

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

March 2022 Electronic Session

Approved Meeting Minutes, prepared by John D'Ambrosia

Session called to order at 10:02 am ET (all times ET), 08 March 2022

Meeting called to order by John D'Ambrosia, IEEE P802.3df Task Force Chair

Chair noted that attendance would be taken by IMAT.

**Presentation #1**

Presenters

URL

**Agenda and General Information**

John D'Ambrosia

[https://www.ieee802.org/3/df/public/22\\_03/agenda\\_3df\\_220308.pdf](https://www.ieee802.org/3/df/public/22_03/agenda_3df_220308.pdf)

Chair reminded everyone attending must register and pay a fee to register. Chair displayed Slide #2 regarding if an individual is in arrears.

Chair reviewed the agenda (Slide #3) and noted presentation order on Slide #4. Chair noted that straw polls might be taken during any meeting of the March 2022 session, pending need and time availability. He noted that any motions for the session would be considered @ the 15 and 16 March meetings, pending time availability. Chair noted that pending discussions with presenters for the 22 and 29 March meetings, motions might be heard, pending time availability. Chair will announce prior to these meetings if motions may occur.

Chair asked if there were any objections to the agenda (Slide #3). It was noted that the agenda slide listed the last meeting as March 24, and not March 29. Chair indicated this was a cut / paste error and corrected the meeting date to March 29 on Slide #4. The updated presentation is noted above. The chair asked if there were there any other objections, and there were none. The chair asked if there were any objections to the approval of the agenda, and there were none. The agenda was considered approved by unanimous consent.

Minutes – Feb 2022 session

[https://www.ieee802.org/3/df/public/22\\_02/minutes\\_3df\\_0222\\_unapproved.pdf](https://www.ieee802.org/3/df/public/22_02/minutes_3df_0222_unapproved.pdf)

Chair asked if there were any other corrections. There were none. Chair asked if there were any objections to approving the modified minutes. There were none, and the minutes were considered approved by unanimous consent.

Chair reviewed the Task Force Project Information / Organization. See Slides #5. Chair noted the 4 task force reflectors, and indicated individuals needed to join each separately. Chair also noted that Task Force information, such as meeting announcements would be sent to [stds-802-3-b400g@listserv.ieee.org](mailto:stds-802-3-b400g@listserv.ieee.org).

Chair reviewed meeting decorum. See Slide #6.

Chair reviewed Ground Rules. See Slide #7.

Chair Reviewed Task Force Comment Phase. See Slide #8.

Chair ruled Task Force voting, voting rights, and attendance. See Slides #9-10.

Slide #11 - Chair noted that the information regarding the IEEE SA Policies had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair asked if anyone needed to review the policies at that time – there were no requests to do so.

Chair presented the third slide (See Slide #31) of the IEEE SA Patent Policy slides. Chair did call for Potentially Essential Patents, and no one came forward.

Chair presented the second slide (See Slide #36) of the IEEE SA Copyright Policy slides. Chair noted – “By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.”

Chair presented the second slide (See Slide #40) of the IEEE SA Participation Policy slides. Chair noted – “Participants in the IEEE-SA “individual process” shall act independently of others, including employers. By participating in standards activities using the “individual process”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation.”

Chair noted that as of 08 Mar, there was only one liaison received (OIF 800G Coherent Project) for the Task Force to consider. See Slide #12.

**Presentation #2**                      **Further Consideration on FEC architecture for 800G and 1.6T**  
Presenters                              Leon Bruckman  
URL                                        [https://www.ieee802.org/3/df/public/22\\_03/bruckman\\_3df\\_01\\_220308.pdf](https://www.ieee802.org/3/df/public/22_03/bruckman_3df_01_220308.pdf)

General questions and discussion.

**Presentation #3**                      **Analysis on FEC1 in Architecture of 800G/1.6TbE**  
Presenter                                Xinyuan Wang  
URL                                        [https://www.ieee802.org/3/df/public/22\\_03/wang\\_3df\\_01a\\_220308.pdf](https://www.ieee802.org/3/df/public/22_03/wang_3df_01a_220308.pdf)

The speaker noted that editorial corrections were made, and he will be sending the chair an update (noted above) after the meeting.

General questions and discussion.

**Presentation #4**                      **Concatenated Code for 800 GbE & 1.6 TbE**  
Presenters                                Xiang He  
URL                                        [https://www.ieee802.org/3/df/public/22\\_03/he\\_3df\\_01a\\_220308.pdf](https://www.ieee802.org/3/df/public/22_03/he_3df_01a_220308.pdf)

General questions and discussion.

Chair reviewed future Task Force meetings. See Slide #13 of agenda presentation.

- It was noted that details of meetings for May 2022 session were still being worked out.
- Call for presentations was announced, and due date is 06 May 2022.

Chair reviewed ad hocs (Slide #14) and reminded everyone of ad hoc meetings (Slide #15).

Session recessed for the day at 11:02am

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

March 2022 Electronic Session

Session reconvened at 10:03 am ET (all times ET), 15 March 2022

Meeting called to order by John D'Ambrosia, IEEE P802.3df Task Force Chair

Chair noted that attendance would be taken by IMAT.

