## Agenda and General Information

IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force

Mabud Choudhury, TF Vice-Chair OFS

TF Interim Series Teleconference June 28, 29 (contingent) & 30 (contingent), 2022

## Webex Meeting Procedures

- Please mute your lines if you are not speaking
- Noisy, unmuted lines will be muted by the Webex organizer

- Please make sure your full name and affiliation are both listed on the Webex Participants List
- If not, you must write your name and affiliation in the Webex Chat window
- Displaying name and affiliation via Webex Participant list or via Webex Chat to Everyone is a meeting requirement

## Agenda

- Welcome
- Approve Agenda
- Task Force Decorum. Ground Rules
- Attendance
- Voting
- Goals for this meeting
- Reflector and Web
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents. IEEE Patent Policy reminder: <a href="http://www.ieee802.org/3/patent.html">http://www.ieee802.org/3/patent.html</a>
  - IEEE Copyright reminder: <a href="https://standards.ieee.org/ipr/index.html">https://standards.ieee.org/ipr/index.html</a>
  - IEEE Participant reminder: <a href="http://www.ieee802.org/devdocs.shtml">http://www.ieee802.org/devdocs.shtml</a>
  - IEEE Standards Process
- PAR & Objectives
- Liaison IEEE 802.3 WG to INCITS T11.2
- SA Ballots Summary
- D3.1 Editors' Report and Comment Agenda Earl Parsons (CommScope), Ramana Murty (Broadcom)
- Comment Resolution against D3.1
- Contribution:
  - "Protecting against the error floor. P802.3db Draft 3.1 comment R1-11" Piers Dawe (Nvidia)
- Straw Polls (as needed) & Motions
- Future Meetings

### .3db Motion #1

Move to approve the Agenda, Slide 3 of agenda 3db 01 062822.pdf

- M:
- S:
- (Procedural > 50%)
- Motion

## Task Force Decorum



- An officer is permitted to make an audio or slideshow recording of this meeting exclusively for the
  purpose of generating minutes which shall not be copied or distributed. IEEE 802.3 meetings do not
  use this option. Recording of the proceedings by any other participant or observer, in part or in whole,
  via any means, is prohibited. (January 2020 IEEE-SA Standards Board Ops Manual 5.3.3.2)
- Privacy of "private chats" cannot be guaranteed
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (January 2020 IEEE-SA Standards Board Ops Manual 5.3.3.3)
- Please mute when not speaking to the group
- Please observe proper decorum in meetings

## **Ground Rules**

- Based upon IEEE 802.3 Rules
  - Foundation based upon Robert's Rules of Order
  - Anyone attending the meeting may speak and participate in straw polls
  - On teleconferences, only IEEE 802.3 WG members may vote, for in-person meetings, anyone attending may vote
- RESPECT... give it, get it
- NO product pitches
- NO corporate pitches
- NO prices!!!
  - This includes costs, ASPs, etc. no matter what the currency
- NO restrictive notices

### Attendance

- Webex attendance list:
  - Attendee names and affiliations for the minutes will be taken from the Webex participants list or from the Webex chat to Everyone
    - Your name and affiliation <u>must</u> be shown on Webex participant list or declared via Webex chat to Everyone

## Voting

- Reference: Excerpt from Section 3.4.2, IEEE 802.3 Operations Manual:
  - http://www.ieee802.org/3/rules/P802\_3\_rules.pdf
- There are two type of votes in the TF; votes on motions and votes in straw polls.
- In face-to-face meetings where a TF is operating with membership rules for voting (see 3.3) only the TF members may make and vote on motions. In face-to-face meetings where membership rules are not in force all TF participants may make and vote on motions, subject only to the provision that they believe that they are qualified to vote on the matter before the TF.
- Electronic meetings that will consider motions shall be approved by the WG Chair prior to the meeting announcement. In such meetings only IEEE 802.3 Working Group members may make and vote on motions. If a motion is not approved by unanimous consent, it shall be taken as a roll call vote.
- In all cases, regardless of any membership rules that may or may not be in force, all
  participants who feel qualified may participate in a straw poll

