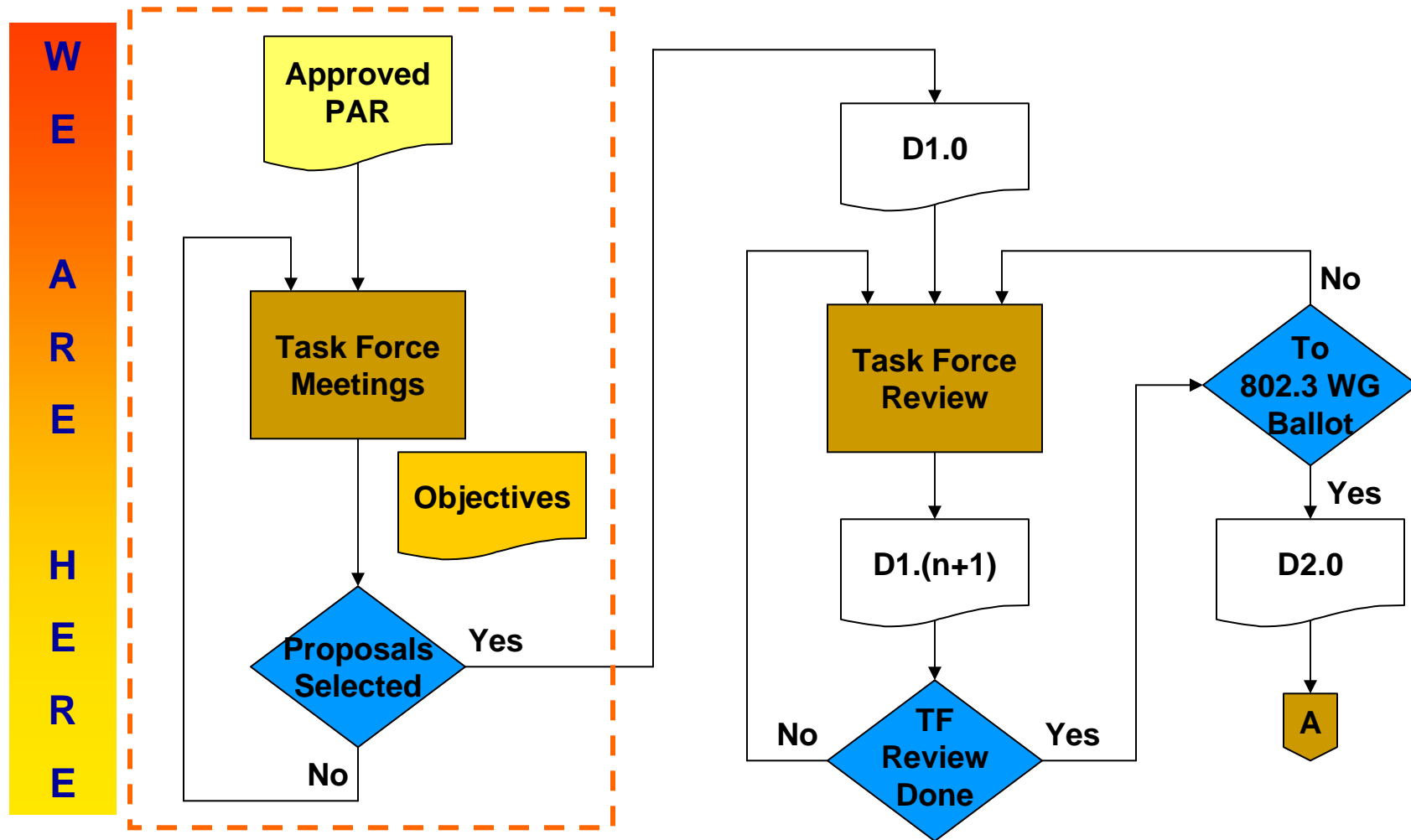


The IEEE P802.3ba Task Force

John D'Ambrosia, Force10 Networks

IEEE 802.3ba Interim, Jan 2008
Portland, OR

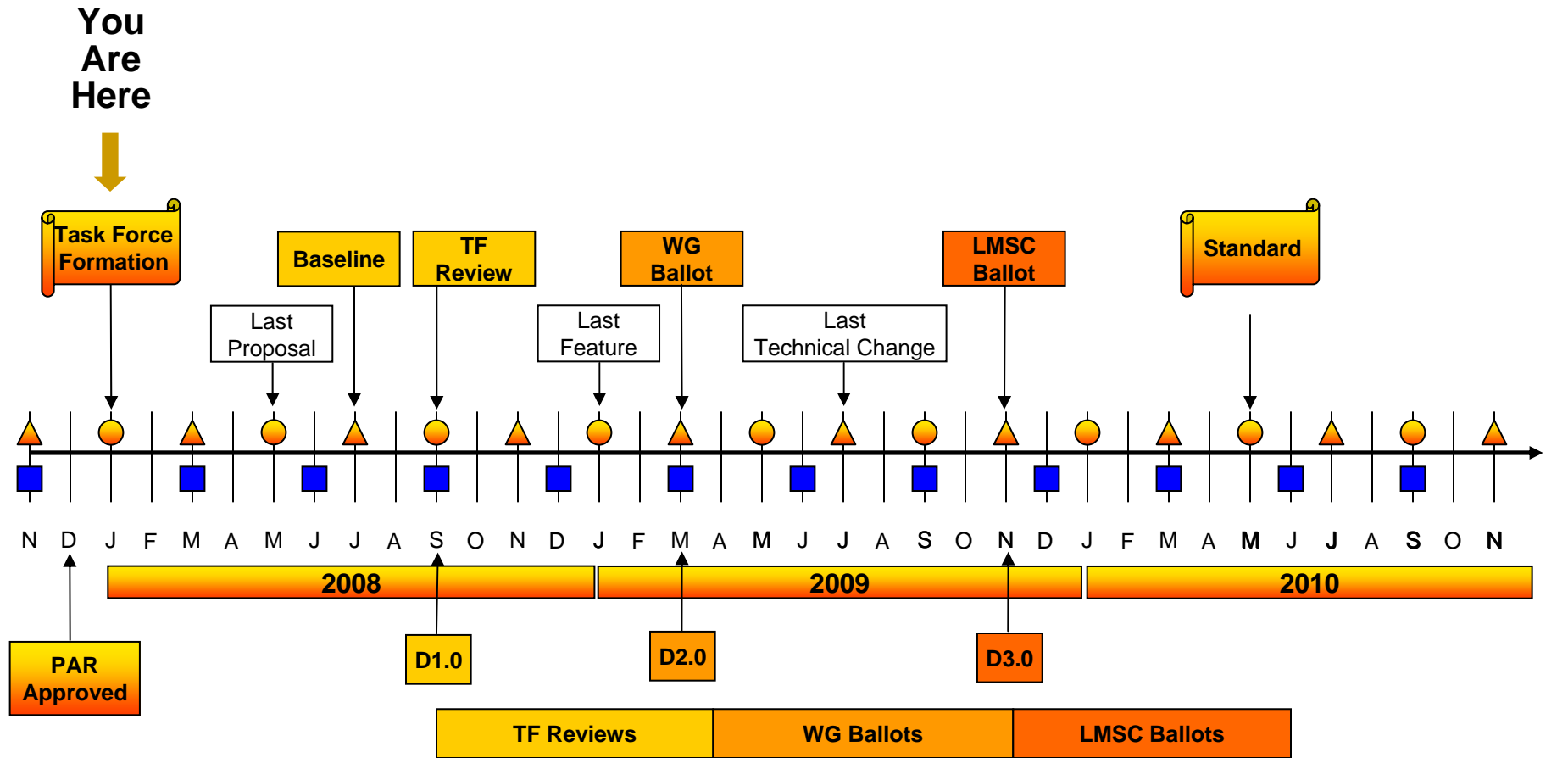
Overview of IEEE 802.3 Standards Process (2/5) - Task Force Comment Phase



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
- Proposed Document Structure (Ganga)
 - 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

Task Force Timeline (not adopted)



Legend

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

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

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 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!