Chair reminded Task Force that today's call required registration and paying meeting fee. Chair noted consequences of non-payment of registration fees. See Slide #2.

The chair noted that presentations had been withdrawn from the 22 Mar and 29 Mar meetings at the request of the presenters. Agenda file had been updated to [https://www.ieee802.org/3/df/public/22\\_03/agenda\\_3df\\_a\\_220308.pdf](https://www.ieee802.org/3/df/public/22_03/agenda_3df_a_220308.pdf).

Slide #11 - Chair noted that the information regarding the IEEE SA Policies had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair asked if anyone needed to review the policies at that time – there were no requests to do so.

Chair presented the third slide (See Slide #31) of the IEEE SA Patent Policy slides. Chair did call for Potentially Essential Patents, and no one came forward.

Chair presented the second slide (See Slide #36) of the IEEE SA Copyright Policy slides. Chair noted – “By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.”

Chair presented the second slide (See Slide #40) of the IEEE SA Participation Policy slides. Chair noted – “Participants in the IEEE-SA “individual process” shall act independently of others, including employers. By participating in standards activities using the “individual process”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation.”

The chair reviewed the business for the day.

<b>Presentation #5</b>	<b>Baseline proposal for 800GbE electrical interfaces and PMDs using 100 Gbps/lane signaling</b>
Presenters	Kent Lusted
URL	<a href="https://www.ieee802.org/3/df/public/22_03/lusted_3df_01a_220315.pdf">https://www.ieee802.org/3/df/public/22_03/lusted_3df_01a_220315.pdf</a>

General questions and discussion.

Chair noted that once IEEE P802.3df Draft 1.0 is generated, if either .3ck or .3db make any subsequent changes, those changes would need to be made to the .3df draft via comment.

Based on feedback there may be some potential changes to his presentation. Chair reminded Mr. Lusted that any subsequent motion / straw poll would need to use the updated file name. Updated presentation noted above.

**Presentation #6**      **Adding 400Gb/s / 2km Objective & Baseline**  
 Presenter                Mark Nowell  
 URL                        [https://www.ieee802.org/3/df/public/22\\_03/nowell\\_3df\\_01a\\_220315.pdf](https://www.ieee802.org/3/df/public/22_03/nowell_3df_01a_220315.pdf)

The chair thanked Mr. Nowell for reviewing the PAR and CSD as part of his effort to add a new project objective. Jeff Maki, Paul Brooks, Flavio Marques, and David Ofelt requested that they be added as supporters to Mr. Nowell’s presentation. Presentation update to be sent after the meeting (noted above).

**Presentation #7**      **PAM4 for 200G/L Optics at 500m and 2km**  
 Presenters                Brian Welch  
 URL                        [https://www.ieee802.org/3/df/public/22\\_03/welch\\_3df\\_01a\\_220315.pdf](https://www.ieee802.org/3/df/public/22_03/welch_3df_01a_220315.pdf)

Mr. Welch noted a supporters page had been added, and he would send the updated presentation after the meeting (noted above).

**Presentation #8**      **Baseline Proposal for 800 GbE over Eight Pairs of MMF for 50 ad 100 m Reaches**  
 Presenters                Ramana Murty  
 URL                        [https://www.ieee802.org/3/df/public/22\\_03/murty\\_3df\\_01a\\_220315.pdf](https://www.ieee802.org/3/df/public/22_03/murty_3df_01a_220315.pdf)

General questions and discussion.

Ray Nering, Gary Nicholl, Jianwei Mu, Vince Ferretti, Paul Brooks, Lance Thompson, Jose Castro, Nathan Tracy, Adee Ran requested that they be added as supporters to Mr. Murty’s presentation. Mr. Murty indicated he would send an updated presentation after the meeting (noted above).

Mr. D’Ambrosia requested that Mr. Nowell take over chairing the call while he gave the following presentation. Mr. Nowell assumed chairing the meeting at 10:55am.

**Presentation #9**      **Proposed Response to OIF Liaison – 800G Coherent Project Status**  
 Presenter                John D’Ambrosia  
 URL                        [https://www.ieee802.org/3/df/public/22\\_03/dambrosia\\_3df\\_01\\_220315\\_Redacted.pdf](https://www.ieee802.org/3/df/public/22_03/dambrosia_3df_01_220315_Redacted.pdf)

Mr. D’Ambrosia reviewed the liaison and captured TF discussion in [https://www.ieee802.org/3/df/public/22\\_03/IEEE\\_802d3\\_to\\_OIF\\_3df\\_0315\\_draft\\_Redacted.pdf](https://www.ieee802.org/3/df/public/22_03/IEEE_802d3_to_OIF_3df_0315_draft_Redacted.pdf).

Mr. D’Ambrosia resumed chairing the call at 11:07am.