## Voting for TF Motions

- All June interim TF votes for motions will be either unanimous consent or by roll call during this meeting
  - Only 802.3 members may vote for TF motions:
     <a href="https://www.ieee802.org/3/minutes/jul22/0722\_voters.pdf">https://www.ieee802.org/3/minutes/jul22/0722\_voters.pdf</a>

## Goals for the meeting

- Motion to authorize Draft liaison letter from IEEE 802.3 WG to INCITS T11.2 to make P802.3db D3.2 available
- Complete comment resolution against D3.1
- Motion to authorize D3.2 (if required)
- Motion to reaffirm CSD, request (conditional) approval to submit to RevCom

## Reflector and Web

 To subscribe to the IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force reflector, send an email to:

ListServ@ieee.org

with the following in the body of the message (do not include "<>"): subscribe stds-802-3-100GSR <yourfirstname> <yourlastname>

 Send IEEE P802.3db 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force reflector messages to:

STDS-802-3-100GSR@listserv.ieee.org

Task Force web page URL:

http://ieee802.org/3/db/index.html

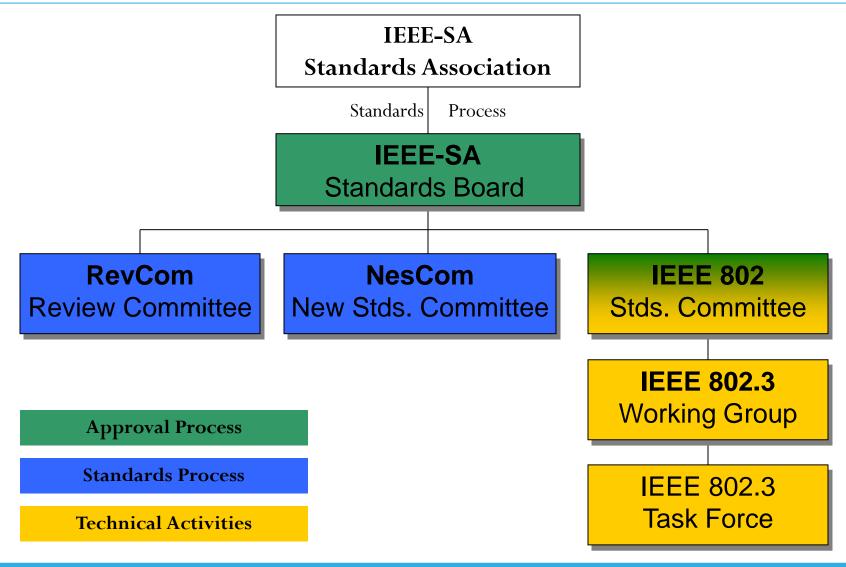
Version 3.8

## TF Private Area

- All drafts of standard are posted in password-protected Private area
- Username (provided at meeting):
- Password (provided at meeting):
- (802.3 WG Private area Username and Password will also work)



## IEEE Structure



## Important Bylaws and Rules

IEEE-SA Operations Manual

http://standards.ieee.org/develop/policies/sa\_opman/

IEEE-SA Standards Board Bylaws

http://standards.ieee.org/develop/policies/bylaws/

IEEE-SA Standards Board Operations Manual

http://standards.ieee.org/develop/policies/opman/

- IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures <a href="https://ieee.app.box.com/v/PandP-LMSC">https://ieee.app.box.com/v/PandP-LMSC</a>
- IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual <a href="http://www.ieee802.org/devdocs.shtml">http://www.ieee802.org/devdocs.shtml</a>
- IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures

http://www.ieee802.org/devdocs.shtml

IEEE 802.3 Working Group Operating Rules

http://ieee802.org/3/rules/P802\_3\_rules.pdf

#### INSTRUCTIONS FOR THE WG CHAIR

The IEEE SA strongly recommends that at each WG meeting the chair or a designee:

- Show slides 1 through 4 of this presentation
- Advise the WG attendees that:
  - IEEE's patent policy is described in Clause 6 of the IEEE SA Standards Board Bylaws;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- Instruct the WG Secretary to record in the minutes of the relevant WG meeting:
  - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
  - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
  - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.
- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG Chair review the guidance in IEEE SA Standards Board Operations Manual 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE SA Standards Board.





