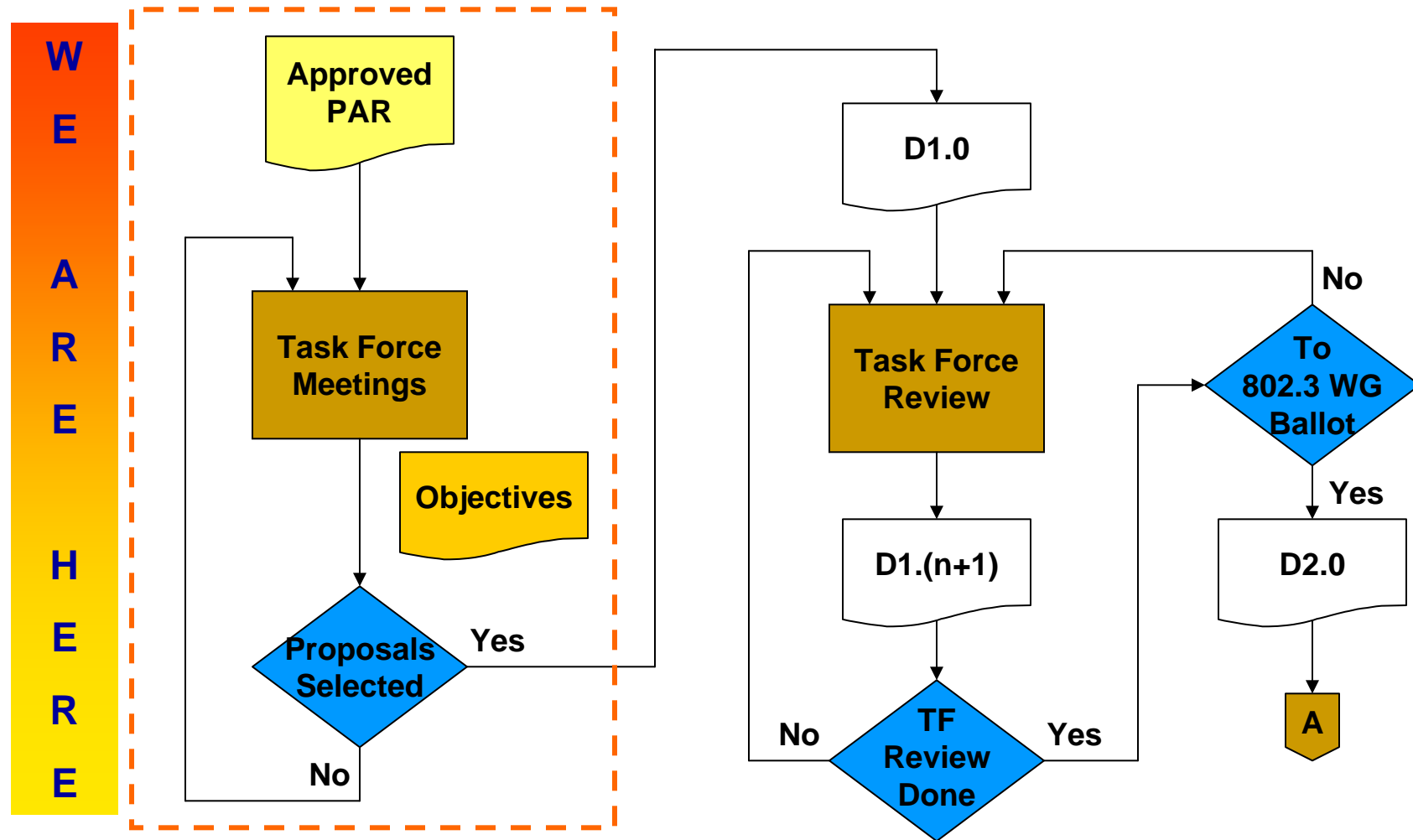


# The IEEE P802.3ba Task Force

John D'Ambrosia, Force10 Networks

IEEE 802.3ba Interim, Jan 2008  
Portland, OR

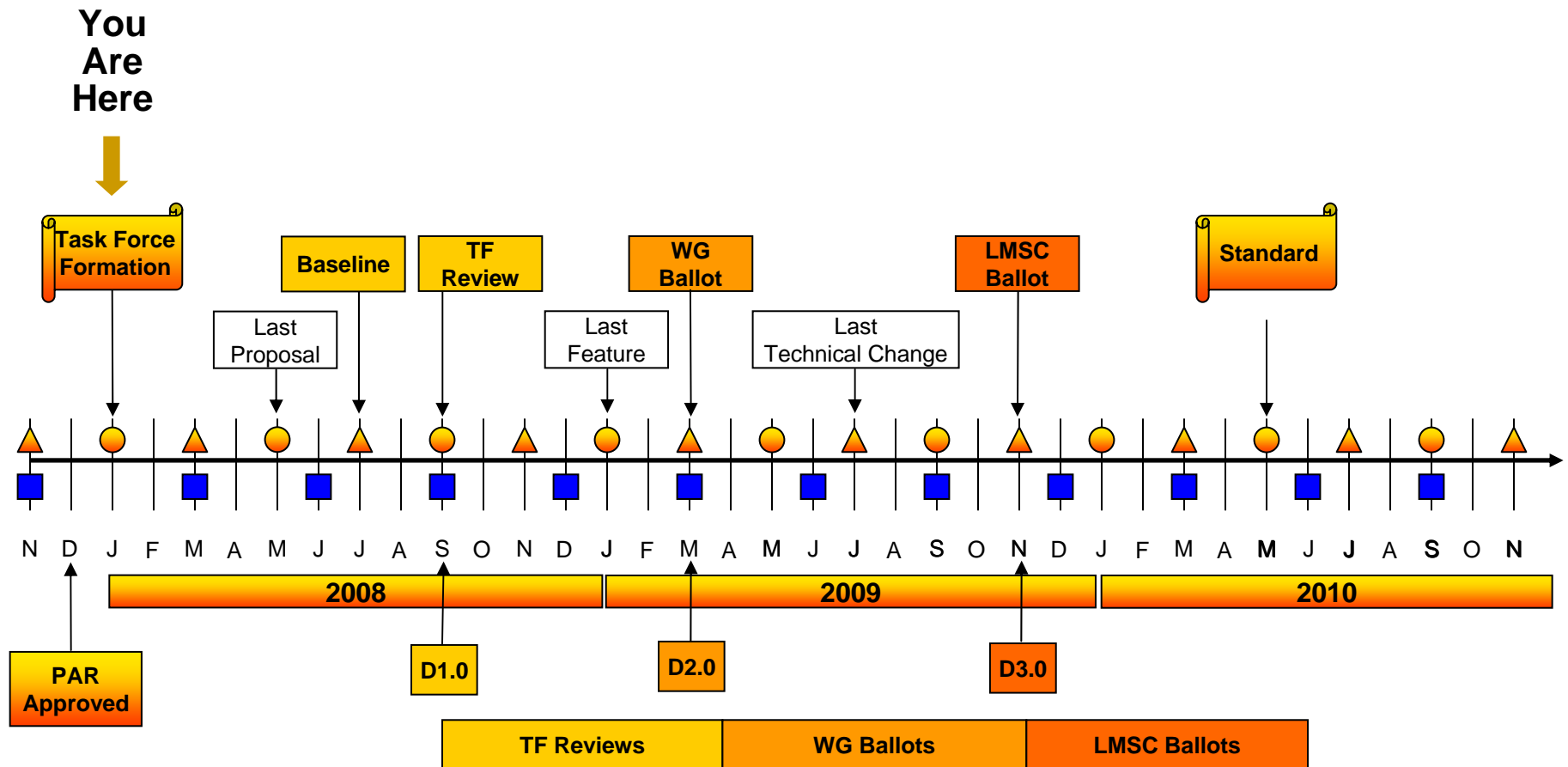
# Overview of IEEE 802.3 Standards Process (2/5) - Task Force Comment Phase



# Reference Documents

- IEEE 802.3 Architecture Overview and 40/100GbE (Ganga / D'Ambrosia)
  - [http://www.ieee802.org/3/hssg/public/nov07/ganga\\_01\\_1107.pdf](http://www.ieee802.org/3/hssg/public/nov07/ganga_01_1107.pdf)
- Proposed Document Structure (Ganga)
  - [http://www.ieee802.org/3/hssg/public/nov07/ganga\\_02\\_1107.pdf](http://www.ieee802.org/3/hssg/public/nov07/ganga_02_1107.pdf)
- The Path to Working Group Ballot (Frazier)
  - [http://www.ieee802.org/3/hssg/public/nov07/frazier\\_02\\_1107.pdf](http://www.ieee802.org/3/hssg/public/nov07/frazier_02_1107.pdf)

# Task Force Timeline (not adopted)



IEEE 802.3ba Interim, Jan 2008, Portland, OR

# Key Dates to Come in 2008

- January Interim
  - Task Force Formation
  - Begin hearing technical proposals
- May Interim
  - Last new proposal
- July Plenary
  - Start Making Baseline Choices
- At September Interim
  - Finish Baseline Choices
- After September Interim
  - Generate Draft 1.0
  - Begin Task Force Review

# Issues to be Addressed (1 of 3)

## ■ Architecture

- One architecture per speed or for both speeds?
- Proposals so far
  - APL
  - CTBI
  - PBL
- MTTFPA Analysis
- Consider future proofing
- PCS – IMHO proposals favor 64B / 66B
- OTN Compatibility?

