IEEE 802.3 DMLT Study Group Objectives

Conventions used in the following text:

- _Text in red means new versus Geneva opening plenary._

- _Text with strike through means deleted versus Geneva opening plenary._

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 MAC 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. Does not degrade (increase) undetected bit error ratio (BER)) at the MAC/PLS service interface.

Objectives (2) – Approved in SG

8. Provide affirmative assurance that both end of the link have this capability before operating in this mode.

9. Provide a mechanism for reduced access latency where the reduced access latency is significantly less than one maximum packet transmit time.

10. 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.

11. Quantify the maximum access latency of the DMLT transmit path.

12. Provide two MAC service interfaces at each end of the DMLT link, as the means to distinguish between the DMLT and the ordinary traffic.

    – Optional MAC Control sub-layer shall be confined to the ordinary MAC Service Interface.

Objectives (3) – Approved in SG

13. Address the impact between Energy-Efficient Ethernet and DMLT operation.
14. This project will be media independent.
15. Require no changes to existing Point-To-Point full-duplex PHYs.
16. Consider providing, at the MAC Client Service interface, a primitive that holds the transmit path in the express position.
17. "M-Frame in the wild" will ~~should~~ be constructed such that it shall not be recognized as a valid frame by a non-DMLT-capable device. ~~it will not be forwarded by non-DMLT-capable devices.~~
    – Buffer repeater e.g. legacy TPMR would be " in the wild".

Objectives (4) – Approved in SG

1. ~~"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. [error, e.g. FCS error | Framing Error].~~ *SG note: This was considered and replaced by 18 on the objectives list.*

2. ~~Preserve [Clause~~ 3~~4/4a] frame format on the respective physical medium.~~ (Editor Note: This is covered by #17 on page (3) and #19 on this page)

18. Support of the Point to Multipoint (P2MP) is not a goal.
    - Downstream Support presents fewer challenges.

19. Fragment size greater than or equal to 64 Bytes.

20. The frame delivered at the receiving MAC service interface shall be identical to the frame sent at the transmitting MAC service interface.

Motion

To agree the set of objectives in this slide set (8023-DMLT-SG-1305-Winkel-Objectives-2013-07-17r2).

Moved: Pat Thaler

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Approved: 23/0/8