#### PARTICIPANTS HAVE A DUTY TO INFORM THE IEEE

- Participants <u>shall</u> inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- Participants <u>should</u> inform the IEEE (or cause the IEEE to be informed)
   of the identity of any other holders of potential Essential Patent Claims

### Early identification of holders of potential Essential Patent Claims is encouraged





#### **WAYS TO INFORM IEEE**

- Cause an LOA to be submitted to the IEEE SA (patcom@ieee.org); or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
- Speak up now and respond to this Call for Potentially Essential Patents

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair





#### OTHER GUIDELINES FOR IEEE WORKING GROUP MEETINGS

- All IEEE SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don't discuss specific license rates, terms, or conditions.
    - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
      - Technical considerations remain the primary focus.
  - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don't discuss the status or substance of ongoing or threatened litigation.
  - Don't be silent if inappropriate topics are discussed. Formally object to the discussion immediately.

For more details, see IEEE SA Standards Board Operations Manual, clause 5.3.10 and Antitrust and Competition Policy: What You Need to Know at

http://standards.ieee.org/develop/policies/antitrust.pdf





#### PATENT-RELATED INFORMATION

The patent policy and the procedures used to execute that policy are documented in the:

- IEEE SA Standards Board Bylaws (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
- IEEE SA Standards Board Operations Manual (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)

Material about the patent policy is available at <a href="http://standards.ieee.org/about/sasb/patcom/materials.html">http://standards.ieee.org/about/sasb/patcom/materials.html</a>

If you have questions, contact the IEEE SA Standards Board Patent Committee Administrator at patcom@ieee.org





# INSTRUCTIONS FOR CHAIRS OF STANDARDS DEVELOPMENT ACTIVITIES

# At the beginning of each standards development meeting the chair or a designee is to:

- Show the following slides (or provide them beforehand)
- Advise the standards development group participants that:
- IEEE SA's copyright policy is described in Clause 7 of the IEEE SA Standards Board Bylaws and Clause 6.1 of the IEEE SA Standards Board Operations Manual;
- Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy;
- Instruct the Secretary to record in the minutes of the relevant meeting:
- That the foregoing information was provided and that the copyright slides were shown (or provided beforehand).





#### **IEEE SA COPYRIGHT POLICY**

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.

- Previously Published material (copyright assertion indicated) shall not be presented/submitted to the Working Group nor incorporated into a Working Group draft unless permission is granted.
- Prior to presentation or submission, you shall notify the Working Group Chair of previously Published material and should assist the Chair in obtaining copyright permission acceptable to IEEE SA.
- For material that is not previously Published, IEEE is automatically granted a license to use any material that is presented or submitted.





#### **IEEE SA COPYRIGHT POLICY**

- The IEEE SA Copyright Policy is described in the IEEE SA Standards Board Bylaws and IEEE SA Standards Board Operations Manual
  - IEEE SA Copyright Policy, see
     Clause 7 of the IEEE SA Standards Board Bylaws
     <a href="https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7">https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7</a>
     Clause 6.1 of the IEEE SA Standards Board Operations Manual https://standards.ieee.org/about/policies/opman/sect6.html
- IEEE SA Copyright Permission
  - https://standards.ieee.org/content/dam/ieeestandards/standards/web/documents/other/permissionltrs.zip
- IEEE SA Copyright FAQs
  - <a href="http://standards.ieee.org/faqs/copyrights.html/">http://standards.ieee.org/faqs/copyrights.html/</a>
- IEEE SA Best Practices for IEEE Standards Development
  - <a href="http://standards.ieee.org/develop/policies/best\_practices\_for\_ieee\_standards\_development\_051215.pdf">http://standards.ieee.org/develop/policies/best\_practices\_for\_ieee\_standards\_development\_051215.pdf</a>
- Distribution of Draft Standards (see 6.1.3 of the SASB Operations Manual)
  - https://standards.ieee.org/about/policies/opman/sect6.html





# Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - IEEE Code of Ethics
  - IEEE Code of Conduct
- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct
  - Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.
  - Avoid injuring others, their property, reputation, or employment by false or malicious action
- The most recent versions of these Codes are available at <a href="http://www.ieee.org/about/corporate/governance">http://www.ieee.org/about/corporate/governance</a>