<b>Motion #1</b>	<b>Move that the IEEE P802.3df Task Force approve:</b> <ul style="list-style-type: none"> <li>• IEEE_802d3_to_OIF_3df_0315_draft.pdf</li> </ul> <b>with editorial license granted to the Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working Group to OIF.</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Mark Nowell
<b>Second by</b>	Mike Li
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #2</b>	<b>Move to adopt the following objective:</b> <ul style="list-style-type: none"> <li>• Define a physical layer specification that supports 400 Gb/s operation over 4 pairs of SMF with lengths up to at least 2 km</li> </ul>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Mark Nowell
<b>Second by</b>	Jeffery Maki
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #3</b>	<b>Move to adopt the eight-lane 800GbE electrical interfaces and PMDs, per lusted_3df_01a_220315.pdf, slides 4-6</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Matt Brown
<b>Second by</b>	Beth Kochuparambil
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #4</b>	<b>Move to adopt PAM4 optical modulation as the basis for all the 200 Gb/s per lane 500m and 2km SMF reach objectives</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Adee Ran
<b>Second by</b>	Joshua Kim
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #5</b>	<b>Adopt slide 8 of murty_3df_01a_220315.pdf as baselines for 800GBASE-VR8 and 800GBASE-SR8 PMDs.</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Ramana Murty
<b>Second by</b>	Earl Parsons
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

Chair reviewed future Task Force meetings. See Slide #13 of agenda presentation. Chair noted he would be working on getting meeting invitations sent out, as well as updates to the IEEE P802.3df webpage.

Chair reviewed ad hocs (Slide #14) and reminded everyone of ad hoc meetings (Slide #15).

Session recessed for the day at 11:39am.

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

March 2022 Electronic Session

Session called to order at 10:03 am ET (all times ET), 16 March 2022

Meeting called to order by Mark Nowell, IEEE P802.3df Task Force Vice-Chair

Chair noted that Mr. D'Ambrosia was addressing some personal issues and would be late joining the call.

Chair noted that attendance would be taken by IMAT.

Chair reminded Task Force that today's call required registration and paying meeting fee. Chair noted consequences of non-payment of registration fees. See Slide #2.

Slide #11 - Chair noted that the information regarding the IEEE SA Policies had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair asked if anyone needed to review the policies at that time – there were no requests to do so.

Chair presented the third slide (See Slide #31) of the IEEE SA Patent Policy slides. Chair did call for Potentially Essential Patents, and no one came forward.

Chair presented the second slide (See Slide #36) of the IEEE SA Copyright Policy slides. Chair noted – “By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.”

Chair presented the second slide (See Slide #40) of the IEEE SA Participation Policy slides. Chair noted – “Participants in the IEEE-SA “individual process” shall act independently of others, including employers. By participating in standards activities using the “individual process”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation.”

<b>Presentation #10</b>	<b>224G Package Investigations and COM Reference Model</b>
Presenters	Mike Li
URL	<a href="https://www.ieee802.org/3/df/public/22_03/mli_3df_01a_220316.pdf">https://www.ieee802.org/3/df/public/22_03/mli_3df_01a_220316.pdf</a>

Mr. Li noted that he had made some editorial corrections and would send the updated presentation after the meeting (noted above).

General questions and discussion.

<b>Presentation #11</b>	<b>Reference Die and Package Models for 802.3df Host</b>
Presenter	Mike Li
URL	<a href="https://www.ieee802.org/3/df/public/22_03/mli_3df_02a_220316.pdf">https://www.ieee802.org/3/df/public/22_03/mli_3df_02a_220316.pdf</a>

Mr. Li noted that he had made some editorial corrections and would send the updated presentation after the meeting (noted above).

General questions and discussion.

**Presentation #12**      **200 Gb/s Baseline proposal for Annex 93A**  
Presenters              Rich Mellitz  
URL                      [https://www.ieee802.org/3/df/public/22\\_03/mellitz\\_3df\\_01b\\_220316.pdf](https://www.ieee802.org/3/df/public/22_03/mellitz_3df_01b_220316.pdf)

General questions and discussion.

During discussion it was noted that there were some errors that needed to be corrected. Mr. Mellitz will send an updated presentation after the meeting (noted above).

The chair noted that given that IEEE P802.3ck is in SA Ballot that he wanted the latest version of COM to reside on the P802.3ck website, and just point to the .3ck webpage from the .3df webpage. Beth Kochuparambil, chair of IEEE P802.ck agreed, and noted she was uploading the latest version of COM onto the .3ck website. She indicated she would send an email to the .3df electrical reflector when it was uploaded.

**Presentation #13**      **PAMn vs Channel and FEC Investigations for 224G**  
Presenters              Mike Li  
URL                      [https://www.ieee802.org/3/df/public/22\\_03/mli\\_3df\\_03a\\_220316.pdf](https://www.ieee802.org/3/df/public/22_03/mli_3df_03a_220316.pdf)

Mr. Li noted that he had made some editorial corrections and would send the updated presentation after the meeting (noted above).

Meeting break at 11:58am

Meeting reconvened at 12:03pm

General questions and discussion.

