

**IEEE 802 Nov 2022**

**IEEE 802.3 Ethernet WG  
Opening Plenary  
14 Nov 2022**

**IEEE P802.3df  
200 Gb/s, 400 Gb/s, 800 Gb/s,  
and 1.6 Tb/s Force  
Opening Report**



# IEEE P802.3df Task Force Project information

## ■ Organization

- John D'Ambrosia, Chair, IEEE P802.3df Task Force
- Mark Nowell, Vice-Chair, IEEE P802.3df Task Force, Optics Track Chair
- Matt Brown, Chief Editor
- Mark Gustlin, Architecture & Logic Track Chair
- Kent Lusted, Electrical Track Chair

## ▪ Task force web and reflector information:

- Home page: <https://www.ieee802.org/3/df/index.html>
- Reflector Info - <https://www.ieee802.org/3/df/reflector.html>
  - TF Reflector: [stds-802-3-b400g@listserv.ieee.org](mailto:stds-802-3-b400g@listserv.ieee.org)
  - Logic Reflector: [stds-802-3-b400g-logic@listserv.ieee.org](mailto:stds-802-3-b400g-logic@listserv.ieee.org)
  - Optical Reflector: [stds-802-3-b400g-optx@listserv.ieee.org](mailto:stds-802-3-b400g-optx@listserv.ieee.org)
  - Electrical Reflector: [stds-802-3-b400g-elec@listserv.ieee.org](mailto:stds-802-3-b400g-elec@listserv.ieee.org)

## ▪ Project Documentation –

- PAR : [https://www.ieee802.org/3/df/proj\\_doc/IEEE\\_P802.3df\\_PAR\\_11122021.pdf](https://www.ieee802.org/3/df/proj_doc/IEEE_P802.3df_PAR_11122021.pdf)
- CSD: <https://mentor.ieee.org/802-ec/dcn/21/ec-21-0306-00-ACSD-p802-3df.pdf>
- Objectives: [https://www.ieee802.org/3/df/proj\\_doc/objectives\\_P802d3df\\_220317.pdf](https://www.ieee802.org/3/df/proj_doc/objectives_P802d3df_220317.pdf)

## ▪ P802.3df TF meeting information may be found on:

- Public page: <https://www.ieee802.org/3/df/public/index.html>
- 802.3 Calendar: <https://www.ieee802.org/3/calendar.html>
- Ad hoc Page: <https://www.ieee802.org/3/df/public/adhoc/index.html>

# Activities Since July 2021 Plenary

- **Sept 2022 Session**
  - **≈ 150 attendees**
  - **Key Motions (all approved by unanimous consent)**
    - **Motion #1** – Move that the IEEE P802.3df Task Force develop:
      - A modification of the IEEE P802.3df PAR to address “Media Access Control Parameters for 800 Gb/s and Physical Layers and Management Parameters for 400 Gb/s and 800 Gb/s Operation”
      - A new IEEE P802.3dj PAR to address “Media Access Control Parameters for 1.6 Tb/s and, Physical Layers and Management Parameters for 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Operation.”
    - **Motion #2** - Move to adopt:
      - The objectives stated on Slide #6 of dambrosia\_3df\_02\_2209 for the modified IEEE P802.3df Project
      - The objectives stated on Slides #6 – 7 of dambrosia\_3df\_05\_2209 for the IEEE P802.3dj Project
    - **Motion #3** - Move to adopt the link training baseline for 800GBASE-CR8 and 800GBASE-KR8 PMDs in lusted\_3df\_01a\_2209 slides 6-11
- **Ad Hoc Meetings**
  - **Electrical Ad hoc (21 Sept)**
    - **≈ 110 Attendees**
    - **3 technical presentations considered**

