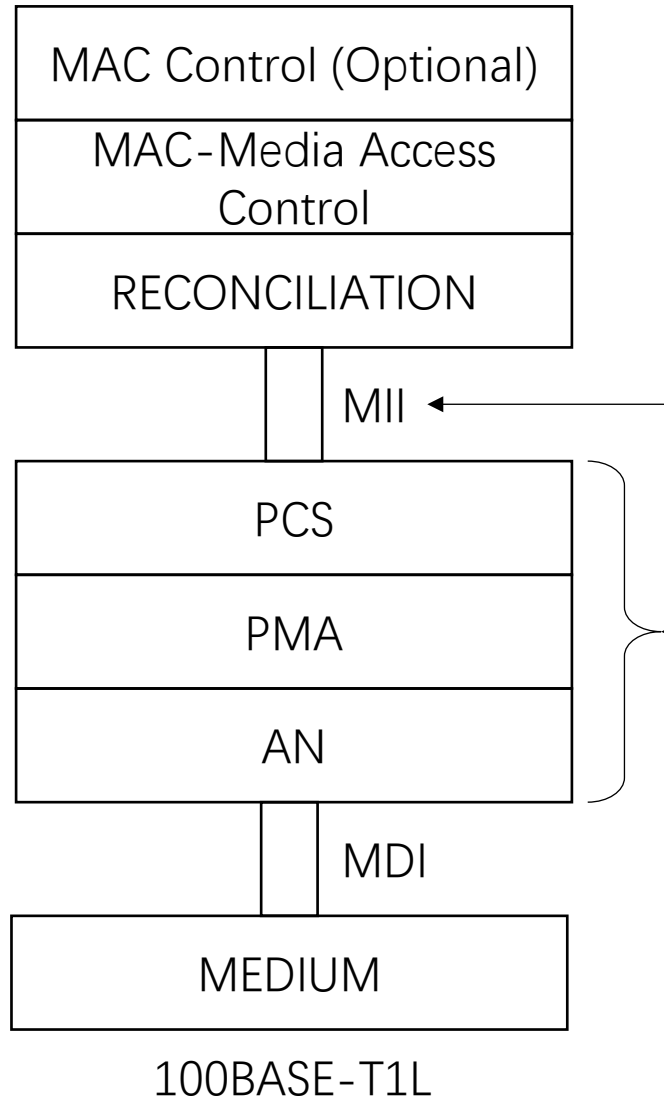# Editor's Report: P802.3dg draft 0.2

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IEEE P802.3dg Task Force January 2025

Introduction

- Review of the adopted baselines
- Major Updates of CL199 in D0.2
- Status of D0.2
- Expectations for this meeting
- Next step

Adopted baselines

MAC Control (Optional)

MAC-Media Access Control

RECONCILIATION

MII

PCS

PMA

AN

MDI

MEDIUM

100BASE-T1L

MII:
- New Sequence Ordered Set to be added on MII
- Rules of nibble combing at input/output of the 8N/(8N+1) according to p3, p9, p10-12, p15 of Lo_3dg_01a_0724.pdf

PCS:
- PAM3 with 8B6T according to Murray_3dg_01a_07152024.
- Modification on 8N/(8N+1) according to p13,14 of Lo_3dg_01a_0724.pdf.
- PCS Tx Scrambler according to Murray_3dg_02_09172024.pdf.
- set the auxiliary bit in the PHY frame to zero.
- Control code and Mode encoding/decoding & pseudo code for 8N/(8N+1) in p3~p8&p10 of Murray_3dg_01a_11132024.pdf. (motion#3)
- EEE adopted in p4 to7 of Murray_3dg_03a_11132024.pdf (M#4)
- Auto-Negotiation adopted in p3 to p7 of Fitzgerald_3dg_01_11132024.pdf.(Motion#5)

Link Segment
- Link segment parameters (RL, IL, PSANEXT & PSAACR-F and TCL) as in link_segment_090723.pdf.

Major Updates of CL199 in D0.2 (1)

- **199.3.3.5 Block structure**
  - Filled in baselines adopted in (<mark>p3~p8&p10 of Murray_3dg_01a_11132024.pdf</mark>) includes:
    - Table 199-2, slide 4 of murray_3dg_01a_11132024.pd.
    - The 8N/8N+1 encoding (the pseudocode) from lo_3dg_01b_1124.doc which is slide 10 of murray_3dg_01a_11132024.
    - Support of sequence Ordered set in slide 5 of murray_3dg_01a_11132024.
  - Filled in contents from lo_3dg_01b_1124.doc (we didn't run motion on this document) which matches the adoptions in <mark>murray_3dg_01a_11132024.pdf</mark>. (Ask the group to review this part to check if the texts match our decisions or provide more detailed baselines for review).

Major Updates of CL199 in D0.2 (2)

- **199.3.3.10 RS-FEC encoder**

  – Filled in baselines according to slide 5 of tingting_3dg_02_16_07_2024, with the RS-FEC encoder as adopted in Murray_01a_07152024.pdf.

- **199.3.6 LPI signaling**

  – Filled in baselines as adopted in Murray_3dg_03a_11132024.pdf, including: (EEE Signaling is merged into LPI signaling)

    – LPI synchronization and signaling

    – LPI Timing Parameters and Wake-up time (while the values may change)

  – Missing part: we have motions on "EEE advertisement in InfoField and Auxiliary bit for insufficient LPI refresh" and need baseline texts to fill in.