**Presentation #14**      **COM Simulation and Analysis for 200Gbps/lane Chip-to-Module**  
Presenter              Tobey Li  
URL                      [https://www.ieee802.org/3/df/public/22\\_03/tli\\_3df\\_01b\\_220316.pdf](https://www.ieee802.org/3/df/public/22_03/tli_3df_01b_220316.pdf)

General questions and discussion.

Note - Chair was contacted after the meeting that the presentation shown was not the one that had been previously sent, and the presenter sent the chair the correct presentation.

Kent Lusted gave the group some closing comments on today's electrical focused presentations and impact on future meetings of the electrical ad hoc.

The chair suggested that more detailed discussion be taken to the electrical reflector.

The chair reminded everyone that we are a contribution driven organization and encouraged individuals to start working together on consensus presentations.

Chair reviewed future Task Force meetings. See Slide #13 of agenda presentation.

Chair reviewed ad hocs (Slide #14) and reminded everyone of ad hoc meetings (Slide #15).

Session recessed for the day at 1:00pm

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

March 2022 Electronic Session

Session called to order at 10:03 am ET (all times ET), 22 March 2022

Meeting called to order by John D’Ambrosia, IEEE P802.3df Task Force Chair

Chair noted that attendance would be taken by IMAT.

Chair noted that agenda file had been updated -

[https://www.ieee802.org/3/df/public/22\\_03/agenda\\_3df\\_b\\_220308.pdf](https://www.ieee802.org/3/df/public/22_03/agenda_3df_b_220308.pdf)

Slide #11 - Chair noted that the information regarding the IEEE SA Policies had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair asked if anyone needed to review the policies at that time – there were no requests to do so.

Chair presented the third slide (See Slide #31) of the IEEE SA Patent Policy slides. Chair did call for Potentially Essential Patents, and no one came forward.

Chair presented the second slide (See Slide #36) of the IEEE SA Copyright Policy slides. Chair noted – “By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.”

Chair presented the second slide (See Slide #40) of the IEEE SA Participation Policy slides. Chair noted – “Participants in the IEEE-SA “individual process” shall act independently of others, including employers. By participating in standards activities using the “individual process”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation.”

**Presentation #15**

**An investigation of a copper cable assembly channel**

Presenter

Nathan Tracy

URL

[https://www.ieee802.org/3/df/public/22\\_03/tracy\\_3df\\_01a\\_220322.pdf](https://www.ieee802.org/3/df/public/22_03/tracy_3df_01a_220322.pdf)

General questions and discussion.

**Presentation #16**

**224G PAM4 CR+/CR Channels and Their Characteristics**

Presenters

Mike Li

URL

[https://www.ieee802.org/3/df/public/22\\_03/li\\_3df\\_01a\\_220322.pdf](https://www.ieee802.org/3/df/public/22_03/li_3df_01a_220322.pdf)

General questions and discussion.

Editorial corrections were made and the presenter will send update to the chair for posting. Update noted above.

**Presentation #17**

**224G PAM4 CR+/CR Channel COM Analysis**

Presenters

Mike Li

URL

[https://www.ieee802.org/3/df/public/22\\_03/li\\_3df\\_02a\\_220322.pdf](https://www.ieee802.org/3/df/public/22_03/li_3df_02a_220322.pdf)

General questions and discussion.

Editorial corrections were made and the presenter will send update to the chair for posting. Update noted above.



Chair reviewed future Task Force meetings. See Slide #13 of agenda presentation.

Chair reviewed ad hocs (Slide #14) and reminded everyone of ad hoc meetings (Slide #15), noting the change of the Optical Ad hoc meeting on 27 Apr to 28 Apr.

Session recessed for the day at 12:00 pm

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

March 2022 Electronic Session

Session called to order at 10:03 am ET (all times ET), 29 March 2022

Meeting called to order by John D'Ambrosia, IEEE P802.3df Task Force Chair

Chair noted that attendance would be taken by IMAT.

Slide #11 - Chair noted that the information regarding the IEEE SA Policies had been sent out, and requested that individuals review the following IEEE SA policies prior to the interim meeting –

- IEEE SA Patent policy
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

Chair asked if anyone needed to review the policies at that time – there were no requests to do so.

Chair presented the third slide (See Slide #31) of the IEEE SA Patent Policy slides. Chair did call for Potentially Essential Patents, and no one came forward.

The Chair reviewed “Other guidelines for IEEE WG meetings. See Slide #32.

Chair presented the second slide (See Slide #36) of the IEEE SA Copyright Policy slides. Chair noted – “By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.”

Chair presented the second slide (See Slide #40) of the IEEE SA Participation Policy slides. Chair noted – “Participants in the IEEE-SA “individual process” shall act independently of others, including employers. By participating in standards activities using the “individual process”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation.”

The chair observed that individuals had been sending him updates of presentations with expectation of their immediate upload. The chair noted that individuals should not assume that their presentations would not be updated on the meeting page website between their immediate upload and the close of the presentation. Reminder - that updates were limited to editorial comments and adding supporters. Chair would ensure that the final presentation would be uploaded.

