

# IEEE P802.3bs 400Gb/s Ethernet MMF ad hoc role

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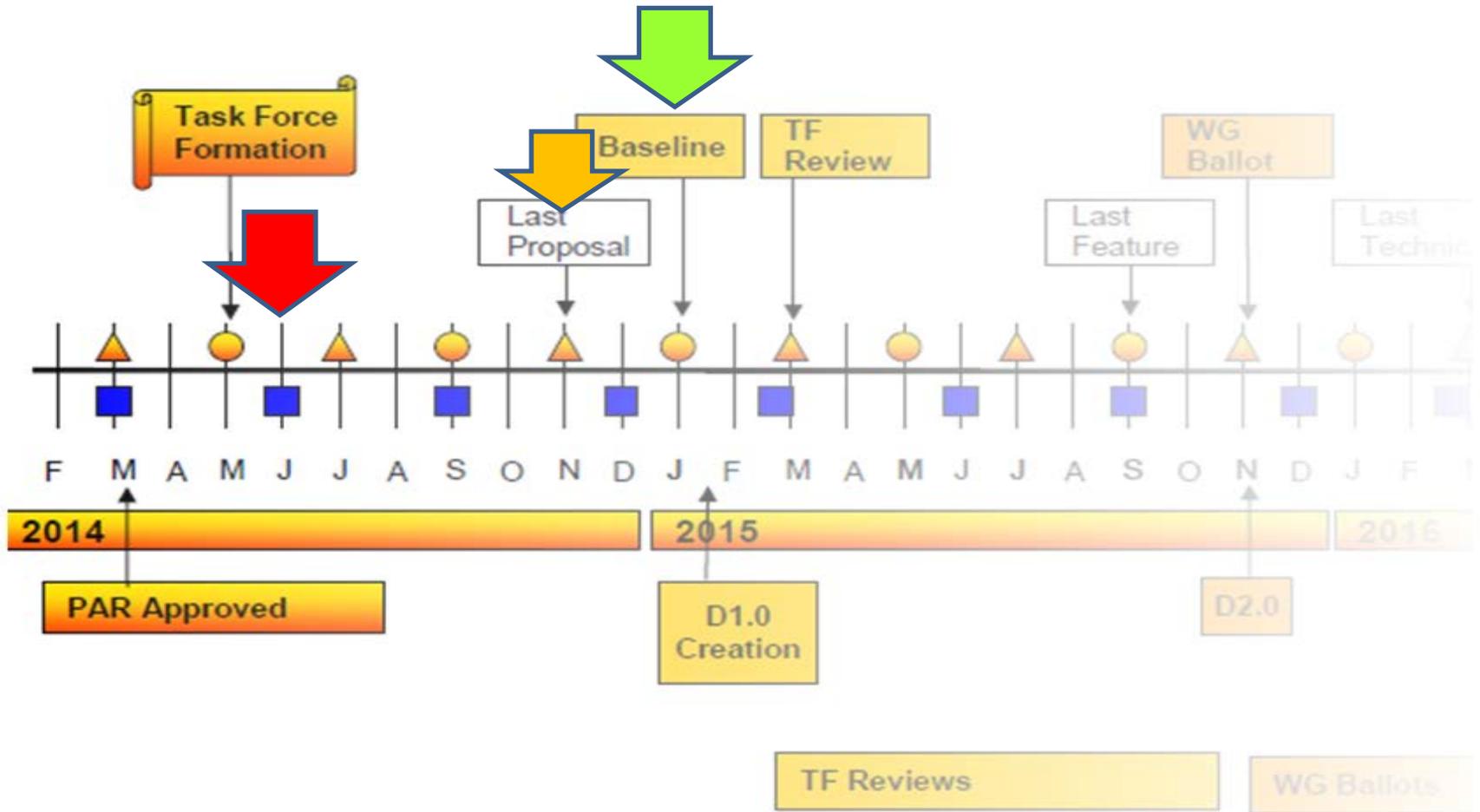
# The MMF ad hoc charter

- ...to initiate an assessment of proposals targeting the MMF 100m objective.
- The MMF Ad Hoc shall also provide feedback to the Task Force on how MMF proposals may impact other aspects of the 400GbE project, such as architecture, electrical interfaces, FEC, OTN compatibility, or EEE.