Major Updates of CL199 in D0.2 (3)

- **199.6.1 Support for Auto-Negotiation**
  - Filled in some baselines texts according to <mark>Fitzgerald_3dg_01_11132024.pdf as adopted in Motion#5.</mark>
  - Change the term MASTER/SLAVE to LEADER/FOLLOWER according to the motion.
  - Ask the group to review the texts here to see if it matches the decision.
  - Missing part: need detailed baseline texts on LEADER-FOLLOWER configuration, Auto-negotiation and link startup.
  - Encourage colleagues to work on as a follow-up.

Status of D0.2 (except Clause 199)

CL #	Clause title	Baseline status	Notes
1	Introduction	Not yet	To be updated accordingly once the main features/function are implemented in clause 199.
22	Reconciliation Sublayer (RS) and Media Independent Interface (MII)	Need review/decisions	No baselines yet but previously discussed in Lo_3dg_01a_1124.docx (MII modification and encoding) and ask the group to review and make decisions.
30	Management	Not yet	To be implemented accordingly
45	Management Data Input/Output(MDIO) Interface	Not yet	To be implemented accordingly
78	Energy-Efficient Ethernet (EEE)	Need baseline texts	Adopted EEE capability and LPI signaling in Nov. plenary and need baselines texts in CL78
98	Auto-Negotiation for single differential-pair media	Need baseline texts	Adopted Auto-negotiation in Nov. plenary and need baselines texts in CL98.
104	Power over Data Lines (PoDL) of Single Ethernet	Not yet	No baseline available yet (an adhoc is working on that)

Baseline under discussion

Status of D0.2 (Clause 199) (I)

Subclause title	Baseline status	Notes
199.2 100BASE-T1L Service primitives and interfaces	Under discussion	Start from clause 146. Baseline proposals under discussion in this meeting: • Curran_3dg_01a_01202025.pdf
199.3.1 PCS Reset function 199.3.2 PCS Data transmission Enable	Complete	Please review if any updates needed.
199.3.3.4 Transmission order	Need review/decisions	Figure 199–5—PCS transmit bit ordering as discussed in Murray_3dg_01_10182024.pdf.
199.3.3.5 block structure	Need review	As stated on slide 5.
199.3.3.6 Idle 199.3.3.7 LPI_IDLE 199.3.3.8 Error	Complete	Please review if any updates needed.
199.3.3.9 Transmit process	Need baseline texts	
199.3.3.10 RS-FEC encoder	Complete	As state on slide 6.
199.3.3.11 PCS scrambler	Complete	Adopted baselines in Murray_3dg_02_09172024.pdf
199.3.3.12 Generation of bits Sx n[3:0], Syn[3:0], and Sgn[3:0]	Complete	Please review if any updates needed.
199.3.3.13 Generation of bits Sdn[8:0]	Complete	

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Status of D0.2 (Clause 199) (II)

Subclause title	Baseline status	Notes
199.3.3.14 Generation of code-groups	Partly complete	Please review if more baseline texts needed.
199.3.2.3.17 EEE capability	Merged into LPI signaling	Consideration: put all the EEE signaling in one place
199.3.2.4 PCS Receiver function	Not yet	Once the PCS transmit function is settled, the Receive function can be implemented accordingly
199.3.3 PMA training side-stream scrambler polynomials	Under discussion	Baseline proposals under discussion in this meeting: • Tingting_3dg_01_01212025.pdf • Curran_3dg_01a_01202025.pdf
199.3.4 LPI signaling	Need more baseline texts	As state on slide 6.

Status of D0.2 (Clause 199) (III)

Subclause title	Baseline status	Notes
199.4 PMA sublayer	Not yet	Lack of proposals and baselines.
199.5 PMA electrical specifications	Not yet	Lack of proposals and baselines.
199.6 Management interface 199.6.1 Support for Auto-Negotiation	Partly completed and need more baseline texts	Stated on slide 7.
199.7 Link Segment characteristics 199.7.1.1 insertion loss 199.7.1.2 Return loss 199.7.1.3 Maximum link delay 199.7.1.4 Differential to common mode conversion	Partly implemented	Adopted baselines in link_segment_090723.pdf and only left figures to be added.
199.7.2 Coupling parameters between 100BASE-T1L link segments	Not yet	To be implemented according to 199.7.1.
199.8 MDI specification	Not yet	Lack of proposals and baselines.
199.9 Environmental specifications	Not yet	Lack of proposals and baselines.
199.10 Delay constraints	Not yet	Lack of proposals and baselines.
199.11 PICS	Not yet	To be implemented accordingly

Expectations for this meeting

- Decisions on previous baseline proposals.
- Decisions on PMA training, PHY control⋯

Summary

- Draft (D0.2) is provide in private area but still not for review yet. Not until the draft is more technical complete and major decisions are made.

- We highly encourage colleagues to check the status of D0.2 and bring your contributions along with similar sections in 802.3 (preferably with baseline texts) to facilitate the baseline work.

- Besides, if you see anything missing in the draft (which the group has already made decisions), please contact editors to incorporate it.

- Next Step:
  - Incorporate adopted baselines in this meeting to generate the next version.

Thank you!