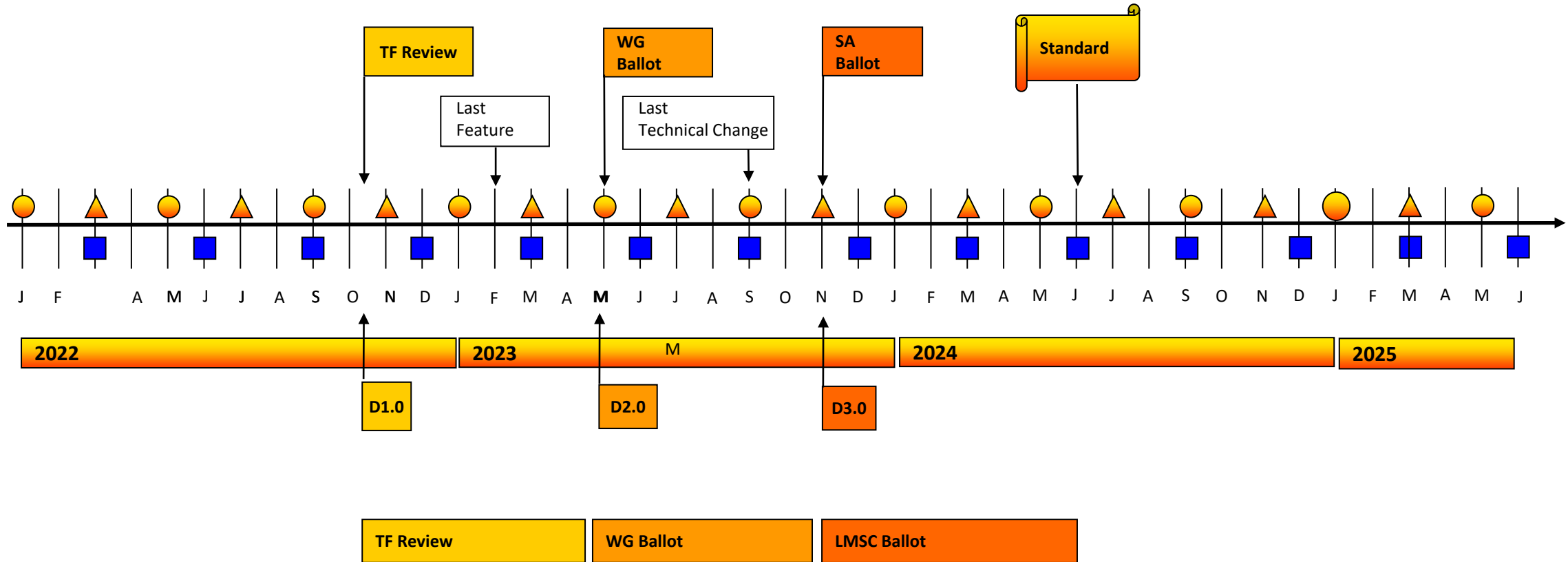
# Activities Since July 2021 Plenary

- **Oct 2022 Session**
  - **180 attendees**
  - **Presentations**
    - **Updated project documentation for P802.3df / P802.3dj**
    - **23 technical presentations**
  - **Key Motions (all approved by unanimous consent)**
    - **Motion #1** - Move to adopt
      - For the modified IEEE P802.3df PAR
        - The PAR responses in PAR\_P802p3df\_Proposedb\_220927.pdf
        - The CSD “Managed Objects”, “Coexistence”, “Broad Market Potential”, “Compatibility”, “Distinct Identity”, “Technical Feasibility”, and “Economic Feasibility” responses, as per [https://www.ieee802.org/3/df/public/22\\_09/dambrosia\\_3df\\_04a\\_2209.pdf](https://www.ieee802.org/3/df/public/22_09/dambrosia_3df_04a_2209.pdf)
      - For the new IEEE P802.3dj PAR
        - The PAR responses in PAR\_P802p3dj\_Proposedda\_220927.pdf
        - The CSD “Managed Objects”, “Coexistence”, “Broad Market Potential”, “Compatibility”, “Distinct Identity”, “Technical Feasibility”, and “Economic Feasibility” responses, as per [https://www.ieee802.org/3/df/public/22\\_09/dambrosia\\_3df\\_07b\\_2209.pdf](https://www.ieee802.org/3/df/public/22_09/dambrosia_3df_07b_2209.pdf)
    - **Motion #2** - Move to adopt shrikhande\_3df\_01a\_221004.pdf as the baseline for the 800GbE PCS/FEC/PMA Baseline Proposal for PHYs using 8 x 100G PMD lanes
    - **Motion #3** - Move to adopt timeline for IEEE P802.3df noted on Slide 4 of [https://www.ieee802.org/3/df/public/22\\_09/dambrosia\\_3df\\_01b\\_2209.pdf](https://www.ieee802.org/3/df/public/22_09/dambrosia_3df_01b_2209.pdf)
    - **Motion #4** - Move that the IEEE P802.3df Task Force:
      - Generate P802.3df Draft 1.0 based on the contributed Draft 0.2 and the subsequent adopted baselines (e.g. lusted\_3df\_01a\_2209 and shrikhande\_3df\_01a\_221004)
      - Initiate Task Force Review