## ■ MIIs

- Logical or Physical?
- XLGMII / CGMII
  - One MII that is lane flexible?
  - Two implementations?
- Need for XLGXS (XLAUI) / CGXS (CAUI)?

## ■ PMA / PMD Interfaces – logical or physical?

## ■ MIBs

- IEEE Std 802.3.1 – 802.3 Maintenance Task Force to progress approach for GDMO and SNMP MIBs
- Individuals need to step up to do work

# Issues to be Addressed (2 of 3)

## ❑ Cu PMDs

### ■ 40G Backplane

- ❑ IMHO – consensus around re-use of 10GBASE-KR
- ❑ Media characteristics?
- ❑ Area for consensus building on proposal?

### ■ 40G Cu Cabling

- ❑ IMHO – consensus around re-use of 10GBASE-KR
- ❑ Media characteristics?
- ❑ Area for consensus building on proposal?

### ■ 100G Cu Cabling

- ❑ Basic discussions -
  - Re-use of 10GBASE-KR?
  - Explore 25G signaling?
- ❑ Media characteristics?

# Issues to be Addressed (3 of 3)

## ❑ Optical PMDs

### ■ $\geq 100\text{m}$ MMF

- ❑ IMHO - VCSEL / Parallel lane approach favored for both rates
- ❑ Area for consensus building on proposal?

### ■ 10km / 40km SMF

#### ❑ Proposals

- $10\lambda \times 10\text{G}$
- $4\lambda \times 25\text{G}$
- 100G Serial
- ❑ IMHO -  $4\lambda \times 25\text{G}$  seems to generate the most interest
- ❑ IMHO – 100G serial must be considered for future proofing of architecture
- ❑ LAN WDM vs CWDM proposals



# Organization of Project Work

Logic Functions	Copper PMD functions	Short Reach Optical PMDs	Long Reach Optical PMDs
<ul style="list-style-type: none"> <li>■ Amendments to MAC, RS, MAC PHY interface, or baseband layer(s)</li> <li>■ RS and XLGMII / CGMII</li> <li>■ XLGXS (XLAUI), CGXS (CAUI) ?</li> <li>■ PCS functions</li> <li>■ PMA functions</li> <li>■ Interfaces</li> <li>■ OTN Compatibility</li> </ul>	<ul style="list-style-type: none"> <li>■ 40G Backplane PMD (including changes to Clause 73, AN, and Clause 74, FEC)</li> <li>■ 40G Cu PMD</li> <li>■ 100G Cu PMD</li> <li>■ Media characteristics</li> </ul>	<ul style="list-style-type: none"> <li>■ 40GBASE-xxx</li> <li>■ 100GBASE-xxx</li> <li>■ Media characteristics</li> </ul>	<ul style="list-style-type: none"> <li>■ 100GBASE-xxx (10km)</li> <li>■ 100GBASE-xxx (40km)</li> <li>■ Media characteristics</li> </ul>
<ul style="list-style-type: none"> <li>■ Management related to Logic functions (Clauses 30, 45, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>■ Management related to copper functions (Clauses 30, 45, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>■ Management related to PMD functions (Clauses 30, 45, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>■ Management related to PMD functions (Clauses 30, 45, etc.)</li> </ul>

Based on Updated Chart from Ilango Ganga, Intel

# Editorial Team

- Chief Editor
- Chief Comment Editor
- Logic Track Editor
  - Appropriate # clause editors
  - Management will extend across all tracks
- Cu PMD Track Editor
  - Appropriate # clause editors
- Optical PMD Track Editor
  - Appropriate # clause editors

# Potential Volunteers for Editors

- Contact chair at [jdambrosia@ieee.org](mailto:jdambrosia@ieee.org) if interested
- It is preferable that volunteers have Frame Version 7.0, but 7.1 is also acceptable.
- Version 6 is the minimum that one should have.
- Tutorial is being planned for March Plenary. Details to be announced.

# Summary

- Proposed Timeline
- Lots of work to do
  - Potential areas where proposal consensus building can begin now
    - 40g Backplane
    - 40G Cu Cable
    - 40G / 100G MMF
  - Areas where there are competing solutions / proposals
    - Architecture (including architecture strategy, PCS, and PMA)
    - Appropriate Support for OTN
    - 100G Cu Cable PMD
    - SMF PMD
  - Areas where there are no solutions / proposals yet
    - MII (XLGMII, CGMII)
    - Need for Extender sub-layers: XLGXS (XLAUI) and CGXS (CAUI)?
    - Interface definitions
    - Management
  - Facilitate discussions outside to put it all together!
- Editorial Team being assembled



# Thank You!