# Project objectives

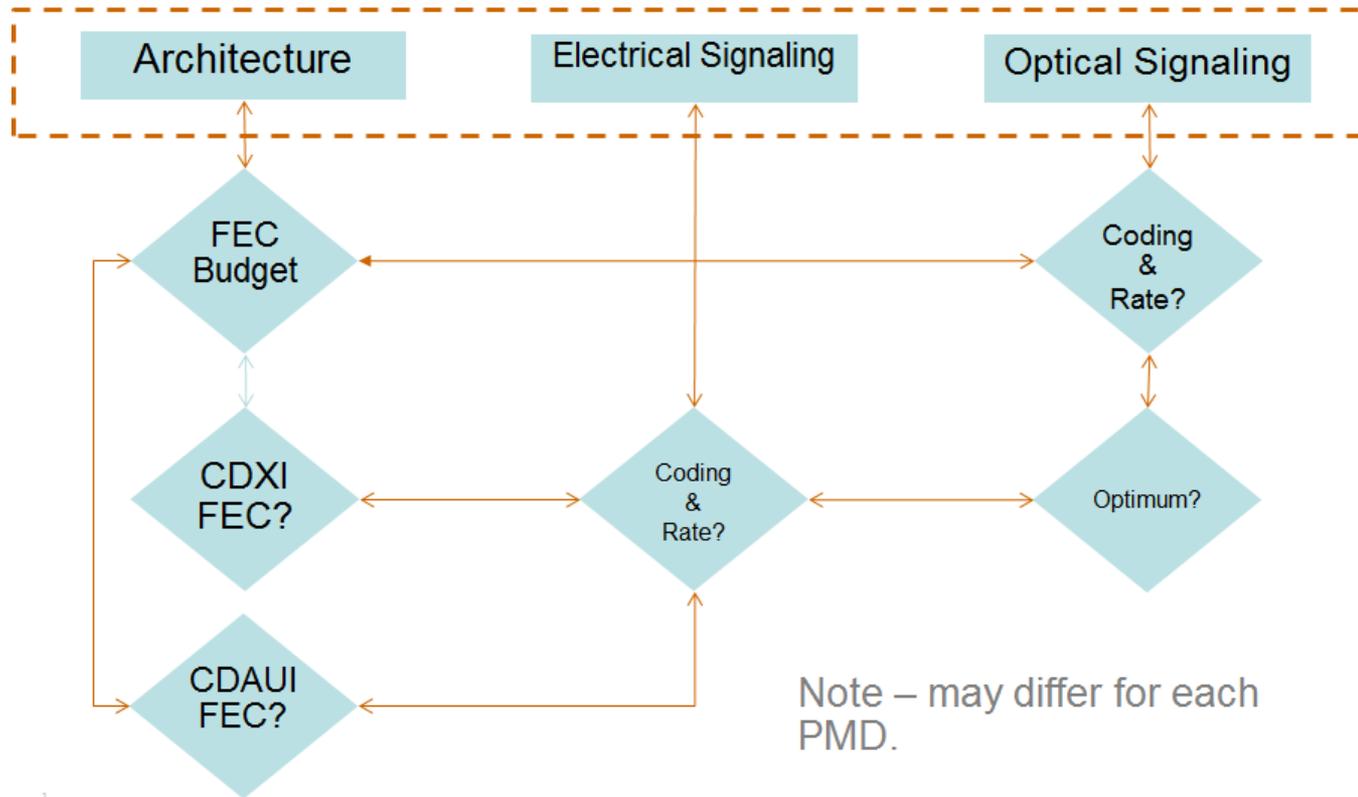
- Support a MAC data rate of 400 Gb/s
- Support a BER of better than or equal to  $10^{-13}$  at the MAC/PLS service interface (or the frame loss ratio equivalent)
- Support full-duplex operation only
- Preserve the Ethernet frame format utilizing the Ethernet MAC
- Preserve minimum and maximum FrameSize of current Ethernet standard
- Provide appropriate support for OTN
- Specify optional Energy Efficient Ethernet (EEE) capability for 400 Gb/s PHYs
- Support optional 400 Gb/s Attachment Unit Interfaces for chip-to-chip and chip-to-module applications
- Provide physical layer specifications which support link distances of:
  - At least 100 m over MMF
  - At least 500 m over SMF
  - At least 2 km over SMF
  - At least 10 km over SMF

