

# IEEE 802.3 DMLT Study Group Objectives & Goals

# Objectives (1) – Approved in SG

1. Preserve the IEEE 802.3 Ethernet frame format at the MAC client service interface.
2. Preserve minimum and maximum frame size of the current IEEE 802.3 standard.
3. Use the Clause 4/4a MAC without alteration.
4. Support full duplex point-to-point operation only.
5. Support a speed of 100 Mb/s and above at the MAC/PLS service interface.
6. Preserve relevant MAC/PLS service interface.
7. Preserve an undetected bit error ratio (BER) of less than or equal to  $10^{-10}$  at the MAC/PLS service interface
8. Provide normal FCS protection-error-detection coverage.

# Objectives (2) – Approved in SG

9. Provide affirmative assurance that both end of the link have this capability before operating in this mode. E.g. Capability discovery and configuration.
  - Use of LLDP expected.
10. Provide a mechanism for reduced access latency where the reduced access latency is significantly less than one maximum packet transmit time.
11. Maximum latency for DMLT frame transmission (ahead of the non-DMLT frame) will be as close to the minimum packet size + IPG (1st and last) as practically possible.
  - No padding allowed in the M-Frames ('segmented' non-DMLT frames); that is, the lowest range of M-Frame sizes may be between 64~127 bytes.
12. Quantify the maximum access latency of the DMLT transmit path.
13. Provide two MAC service interfaces at each end of the DMLT link, as the means to distinguish between the DMLT and the best effort traffic.
  - Optional MAC Control sub-layer shall be confined to the best-effort MAC Service Interface.

# Objectives – OPEN & Consideration

14. “M-Frame in the wild” should be recognized by the non-DMLT capable stations to be detected as an error and not be considered as a valid frame. [FCS error | Framing Error].
15. Preserve [Clause 4/4a] frame format on the respective physical medium.
16. Consider Energy-Efficient Ethernet as appropriate.

Others ??

# Goals

1. This project will be PHY-type agnostic.

Thank you

# Motion #1:

- Move that, Objectives 1-8, be adopted by the DMLT SG.
- Moved by: Geoff Thompson
- Seconded by: Oliver Kleineberg
  
- Y: 9 N: 0 A: 0
- Passed  $\geq 75\% Y/(Y+N)$

# Motion #2:

- Move that, Objectives 9-13, be adopted by the DMLT SG.
- Moved by: Albert Tretter
- Seconded by: Geoff Thompson
  
- Y: 7 N: 0 A: 0
- Pass  $\geq 75\% Y/(Y+N)$

# Reminder - Tech

9. Service Interface for "Xoff" to be used for Time Aware Shaper (TAS, 802.1Qav) guardband.