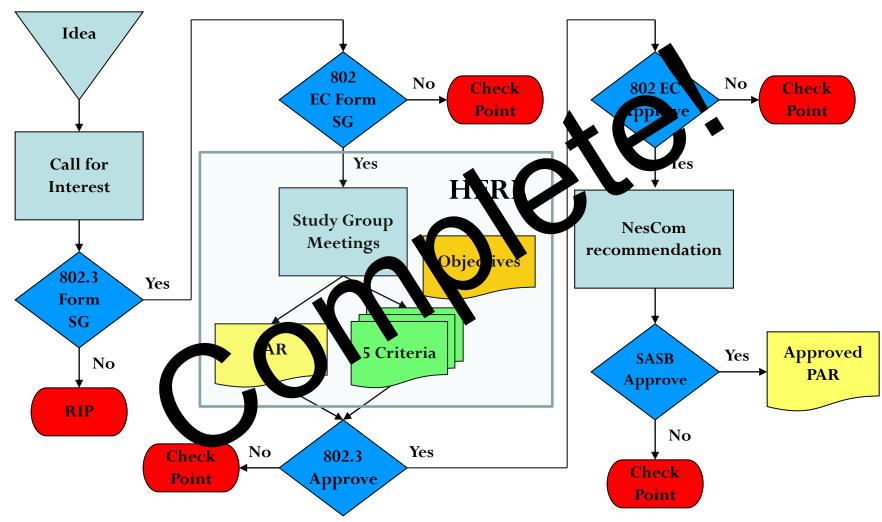
# Participants in the IEEE-SA "individual process" shall act independently of others, including employers

- The <u>IEEE-SA Standards Board Bylaws</u> require that "participants in the IEEE standards development individual process shall act based on their qualifications and experience"
- This means participants:
  - Shall act & vote based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
  - Shall not act or vote based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
  - Shall not direct the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions
- 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

# IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

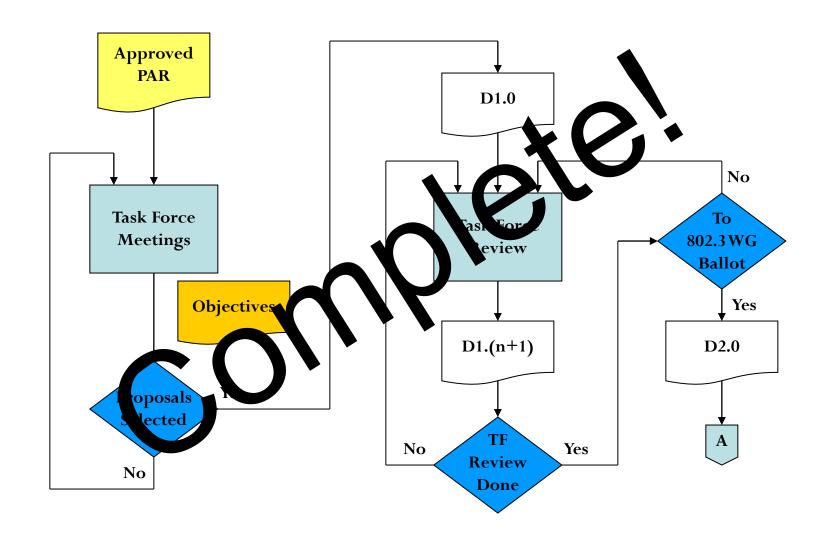
- The <u>IEEE-SA Standards Board Bylaws</u> (clause 5.2.1.3) specifies that "the standards development process shall not be dominated by any single interest category, individual, or organization"
  - This means no participant may exercise "authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints" or "to hinder the progress of the standards development activity"
- This rule applies equally to those participating in a standards development project and to that project's leadership group
- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project's IEEE-SA Program Manager