In addition, the chair reminded individuals that presentations are supposed to be sent in pdf format, be <2MB, and should have the properties fields filled out. Individuals are not doing this, and, going forward, they should not be surprised if the Chair asks them to do so before he uploads presentations.

**Presentation #18**      **800GbE PCS/FEC/PMA Baseline Proposal for PHYs using 8x100G PMD lanes**  
Presenters              Kapil Shrikhande  
URL                        [https://www.ieee802.org/3/df/public/22\\_03/shrikhande\\_3df\\_01\\_220329.pdf](https://www.ieee802.org/3/df/public/22_03/shrikhande_3df_01_220329.pdf)

General questions and discussion.

**Presentation #19**      **On Technical Feasibility of 800G-LR4 with Direct Detection**  
Presenters              Robert Rodes  
URL                        [https://www.ieee802.org/3/df/public/22\\_03/rodes\\_3df\\_01a\\_220329.pdf](https://www.ieee802.org/3/df/public/22_03/rodes_3df_01a_220329.pdf)

General questions and discussion.

Ali Ghiaisi requested to be added to presentations supporters list. (Updated presentation noted above.)

Meeting break at 11:45am

Meeting reconvened at 11:50am

**Presentation #20      Proposed 800G LR4 Baseline with PAM4 IMDD**

Presenters              Ryan Yu

URL                      [https://www.ieee802.org/3/df/public/22\\_03/03/03/yu\\_3df\\_01a\\_220329.pdf](https://www.ieee802.org/3/df/public/22_03/03/03/yu_3df_01a_220329.pdf)

General questions and discussion.

The chair noted that the following slide had been reviewed by IEEE legal, and asked Mr. Law to review proper discussion. Mr. Law reviewed "Other guidelines for IEEE WG meetings." See Slide #32 of the agenda deck.

Mr. Law noted that if anyone wishes to make a follow-up presentation regarding the analysis presented, they should contact Mr. D'Ambrosia or Mr. Law first.

**Presentation #21      Considerations on an 800G-LR1 and 800G-ER1 baseline**

Presenters              Tom Williams

URL                      [https://www.ieee802.org/3/df/public/22\\_03/03/03/williams\\_3df\\_01a\\_220329.pdf](https://www.ieee802.org/3/df/public/22_03/03/03/williams_3df_01a_220329.pdf)

General questions and discussion.

The chair noted that due to time constraints that the leadership observation summary presentation would not be presented, but was loaded to the March webpage for individuals to review.

**Presentation #22      802.3df Leadership Observations: March Meeting Cycle**

Presenter              Mark Nowell

URL                      [https://www.ieee802.org/3/df/public/22\\_03/03/03/nowell\\_3df\\_01\\_220329.pdf](https://www.ieee802.org/3/df/public/22_03/03/03/nowell_3df_01_220329.pdf)

Chair reviewed upcoming ad hoc meetings in April. See Slide #15 of agenda presentation.

Chair reviewed future Task Force meetings. See Slide #13 of agenda presentation. Chair noted that he will be consulting with Mr. Law, and presentations proposing relative cost analysis may be requested to be submitted early to allow adequate time to get reviewed.

Session adjourned at 1:06 pm

## Attendees

Name	Employer	Affiliation	8-Mar	15-Mar	16-Mar	22-Mar	29-Mar
Abbott, John	Corning Incorporated	Corning Incorporated		X			
Akbaba, Enis	Analog Devices Inc.	Analog Devices Inc.	X	X	X	X	X
Akinwale, Oluwafemi		Intel Corporation	X	X		X	
Ben-Artzi, Liav	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.	X	X	X	X	
Bernier, Eric		Huawei Technologies Canada; Huawei Technologies Co., Ltd		X	X	X	X
Bhatt, Vipul	II-VI Incorporated	II-VI Incorporated					X
Bliss, William	Broadcom Corporation	Broadcom Corporation	X	X	X	X	X
Bois, Karl	NVIDIA Corporation	NVIDIA Corporation	X	X	X	X	X
Brooks, Paul	Viavi solutions GmbH	Viavi Solutions	X	X	X		
Brown, Blake		University of New Hampshire InterOperability Laboratory (UNH-IOL)	X	X			
Brown, Matthew	Huawei Technologies Canada	Huawei Technologies Canada	X	X	X	X	X
Bruckman, Leon	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X
Calvin, John	Keysight Technologies	Keysight Technologies	X	X	X	X	X
Cassan, Dave	Alphawave	Alphawave				X	X
Castro, Jose	Panduit	Panduit Corp.	X	X	X		
Chang, Xin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X			
Chang, Yongmao	Inphi Corporation	Source Photonics				X	X
Chen, Chan	Applied Optoelectronics, Inc.	Applied Optoelectronics, Inc.			X		X
Chen, Ling		Huawei Technologies Co., Ltd;	X	X			
Choe, Denz		BeCe Pte Ltd				X	
Choudhury, Golam	OFS	OFS	X	X	X	X	
Connaughton, Michael		Leviton Manufacturing Co.					X
D'Ambrosia, John	Futurewei Technologies	Futurewei Technologies, U.S. Subsidiary of Huawei	X		X	X	X
Dawe, Piers J G	NVIDIA	Nvidia	X	X	X	X	X
Deandrea, John	Finisar Corporation	Finisar Corporation	X	X			
Dehlaghi, Behzad		Alphawave IP					X
Diminico, Christopher	M C Communications, LLC	Panduit Corp.	X	X	X	X	
Dittmann, Markus	KDPOF	KDPOF			X		
Donahue, Curtis	Rohde & Schwarz	Rohde & Schwarz			X		
donthu, suresh		Corning Incorporated			X		
Dube, Kathryn	UNH-IOL	UNH-IOL	X	X	X	X	X
Dudek, Michael	Marvell	Marvell		X	X		
Effenberger, Frank	Futurewei Technologies	Futurewei Technologies	X	X	X		
Estes, David	Spirent Communications	Spirent Communications	X	X	X		
Ewen, John	Marvell	Marvell	X	X	X	X	X
FAn, DAWEI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X				
Ferretti, Vincent	Corning Incorporated	Corning Incorporated	X	X			X
FILIPPOU, DIMITRIS		Dimitris Filippou; I2QS					X
Gao, Xiangrong	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X			X
Geng, Limin	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X

