [T11-2020-00257-v000](#) about FC-GS-9 ad hoc activity since the last plenary meeting of this Task Group.

### 10.3 *FC-LS-5*

Patty Driever (IBM) presented the information posted as [T11-2020-00286-v000](#) about FC-LS-5 ad hoc activity since the last plenary meeting of this Task Group.

## **10.4 FC-PM**

Craig Carlson (Marvell) presented the information posted as [T11-2020-00292-v000](#) about FC-GS-9 ad hoc activity since the last plenary meeting of this Task Group.

## **10.5 FC-SW-8**

Craig Carlson (Marvell) presented the information posted as [T11-2020-00291-v000](#) about FC-SW-8 ad hoc activity since the last plenary meeting of this Task Group.

## **10.6 FCP-5**

Dave Peterson (Broadcom) presented the information posted as [T11-2020-00267-v000](#) about FCP-5 ad hoc activity since the last plenary meeting of this Task Group.

## **10.7 Joint T11.2/T11.3**

Craig Carlson (Marvell) presented the information posted as [T11-2020-00295-v000](#) about Joint T11.2/T11.3 activity since the last plenary meeting of this Task Group.

# **12 Other Business and Technical Items.**

## **13 Review T11.3 Project Status**

The current project status is available among the electronically distributed meeting documents as well as on the INCITS web site

([https://standards.incits.org/apps/org/workgroup/portal/projects.php?end\\_in\\_year=never\\_&page=1](https://standards.incits.org/apps/org/workgroup/portal/projects.php?end_in_year=never_&page=1)).

The chair asked that if the facilitators or anyone else finds errors that they inform him.

## **14 Future Meeting Schedule**

### **14.1 *Plan for the next meeting week***

Marvell will host the next T11 meeting on 2021 February 04 as a Zoom virtual meeting.

Refer to the INCITS T11 meeting web site page

([https://standards.incits.org/apps/org/workgroup/t11/documents.php?folder\\_id=2213](https://standards.incits.org/apps/org/workgroup/t11/documents.php?folder_id=2213)) for the meeting announcement, which will always contain the latest information on future T11.3 plenary meetings.

PLEASE NOTE: If there is any conflict between the website schedule database, and the single ASCII sheet, the database is to be considered correct.

## 14.2 Ad-hoc meetings

Refer to the INCITS T11 meeting web site page for further details. ([https://standards.incits.org/apps/org/workgroup/t11/documents.php?folder\\_id=2202](https://standards.incits.org/apps/org/workgroup/t11/documents.php?folder_id=2202)). This URL will always contain the latest announcements of pending work group interim meetings and teleconferences.

## 15 Action Items

|               |  |
|---------------|--|
| ACTION 20-012 | T11.3 secretary to post <b>T11-2020-00227-v001</b> as the approved minutes of T11.3 meeting #136. See <a href="#">Clause 7</a> . |
| ACTION 20-013 | T11.3 secretary to post <b>T11-2020-00282-v000</b> as the draft minutes of T11.3 meeting #137.                                   |

## 16 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 formal record of attendance at this meeting.

Chair also reminded everyone that physical presence at the meeting is required in order to count towards membership requirements. If you sign in but are not physically present at the meeting, the sign-in will be discarded by INCITS.

## 17 Adjournment

David Peterson (Broadcom) moved and Roger Hathorn (IBM) seconded to adjourn at 2020 December 10 11:54 AM CDT. The motion passed unanimously.

## A Membership

Reflecting the changes at this meeting, the voting membership of T11.3 for this meeting is:

| Organization         | Name            | Principal/<br>Alternate |
|----------------------|-----------------|-------------------------|
| Amphenol Corporation | Chris Lyon      | Principal               |
|                      | Paul Coddington | Alternate               |
|                      | Michael Klempa  | Alternate               |
|                      | Sam Kocsis      | Alternate               |
|                      | Hu Silver       | Alternate               |
| Broadcom Inc         | David Peterson  | Principal               |
|                      | Ben Chu         | Alternate               |
|                      | Mark Jones      | Alternate               |
|                      | James Smart     | Alternate               |