### Overview of IEEE 802.3 Standards Process (1/5)-Study Group Phase

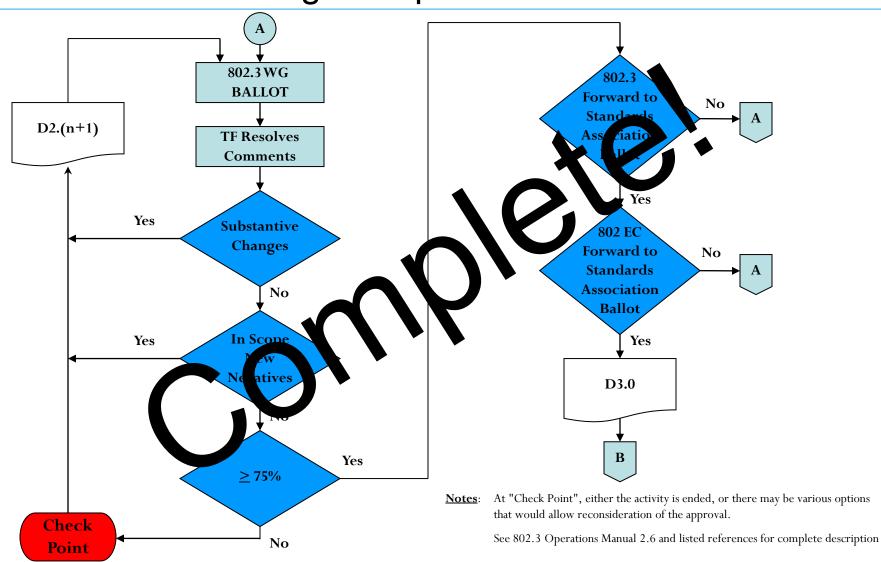


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

# Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase

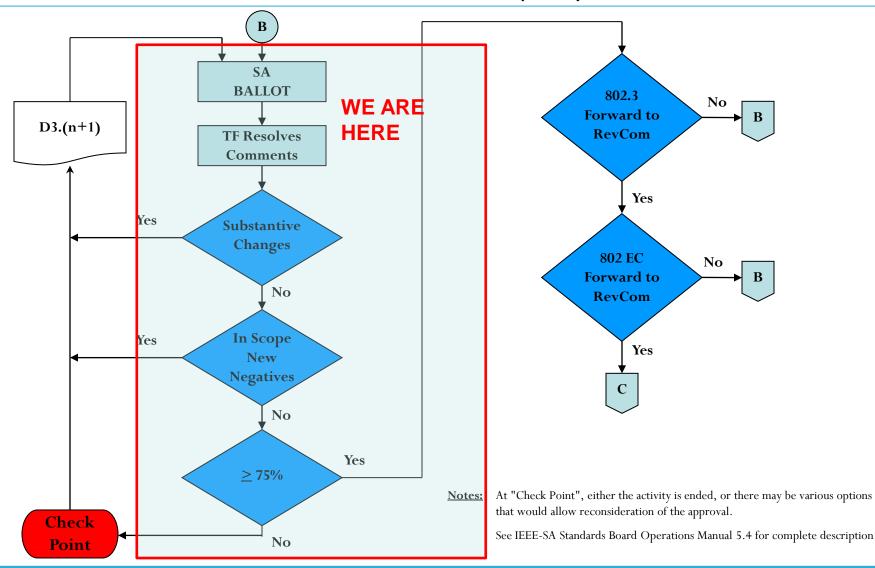


# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase

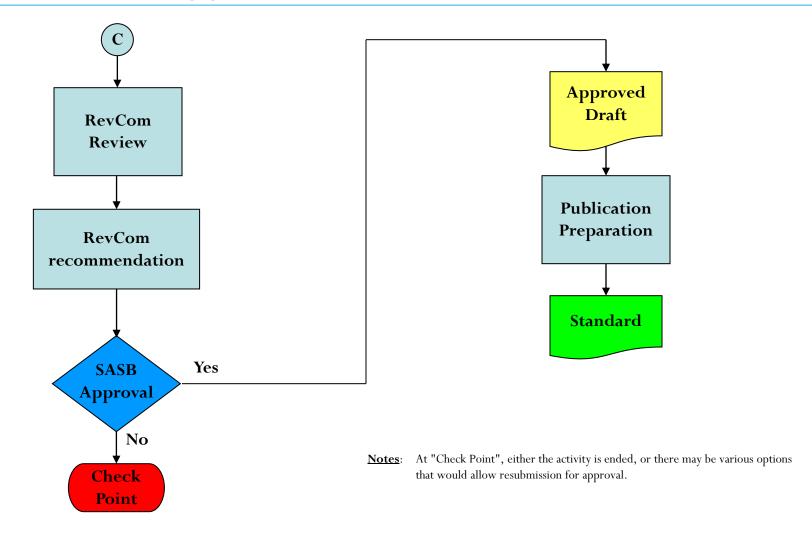


Version 3.8

# Overview of IEEE 802.3 Standards Process (4/5)-IEEE Standards Association (SA) Ballot