Ghiasi, Ali	Ghiasi Quantum LLC	Ghiasi Quantum LLC; Marvell Semiconductor, Inc.	X	X	X	X	X
Goodwill, Dominic		Huawei Technologies Canada; Huawei Technologies Co., Ltd				X	X
Gore, Brandon	Samtec, Inc.	Samtec, Inc.		X	X	X	X
Gorshe, Steven Scott	Microchip Technology, Inc.	Microchip Technology, Inc.	X	X	X	X	X
Graba, James	Broadcom Corporation	Broadcom Corporation			X		
Gu, Tao		Centec					X
Gustlin, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X	X	X	X
Haasz, Jodi	IEEE-SA	IEEE Standards Association (IEEE-SA)				X	
Han, Ruibo	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)			X		
Harstead, Ed	Nokia	Nokia					X
Hartmann, Stephan	Siliconally GmbH	Siliconally GmbH	X				
Haser, Alexandra	Molex Incorporated	Molex Incorporated	X	X	X	X	X
He, Xiang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X
Healey, Adam	Broadcom Inc.	Broadcom Inc.	X	X	X	X	X
Heck, Howard	Intel Corporation	Intel Corporation	X	X	X	X	X
Hidaka, Yasuo	Credo Semiconductor	Credo Semiconductor	X	X	X	X	X
Huang, Kechao		Huawei Technologies Co., Ltd	X	X	X	X	X
HUANG, QINHUI	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd				X	X
Huber, Thomas	Nokia	Nokia	X	X	X	X	
Hutchins, Jeff	Ranovus	Ranovus		X	X	X	X
ISHIBE, KAZUHIKO	Anritsu Company	Anritsu Company	X	X	X		
Isono, Hideki	Fujitsu Optical Components Limited	Fujitsu Optical Components Limited	X	X	X		X
Issenhuth, Tom	Issenhuth Consulting, LLC	Huawei Technologies Co., Ltd	X	X	X	X	X
Jackson, Kenneth	Sumitomo Electric Device Innovations, USA	Sumitomo Electric Industries, LTD	X	X	X	X	X
Jimenez, Andrew	Anixter Inc.	Anixter Inc.	X	X			
Johnson, John	Broadcom Corporation	Broadcom Corporation		X	X		X
Kareti, Upen	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X	X	X	X
Kawatsu, Yasuaki	APRESIA Systems	APRESIA Systems	X	X	X		
Kim, Kihong/Joshua	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.	X	X	X	X	X
Kimber, Eric	Semtech Ltd	Semtech Ltd	X	X	X	X	X
Kinningham, Alan	I-PEX CONNECTORS	I-PEX (division of Dai-Ichi Seiko)					X
Klempa, Michael	University of New Hampshire InterOperability Laboratory (UNH-IOL)	Amphenol Corporation				X	
Kochuparambil, Elizabeth	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X	X		
Kocsis, Sam	Amphenol Corporation	Amphenol Corporation		X	X		X
Koehler, Daniel	MorethanIP	Synopsys, Inc.	X			X	X
Kondo, Taiji	MegaChips Corporation	Dexerials	X	X	X	X	X
Kuschnerov, Maxim	Huawei Technologies Duesseldorf GmbH	Huawei Technologies Duesseldorf GmbH					X
Lackner, Hans	QoSCom GmbH	QoSCom - Quality in Communications - GmbH		X			
Lam, Cedric		Google		X	X	X	X