# Our adopted timeline



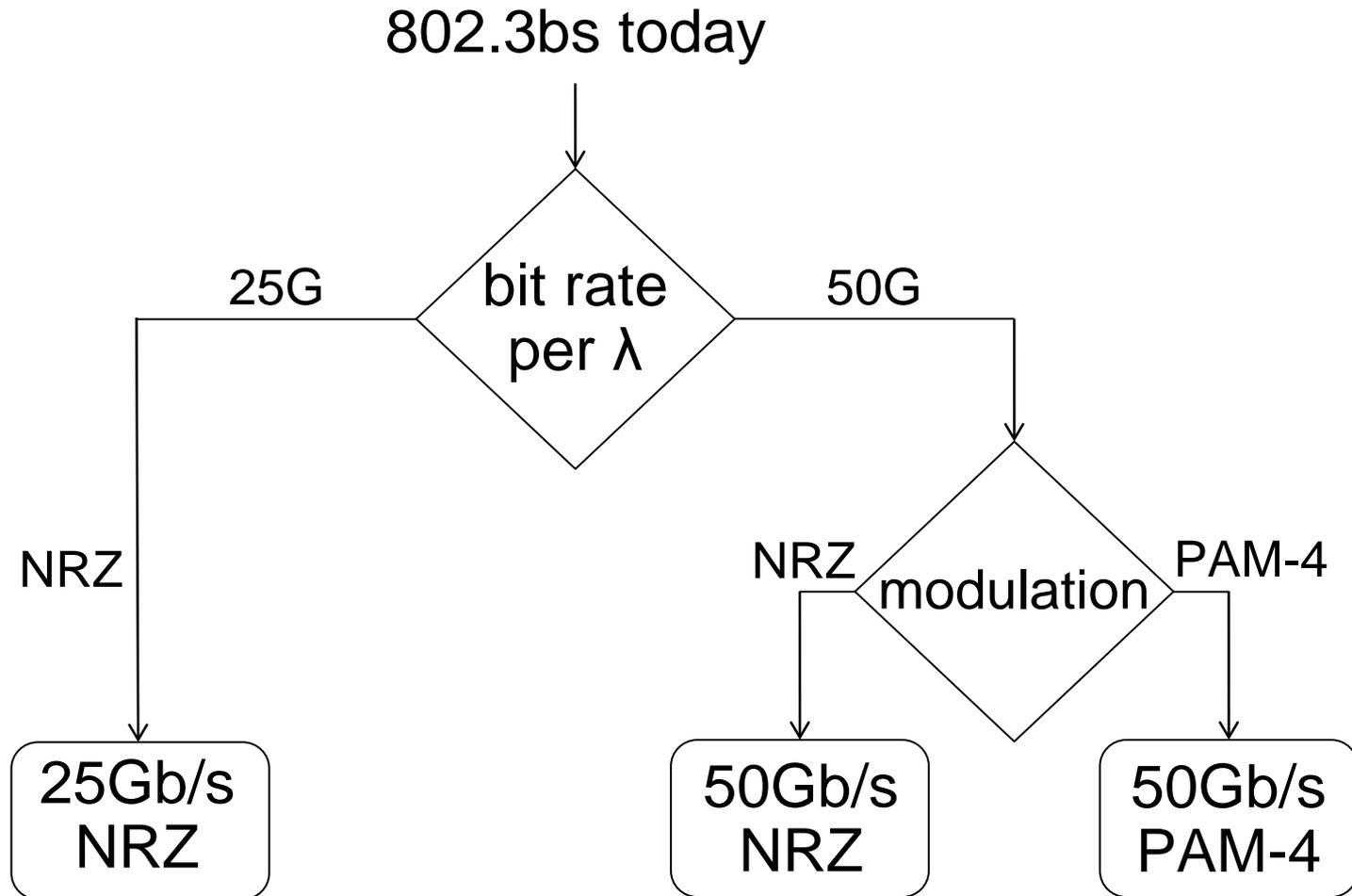
- 5 months to Last Proposal
- 7 months to Baseline

# Interrelations between technical decisions



- The PMD we spec in this project is probably not the PMD we would spec in a future 'next gen 400G' project....
  - What features do we need to be able to support a 'next gen 400G PMD (stronger FEC, provision for 1, 2, 4, 8, or 16 lanes, modulation formats, others...) ?

# Decision tree for 400Gb/s on MMF



# Invitation

- Bring in detailed proposals that address the 100 m MMF objective for review.