Phase



# Overview of IEEE 802.3 Standards Process (5/5) – Final Approvals / Standard Release



### IEEE P802.3db Short Reach Fiber Task Force Approved Project Documents

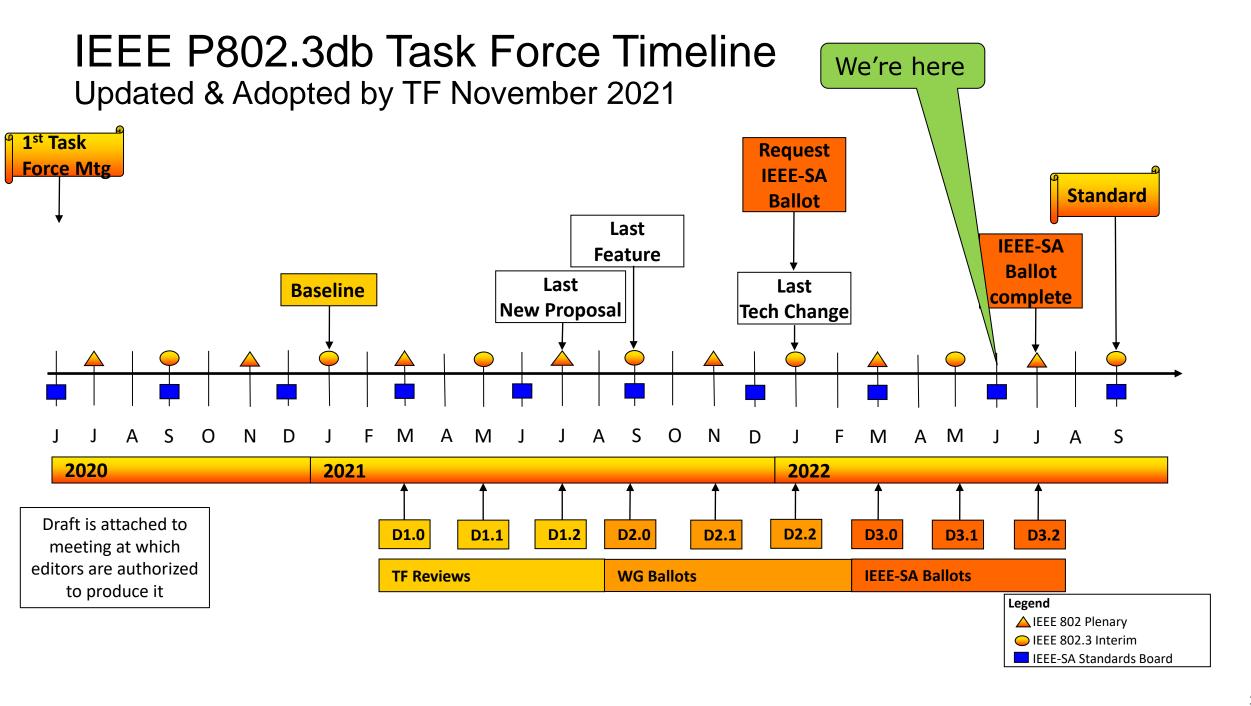
- PAR
  - http://ieee802.org/3/db/P802d3db\_PAR.pdf
- CSD Responses
  - https://mentor.ieee.org/802-ec/dcn/20/ec-20-0097-01-ACSDp802-3db.pdf
- Objectives
  - https://www.ieee802.org/3/db/P802d3db\_Updated\_Objectives\_ Approved\_November\_2020.pdf