Lapierre, Dominic		EXFO Inc.				X	X
Law, David	Hewlett Packard Enterprise	Hewlett Packard Enterprise		X		X	X
Lawson, Matthew	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X	X	X	X
Le Cheminant, Greg	Keysight Technologies	Keysight Technologies		X	X		X
Levin, Itamar		Intel Corporation	X	X	X	X	X
Lewis, David	Lumentum Inc.	Lumentum Inc.	X	X	X		X
Li, Mike-Peng	Intel Corporation	Intel Corporation	X	X	X		X
Li, Pei-Rong		MediaTek Inc.	X	X	X	X	X
Lim, Jane	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X	X		
Lin, Youxi	Huawei Technologies Duesseldorf GmbH	Huawei Technologies Co., Ltd					X
Lusted, Kent	Intel Corporation	Intel Corporation	X	X	X	X	X
Maguire, Valerie	The Siemon Company	The Siemon Company	X	X			
Mak, Gary	Inphi Corporation	inphi					X
Maki, Jeffery	Juniper Networks, Inc.	Juniper Networks, Inc.	X	X	X	X	X
Malicoat, David	Malicoat Networking Solutions	Malicoat Networking Solutions; SENKO Advanced Components	X	X	X	X	X
Maniloff, Eric	Ciena Corporation	Ciena Corporation	X	X	X	X	X
Marques, Flavio	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC	X	X	X		
Marris, Arthur	Cadence Design Systems, Inc.	Cadence Design Systems, Inc.		X			
Mazzini, Marco	Cisco Systems, Inc.	Cisco Systems, Inc.				X	
Mellitz, Richard	Samtec, Inc.	Samtec, Inc.	X	X	X	X	X
Meltser, Roman		NVIDIA Corporation	X	X	X	X	X
mi, guangan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X
Moorwood, Charles	Keysight Technologies	Keysight Technologies	X	X	X	X	X
Mu, Jianwei		Hisense		X	X		X
Mueller, Thomas	Rosenberger	Rosenberger			X		
Muller, Shimon	Enfabrica Corp.	Enfabrica Corp.	X	X	X	X	X
Murty, Ramana	Broadcom Inc.	Broadcom Corporation	X	X	X	X	X
Muth, Karlheinz	Broadcom Corporation	Broadcom Corporation					X
Nakamoto, Edward	Spirent Communications	Spirent Communications	X	X	X		
Nering, Raymond	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X	X	X	X
Nicholl, Gary	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X			
Nicholl, Shawn	Xilinx	Advanced Micro Devices (AMD)	X	X	X		X
Noujeim, Leesa	Google	Google	X	X	X	X	
Nowell, Mark	Cisco Systems, Inc.	Cisco Systems, Inc.		X	X	X	X
Ofelt, David	Juniper Networks, Inc.	Juniper Networks, Inc.	X	X	X	X	X
Ogura, Ichiro	AIO Core	PETRA		X	X		
Omori, Kumi	NEC Corporation	NEC Corporation	X	X	X	X	X
Opsasnick, Eugene	Broadcom Inc.	Broadcom Inc.	X	X	X	X	X
Palkert, Thomas	Macom,&nbsp;Samtec	Samtec-Macom		X	X	X	X
PARK, CHUL SOO	Juniper Networks Inc.	Juniper Networks, Inc.	X	X	X	X	X
Parkholm, Ulf	Telefon AB LM Ericsson	Ericsson AB		X	X		
Parsons, Earl	CommScope, Inc.	CommScope, Inc.		X	X	X	X
peng, semmy		Huawei Technologies Co., Ltd		X	X	X	X
Pepper, Gerald	Keysight Technologies	Keysight Technologies	X	X	X		
Piehler, David	Dell Technologies	Dell	X	X	X	X	X
Pimpinella, Rick	Panduit Corp.	Panduit Corp.		X	X	X	