|                             |   |  |
|-----------------------------|---|--|
|                             | Anil Veerabhadrappa<br>Steven L. Wilson   | Alternate<br>Alternate   |
| Cisco Systems, Inc.         | Mike Blair<br>Mark Allen<br>Harsha Bharadwaj<br>Fabio Maino<br>Mark Nowell<br>Sai Pavan<br>Joe Pelissier<br>Kiran Ranabhor<br>Ramesh Sivakolundu<br>Xiaohong Wu | Principal<br>Alternate<br>Alternate<br>Alternate<br>Alternate<br>Alternate<br>Alternate<br>Alternate<br>Alternate<br>Alternate |
| Dell                        | Erik Smith<br>David Black<br>David Brown<br>Gaurav Chawla<br>Vinay Sawal<br>Joseph White  | Principal<br>Alternate<br>Alternate<br>Alternate<br>Alternate<br>Alternate   |
| Fujitsu                     | Mark Malcolm<br>Kun Katsumata<br>Gene Owens   | Principal<br>Alternate<br>Alternate  |
| Hewlett Packard Enterprise  | Barry Maskas<br>Rupin Mohan<br>Krishna Babu Puttagunta  | Principal<br>Alternate<br>Alternate  |
| IBM Corporation             | Roger Hathorn<br>Patty Driever<br>Stephen Guendert  | Principal<br>Alternate<br>Alternate  |
| Marvell Semiconductor Inc   | Craig W. Carlson<br>Raul Oteyza<br>Alan Spalding<br>Dean Wallace  | Principal<br>Alternate<br>Alternate<br>Alternate   |
| NetApp Inc                  | Frederick Knight<br>John Meneghini  | Principal<br>Alternate   |
| Teledyne LeCroy Corporation | David Rodgers<br>Amit Bakshi<br>Rakesh Kathiresan<br>Natarajan<br>Douglas Lee<br>Henry Poelstra<br>Srikant Tadigadapa   | Principal<br>Alternate<br>Alternate<br><br>Alternate<br>Alternate<br>Alternate   |
| Viavi Solutions             | Jason Rusch   | Principal  |



|      |   |                                     |
|------|---|-------------------------------------|
| Inc. | Scott Baxter<br>George Bullis<br>Paul Gentieu | Alternate<br>Alternate<br>Alternate |
|------|---|-------------------------------------|

Reflecting the changes at this meeting, the advisory (i.e., nonvoting) membership of T11.3 for this meeting is:

| <b>Organization</b>        | <b>Name</b>  | <b>Principal/<br/>Alternate</b>                               |
|----------------------------|--|---|
| Futurewei Technologies Inc | Timothy Jeffries<br>Lei Wang   | Principal<br>Alternate  |
| MediaTek USA Inc           | Tamer Ali<br>Yan-Bin Luo<br>Mau-Lin Wu                                       | Principal<br>Alternate<br>Alternate                           |
| TE Connectivity            | Matt Schumacher  | Principal   |
| Unisys Corporation         | Jeffrey Dremann<br>Phil Shelton  | Principal<br>Alternate  |
| VMware Inc                 | Neil MacLean<br>Wenchao Cui<br>Wenhua Liu<br>Murali Rajagopal<br>Ahmad Tawil | Principal<br>Alternate<br>Alternate<br>Alternate<br>Alternate |

Reflecting the changes at this meeting, 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. Gary Stephens  
Mr. Robert Kembel  
Mr. Joseph Mathis  
Mr. Horst Truestedt

## **B Attendance**

The following table lists those persons who electronically recorded their attendance at this plenary meeting. This includes representatives from voting member companies and may include representatives

from non-voting advisory companies, as well as non-voting emeritus members and visitors.

This table also records the affiliations claimed by those who registered their attendance. The presence of a company or organization in the affiliation column does not imply that it is a member of T11.3, nor does it imply that the person in attendance is a representative of that company or organization.