### IEEE P802.3db Short Reach Fiber Task Force Approved Objectives

- 1. Support a MAC data rate of 100 Gb/s, 200 Gb/s and 400 Gb/s
- 2. Support full-duplex operation only
- 3. Preserve the Ethernet frame format utilizing the Ethernet MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- Provide appropriate support for OTN
- 6. Support a BER of better than or equal to 10^-12 at the MAC/PLS service interface (or the frame loss ratio equivalent) for 100 Gb/s operation
- 7. Support a BER of better than or equal to 10^-13 at the MAC/PLS service interface (or the frame loss ratio equivalent) for 200 Gb/s and 400 Gb/s operation

### IEEE P802.3db Short Reach Fiber Task Force Approved Objectives

- Define a physical layer specification that supports 100 Gb/s operation over 1 pair of MMF with lengths up to at least 50 m
- Define a physical layer specification that supports 200 Gb/s operation over 2 pairs of MMF with lengths up to at least 50 m
- Define a physical layer specification that supports 400 Gb/s operation over
   4 pairs of MMF with lengths up to at least 50 m
- 11. Define a physical layer specification that supports 100 Gb/s operation over1 pair of MMF with lengths up to at least 100 m
- 12. Define a physical layer specification that supports 200 Gb/s operation over 2 pairs of MMF with lengths up to at least 100 m
- 13. Define a physical layer specification that supports 400 Gb/s operation over 4 pairs of MMF with lengths up to at least 100 m



## Liaison

- Liaison letter IEEE 802.3 WG to INCITS T11.2 (Fibre Channel Physical Variants Task Group) to share IEEE P802.3db Draft 3.2 (if approved):
  - IEEE\_802d3\_to\_T11-2\_062822\_draft1\_redacted.pdf

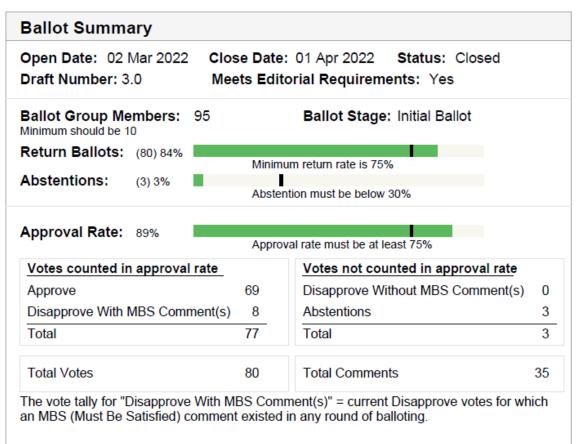
Version 3.8

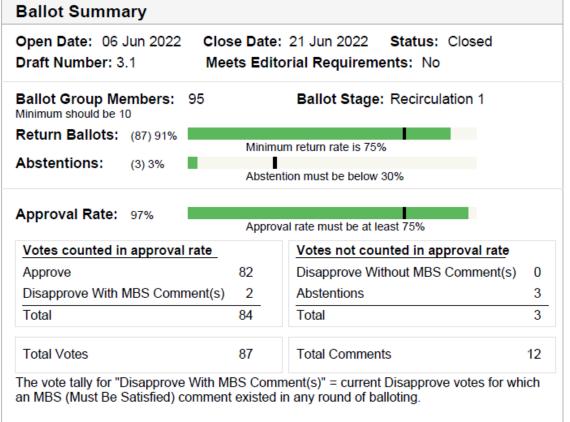
## .3db Motion #2

- Move that the IEEE P802.3db Task Force approve

   <u>IEEE\_802d3\_to\_T11-2\_062822\_draft1\_redacted.pdf</u> with editorial license granted to the Chair (or his appointed agent) as liaison communication from the IEEE 802.3 Working Group to INCITS T11.2
- M:
- S:
- Y: N: A:
- Technical (>/=75% of 802.3 voters)
- Motion