Pittala, Fabio	Huawei Technologies Duesseldorf GmbH	Huawei Technologies Duesseldorf GmbH						X
Quan, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X				
Rabinovich, Rick	Keysight Technologies	Keysight Technologies	X	X	X	X	X	X
Radhamohan, Rajeshmohan	MAXLINEAR INC	Cisco Systems, Inc.						X
Rahn, Jeffrey	Facebook	Facebook	X	X	X			X
Ran, Adee	Cisco Systems, Inc.	Cisco Systems, Inc.	X	X	X	X	X	X
Rechtman, Zvi	NVIDIA	NVIDIA						X
Ren, Hao	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X	X
Rodes, Roberto	II-VI	II-VI	X	X	X	X	X	X
Rush, Joshua		UNH-IOL	X	X	X			
Sakai, Toshiaki	Socionext Inc.	socionext	X	X	X	X	X	X
Sambasivan, Sam	AT&T	AT&T		X			X	
Savi, Olindo	Hubbell Incorporated	Hubbell Incorporated	X	X	X	X	X	
Sedarat, Hossein	Ethernovia	Ethernovia			X			
Shah, Anup	Siemens Corporation	Siemens EDA	X					
Shahramian, Shayan	Alphawave IP	Alphawave	X	X	X	X	X	X
Shanbhag, Megha	Tyco	TE Connectivity				X	X	X
She, Qingya	Fujitsu Network Communications	Fujitsu Network Communications	X	X	X	X	X	X
Shrikhande, Kapil	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.	X	X	X	X	X	X
Shubochkin, Roman	OFS	OFS		X	X			
Shukla, Priyank	Synopsys, Inc.	Synopsys, Inc.	X	X	X	X	X	X
Simms, William	NVIDIA Corporation	NVIDIA Corporation	X	X	X	X	X	X
Slavick, Jeff	Broadcom Inc	Broadcom Inc	X	X	X			X
Sommers, Scott	Molex LLC	Molex Incorporated	X	X	X	X	X	
Son, Yung Sung	Optomind Inc	Optomind Inc	X	X	X	X	X	
Sorbara, Massimo	GLOBALFOUNDRIES	GLOBALFOUNDRIES	X	X	X			
Souvignier, Tom	Broadcom Corporation	Broadcom Corporation			X			
Sprague, Edward	Infinera Corporation	Infinera Corporation		X	X	X	X	X
Stassar, Peter	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X				X
Stone, Robert	Broadcom Corporation	Meta					X	
SU, CHANGZHENG		Huawei Technologies Co., Ltd	X	X	X			X
Sun, Junqing	Credo Semiconductor	Credo Semiconductor	X	X				
Sun, Yi		OFS		X				
Tailor, Bharat	Semtech Canada Corporation	Semtech Canada Corporation					X	X
TAKAHARA, TOMOO	FUJITSU LABORATORIES LIMITED	FUJITSU LIMITED	X	X	X			X
TAZEBAY, MEHMET	Broadcom Corporation	Broadcom Corporation			X			
Terada, Masaru	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC						X
Theodoras, James	HG Genuine	HG Genuine	X	X	X	X	X	X
Thompson, lance	II-VI	Finisar Corporation	X	X	X	X	X	X
tomofuji, hiroaki		FUJITSU	X	X				
Tooyserkani, Pirooz	Cisco Systems, Inc.	Cisco Systems, Inc.		X	X	X	X	X
Torza, Anthony		Cisco Systems, Inc.						X
Tracy, Nathan	TE Connectivity	TE Connectivity	X	X	X	X	X	X
Tran, Viet	Keysight Technologies	Keysight Technologies	X	X	X	X	X	X
Trowbridge, Stephen	Nokia	Nokia						X
Ulrichs, Ed	Intel Corporation	Intel Corporation						X

Wang, Haojie	China Mobile Communications Corporation (CMCC)	China Mobile Communications Corporation (CMCC)	X	X	X	X	X
Wang, Ruoxu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X
Wang, Xinyuan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X
Weaver, James	Arista Networks	Arista Networks	X	X	X	X	X
Welch, Brian	Cisco Systems, Inc.	Luxtera		X	X	X	X
Wey, Jun Shan	Verizon Communications	Verizon Communications		X	X		
Williams, Tom	Cisco Systems, Inc.	Cisco Systems, Inc.			X		X
Withey, James	Fluke Corporation	Fluke Corporation	X	X			
Wu, Mau-Lin	MediaTek Inc.	MediaTek Inc.	X	X	X	X	X
Xu, Yu	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X
Yin, Shuang		Google					X
Young, James	CommScope, Inc.	CommScope	X				X
Yu, Rang-Chen		SiFotonics Technologies					X
Zebian, Sara		Google			X		
Zhang, Bo	Marvell Technology, Inc	Marvell Technology, Inc					X
Zhiwei, Yang	ZTE Corporation	ZTE Corporation	X	X		X	
Zhong, Qiwen	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd			X		
Zhuang, Yan	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	X	X	X	X	X
Zivny, Pavel	Tektronix, Inc.	Tektronix, Inc.	X		X	X	



## Motions Summary

<b>Motion #1</b>	<b>Move that the IEEE P802.3df Task Force approve:</b> <ul style="list-style-type: none"> <li>• IEEE_802d3_to_OIF_3df_0315_draft.pdf</li> </ul> <b>with editorial license granted to the Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working Group to OIF.</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Mark Nowell
<b>Second by</b>	Mike Li
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #2</b>	<b>Move to adopt the following objective:</b> <ul style="list-style-type: none"> <li>• Define a physical layer specification that supports 400 Gb/s operation over 4 pairs of SMF with lengths up to at least 2 km</li> </ul>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Mark Nowell
<b>Second by</b>	Jeffery Maki
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #3</b>	<b>Move to adopt the eight-lane 800GbE electrical interfaces and PMDs, per lusted_3df_01a_220315.pdf, slides 4-6</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Matt Brown
<b>Second by</b>	Beth Kochuparambil
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #4</b>	<b>Move to adopt PAM4 optical modulation as the basis for all the 200 Gb/s per lane 500m and 2km SMF reach objectives</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Adee Ran
<b>Second by</b>	Joshua Kim
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent

<b>Motion #5</b>	<b>Adopt slide 8 of murty_3df_01a_220315.pdf as baselines for 800GBASE-VR8 and 800GBASE-SR8 PMDs.</b>
<b>Technical (&gt;= 75%)</b>	
<b>Moved by</b>	Ramana Murty
<b>Second by</b>	Earl Parsons
<b>Results 802.3 (y/n/a)</b>	Approved by unanimous consent