# Activities Since July 2021 Plenary

- **Initiated IEEE P802.3df Task Force Review**
  - **Opened 14 Oct 2022**
  - **Closed 13 Nov 2022 AoE**
- **Submitted IEEE P802.3 modified PAR and IEEE P802.3dj PAR to 802 and NesCom**

# Adopted IEEE P802.3df Timeline (04 Oct 2022)



**Legend**

- ▲ IEEE 802 Plenary
- IEEE 802.3 Interim
- IEEE-SA Standards Board

# Summary Progress

| Ethernet Rate | Assumed Signaling Rate | AUI                    | BP                      | Cu Cable                | MMF 50m                 | MMF 100m                | SMF 500m                | SMF 2km                                                  | SMF 10km                                 | SMF 40km                                 |
|---------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------------------------------------------------------|------------------------------------------|------------------------------------------|
| 200 Gb/s      | 200 Gb/s               | 1 lane<br>200GAUI-1    |                         | 1 pair<br>200GBASE-CR1  |                         |                         | 1 pair<br>200GBASE-DR1  | 1 pair<br>200GBASE-FR1                                   |                                          |                                          |
| 400 Gb/s      | 100 Gb/s               |                        |                         |                         |                         |                         |                         | 4 pair<br>400GBASE-DR4-2                                 |                                          |                                          |
|               | 200 Gb/s               | 2 lanes<br>400GAUI-2   |                         | 2 pairs<br>400GBASE-CR2 |                         |                         | 2 Pair<br>400GBASE-DR2  |                                                          |                                          |                                          |
| 800 Gb/s      | 100 Gb/s               | 8 lanes<br>800GAUI-8   | 8 lanes<br>800GBASE-KR8 | 8 pairs<br>800GBASE-CR8 | 8 pairs<br>800GBASE-VR8 | 8 pairs<br>800GBASE-SR8 | 8 pairs<br>800GBASE-DR8 | 8 pairs<br>800GBASE-DR8-2                                |                                          |                                          |
|               | 200 Gb/s               | 4 lanes<br>800GAUI-4   |                         | 4 pairs<br>800GBASE-CR4 |                         |                         | 4 pairs<br>800GBASE-DR4 | 1. 4 pairs<br>800GBASE-DR4-2<br>2. 4 λ's<br>800GBASE-FR4 |                                          |                                          |
|               | TBD                    |                        |                         |                         |                         |                         |                         |                                                          | Over single SMF in each direction<br>TBD | Over single SMF in each direction<br>TBD |
| 1.6 Tb/s      | 100 Gb/s               | 16 lanes<br>1.6TAUI-16 |                         |                         |                         |                         |                         |                                                          |                                          |                                          |
|               | 200 Gb/s               | 8 lanes<br>1.6TAUI-8   |                         | 8 pairs<br>1.6TBASE-CR8 |                         |                         | 8 pairs<br>1.6TBASE-DR8 | 8 pairs<br>1.6TBASE-DR8-2                                |                                          |                                          |

Adopted baselines

# 802.3df Nov Plenary Plans

## ■ Meetings:

- Mon 1:00 pm to 6:00 pm
- Tues 8:00 am to 6:00 pm
- Wed 8:00 am to 6:00 pm
- Thurs 8:00 am to 12:00 pm

## ■ Consider comments submitted against IEEE P802.3df modified PAR and IEEE P802.3dj PAR and respond

## ■ Will hear Technical presentations related to > 100 Gb/s per lane Objectives

## ■ Consider proposed responses to OIF liaisons

- OIF to IEEE 802.3: 800ZR/800LR IA Project Update
- OIF to IEEE 802.3: Progress on OIF CEI-112G-XSR+-PAM4 project



**THANK YOU!**