## SA Ballots Summary - D3.0 & D3.1





## Editors' Report and Comment Agenda & D3.1

- "802.3db Editors Report and Comment Agenda" Earl Parsons (affiliated with CommScope) and Ramana Murty (affiliated with Broadcom Inc.):
  - editors\_report\_3db\_01\_062822.pdf
- D3.1:
  - 8023db\_D3p1.pdf

# Comments against D3.1

- Comments received (sorted by Clause):
  - P802d3db\_D3p1\_comments\_received\_by\_Clause.pdf
- Comments received (sorted by ID):
  - P802d3db\_D3p1\_comments\_received\_by\_ID.pdf
- Proposed responses (sorted by Clause):
  - P802d3db\_D3p1\_proposed\_responses\_by\_Clause.pdf
- Proposed responses (sorted by ID):
  - P802d3db\_D3p1\_proposed\_responses\_by\_ID.pdf

## Late Comment

- Comment R1-13 was a late (non-ballot) comment
- Comment R1-13 will be considered by the IEEE P802.3db Task Force if (based on a vote, if necessary) there is no objection to do so.

# Unsatisfied Comments Against D3.0

- Unsatisfied negative comments against D3.0
  - P802d3db\_D3p0\_unsatisfied\_by\_Clause\_052722.pdf

### Contribution

 "Protecting against the error floor. P802.3db Draft 3.1 comment R1-11" – Piers Dawe (Nvidia): <a href="mailto:dawe\_3db\_01\_062822.pdf">dawe\_3db\_01\_062822.pdf</a>

#### .3db Motion #

Move to generate Draft 3.2, from D3.1 and closed comments, for IEEE Standards Association recirculation ballot

- M:
- S:
- Technical (>/=75% of 802.3 voters)
- Motion

## Re-affirm CSD Responses

IEEE 802.3db Task Force CSD responses:

https://mentor.ieee.org/802-ec/dcn/20/ec-20-0097-01-

ACSD-p802-3db.pdf

#### .3db Motion #

Move that the IEEE 802.3db Task Force re-affirm the CSD responses in <a href="https://mentor.ieee.org/802-ec/dcn/20/ec-20-0097-01-ACSD-p802-3db.pdf">https://mentor.ieee.org/802-ec/dcn/20/ec-20-0097-01-ACSD-p802-3db.pdf</a> and request conditional approval to progress the IEEE P802.3db draft to RevCom once the IEEE Standards Association ballot process has been successfully completed.

- M:
- S:
- Technical (>/=75% of 802.3 voters)
- Motion

# Future TF Meetings

- See: <a href="http://ieee802.org/3/calendar.html">http://ieee802.org/3/interims/index.html</a>
- IEEE 802 plenary (11-15 July) will be hybrid (in-person Montreal, Quebec, Canada plus virtual)
  - Registration and payment of fee is required to attend either in-person or virtual
  - Face-to-Face with remote access (provided on best effort basis)
  - Meetings will be scheduled for in-person attendees (Montreal business hours, with typical in-person morning, lunch, and afternoon breaks, and when necessary, evening meetings)
  - P802.3db TF plenary: Monday, July 11, 13:00 18:00 EDT/UTC-4: <a href="https://www.ieee802.org/3/interims/July%20IEEE%20802.3%20Plenary%20Meetings%20(June%206,%2020).pdf">https://www.ieee802.org/3/interims/July%20IEEE%20802.3%20Plenary%20Meetings%20(June%206,%2020).pdf</a>
  - Late registration fee \$US900.00 After June 24, 2022. No refund after June 24: <a href="https://web.cvent.com/event/5ab3e363-ef4b-45fe-b35d-cd88bf622491/summary">https://web.cvent.com/event/5ab3e363-ef4b-45fe-b35d-cd88bf622491/summary</a>

## **Future Meetings**

Meeting	Location	Dates
IEEE 802 July 2022 plenary	Montreal, Quebec, Canada	11-14 July 2022
IEEE 802.3 September 2022 interim	TBD	5-9 & 12-16 September 2022
IEEE 802 November 2022 plenary	Bangkok, Thailand	14-17 November 2022

#### .3db Motion #

#### Move to Adjourn TF Telephonic Interim Meeting

- M:
- S:
- (Procedural > 50%)

Motion

# Thank You!