See "Section A: Membership" above for a complete list of voting members of T11.3 as well as a list of non-voting advisory companies and emeritus members.

| <b>Sequence</b> | <b>Affiliation</b>            | <b>Name</b>                |
|-----------------|-------------------------------|----------------------------|
| 1               | AMPHENOL CORP                 | Paul Coddington            |
| 2               | AMPHENOL CORP                 | Michael Klempa             |
| 3               | AMPHENOL CORP                 | Sam Kocsis                 |
| 4               | AMPHENOL CORP                 | Chris Lyon                 |
| 5               | BROADCOM INC                  | David Peterson             |
| 6               | BROADCOM INC                  | Anil Veerabhadrapa         |
| 7               | BROADCOM INC                  | Steven L. Wilson           |
| 8               | CISCO SYSTEMS INC             | Ramesh Sivakolundu         |
| 9               | DELL INC                      | Erik Smith                 |
| 10              | HEWLETT PACKARD<br>ENTERPRISE | Barry Maskas               |
| 11              | HEWLETT PACKARD<br>ENTERPRISE | Krishna Babu<br>Puttagunta |
| 12              | IBM CORPORATION               | Patty Driever              |

|    |                           |                  |
|----|---------------------------|------------------|
| 13 | IBM CORPORATION           | Roger Hathorn    |
| 14 | MARVELL SEMICONDUCTOR INC | Craig W. Carlson |
| 15 | MARVELL SEMICONDUCTOR INC | Raul Oteyza      |
| 16 | NETAPP INC                | Frederick Knight |
| 17 | TELEDYNE LECROY CORP      | Henry Poelstra   |
| 18 | VIAVI SOLUTIONS           | Jason Rusch      |

## C Attendance at Ad Hoc Meetings

### C.1 FC-NVMe-2

This working group was not active during this meeting cycle.

| Organization | Representative | Member Company |
|--------------|----------------|----------------|
|--------------|----------------|----------------|

### C.2 FC-LS-5

| Organization               | Representative      | Member Company |
|----------------------------|---------------------|----------------|
| Broadcom Inc               | Howard Johnson      | Y              |
| Broadcom Inc               | David Peterson      | Y              |
| Broadcom Inc               | Anil Veerabhadrappe | Y              |
| Cisco Systems Inc          | Harsha Bharadwaj    | Y              |
| Cisco Systems Inc          | Mike Blair          | Y              |
| Hewlett-Packard Enterprise | Barry Maskas        | Y              |
| IBM Corporation            | Patty Driever       | Y              |
| IBM Corporation            | Roger Hathorn       | Y              |

|                           |                  |   |
|---------------------------|------------------|---|
| Marvell Semiconductor Inc | Craig Carlson    | Y |
| NetApp Inc                | Frederick Knight | Y |
| Viavi Solutions Inc       | Jason Rusch      | Y |

### C.3 FC-FS-6

| Organization                | Representative     | Member Company |
|-----------------------------|--------------------|----------------|
| Amphenol Corp               | Michael Klempa     | Y              |
| Broadcom Inc                | David Peterson     | Y              |
| Broadcom Inc                | Howard Johnson     | Y              |
| Broadcom Inc                | Mark Jones         | Y              |
| Broadcom Inc                | James Smart        | Y              |
| Broadcom Inc                | Anil Veerabhadrapa | Y              |
| Broadcom Inc                | Steven Wilson      | Y              |
| Cisco Systems Inc           | Mike Blair         | Y              |
| Cisco Systems Inc           | Ed Mazurek         | Y              |
| Dell Inc                    | Vinay Sawal        | Y              |
| Hewlett Packard Enterprise  | Barry Maskas       | Y              |
| IBM Corporation             | Patty Driever      | Y              |
| IBM Corporation             | Roger Hathorn      | Y              |
| Marvell Semiconductor Inc   | Craig W. Carlson   | Y              |
| Marvell Semiconductor Inc   | Raul Oteyza        | Y              |
| NetApp Inc                  | Frederick Knight   | Y              |
| Teledyne LeCroy Corporation | Henry Poelstra     | Y              |
| Viavi Solutions Inc         | Jason Rusch        | Y              |

### C.4 FC-SW-8

| Organization              | Representative     | Member Company |
|---------------------------|--------------------|----------------|
| Broadcom Inc              | Howard Johnson     | Y              |
| Broadcom Inc              | David Peterson     | Y              |
| Broadcom Inc              | Anil Veerabhadrapa | Y              |
| Broadcom Inc              | Steven Wilson      | Y              |
| Cisco Systems Inc         | Harsha Bharadwaj   | Y              |
| IBM Corporation           | Patty Driever      | Y              |
| IBM Corporation           | Roger Hathorn      | Y              |
| Marvell Semiconductor Inc | Craig Carlson      | Y              |
| NetApp Inc                | Frederick Knight   | Y              |

**C.5 FC-PM**

| <b>Organization</b>         | <b>Representative</b> | <b>Member Company</b> |
|-----------------------------|-----------------------|-----------------------|
| Broadcom Inc                | Mark Jones            | Y                     |
| Broadcom Inc                | Howard Johnson        | Y                     |
| Broadcom Inc                | David Peterson        | Y                     |
| Broadcom Inc                | James Smart           | Y                     |
| Broadcom Inc                | Anil Veerabhadrapa    | Y                     |
| Broadcom Inc                | Steven Wilson         | Y                     |
| Cisco Systems Inc           | Mike Blair            | Y                     |
| Hewlett Packard Enterprise  | Barry Maskas          | Y                     |
| IBM Corporation             | Patty Driever         | Y                     |
| IBM Corporation             | Roger Hathorn         | Y                     |
| Marvell Semiconductor Inc   | Craig Carlson         | Y                     |
| Marvell Semiconductor Inc   | Raul Oteyza           | Y                     |
| NetApp Inc                  | Frederick Knight      | Y                     |
| Teledyne LeCroy Corporation | Henry Poelstra        | Y                     |
| Viavi Solutions Inc         | Jason Rusch           | Y                     |

**C.6 FC-GS-9**

| <b>Organization</b>        | <b>Representative</b> | <b>Member Company</b> |
|----------------------------|-----------------------|-----------------------|
| Broadcom Inc               | Howard Johnson        | Y                     |
| Broadcom Inc               | David Peterson        | Y                     |
| Broadcom Inc               | James Smart           | Y                     |
| Broadcom Inc               | Anil Veerabhadrapa    | Y                     |
| Cisco Systems Inc          | Mike Blair            | Y                     |
| Hewlett-Packard Enterprise | Barry Maskas          | Y                     |
| IBM Corporation            | Patty Driever         | Y                     |
| IBM Corporation            | Roger Hathorn         | Y                     |
| NetApp Inc                 | Frederick Knight      | Y                     |
| Viavi Solutions Inc        | Jason Rusch           | Y                     |

**C.7 Joint T11.2/T11.3**

| <b>Organization</b> | <b>Representative</b> | <b>Member Company</b> |
|---------------------|-----------------------|-----------------------|
| Broadcom Inc        | Ben Chu               | Y                     |
| Broadcom Inc        | Howard Johnson        | Y                     |
| Broadcom Inc        | Anil Mehta            | Y                     |
| Broadcom Inc        | David Peterson        | Y                     |

|                             |                         |   |
|-----------------------------|-------------------------|---|
| Broadcom Inc                | James Smart             | Y |
| Broadcom Inc                | Steven Wilson           | Y |
| Cisco Systems Inc           | Mike Blair              | Y |
| Cisco Systems Inc           | Rames Sivakolundu       | Y |
| Data Center Systems         | Steve Eisele            | Y |
| Hewlett Packard Enterprise  | Barry Maskas            | Y |
| Hewlett Packard Enterprise  | Krishna Babu Puttagunta | Y |
| IBM Corporation             | Patty Driever           | Y |
| IBM Corporation             | Roger Hathorn           | Y |
| II-VI Inc                   | Lance Thompson          | Y |
| Keysight Technologies Inc   | Stephen Didde           | Y |
| Marvell Semiconductor Inc   | Craig Carlson           | Y |
| Marvell Semiconductor Inc   | Mike Dudek              |   |
| Marvell Semiconductor Inc   | Raul Oteyza             | Y |
| NetApp Inc                  | Frederick Knight        | Y |
| OFS Fitel LLC               | Mabud Choudhury         | Y |
| Panduit Corporation         | Jose Castro             | Y |
| Teledyne LeCroy Corporation | Henry Poelstra          | Y |
| Teledyne LeCroy Corporation | David Rodgers           | Y |
| Viavi Solutions Inc         | Jason Rusch             | Y |