

Opening Chief Editor's Report P802.3cg draft 0.3

Valerie Maguire
IEEE P802.3cg, Chief Editor

November 6, 2017 – Orlando, FL

P802.3cg Editorial Team

- Valerie Maguire, Chief Editor
 - Front matter, Clause 1, Definitions
 - Clause 30 Management
 - Clause 45 Management Data Input/Output (MDIO) Interface
 - Clause 78 EEE (TBD)
 - Clause 98 Auto-Negotiation
- George Zimmerman, Interim Clause 146 Editor
 - PHY specification(s), excluding link segments (e.g., clause 146.7)
 - Permanent PHY editor sought
- Open, Clause 147 Editor
 - PHY specification(s), excluding link segments (e.g., clause 147.7)
 - Do we have a volunteer from the “New Use Cases” group?

P802.3cg Editorial Team, cont.

- Open, Clause 148 Editor
 - PLCA specifications
 - Do we have a volunteer from the “New Use Cases” group?
- Chris DiMinico, Editor
 - Clauses 146.7 and 146.7, Link Segment Characteristics
 - Annex 200A Optional Power Distribution (Placeholder clause number)
- Curtis Donahue, Editor
 - PICS, other clauses as needed
- Jon Lewis, Editor
 - At large, state diagrams as needed

P802.3cg Draft D0.3 Structure

- Typical legacy clause content:
 - Clause 1 with definitions and normative references
 - Clause 30 with management objects
 - Clause 45 with MDIO registers
- Placeholders for existing clauses:
 - Clause 78 with Energy Efficient Ethernet functionality
 - Clause 98 with single-pair Auto-Negotiation
- New clauses:
 - Clause 146, 10BASE-T1L
 - Clause 147, 10BASE-T1S
 - Clause 148, PLCA Reconciliation Sublayer (Placeholder)
 - Annex 200A, Optional Power Distribution (Placeholder annex number)

Draft 0.3 Chief Editor's Notes

- Draft 0.3 has been posted in the private area since October 30th
- 10BASE-T1L (1000m PHY): Good progress has been made
 - Easy to see areas requiring further definition
 - Need baseline text for Service Primitives and Interfaces
 - Review TBD's
- 10BASE-T1S (Short reach) and Multidrop: Baseline content needed
 - Baseline proposals should ideally come with text
 - Refer to <http://www.ieee802.org/3/cg/public/Sept2017/10BASE-T1L%20Clause%20164%20Rev.%20F.pdf> for an example of how proposals should ideally be submitted
 - Reference existing 802.3cg clauses when possible

Draft 0.3 Chief Editor's Notes, cont.

- Powering: Baseline content needed
 - Modifications to PoDL requires
 - Powering requirements for new modes and a longer/more capacitive link segment required
- Auto-Negotiation: Baseline content needed
- Energy Efficient Ethernet: Baseline content needed
 - Both long and short reach PHYs need optional EEE defined to allow the PHY to consume less power when no data is being sent (only idles)

P802.3cg Draft D0.3

- Proceed to document review

Next revision: draft 0.4 or 1.0?

- Draft 1.0 may be still technically incomplete, contain TBDs, editorial notes on missing text, etc., but these will be resolved through comments before draft 2.0 can be generated
- The decision as to whether the next revision will be draft 0.4 or draft 1.0 should depend upon the progress that has been made towards adopting baselines proposals for 10BASE-T1s and multidrop
 - MOTION required at the end of the meeting: Move to approve draft 0.3 text as presented and instruct editor to implement changes agreed to during online discussion and motions to generate draft XX

Questions?

Thank you!

Valerie Maguire
valerie_magurie@siemon.com

Annex: Draft 0.3 Items Completed

- Adopted draft 0.2 and instruct Editor to incorporate agreed up changes to create draft 0.3 (MOTION)
- Incorporated insertion loss, return Loss, ANEXT and AFEXT from slide 10, slide 25, slide 28 and slide 30 respectively in diminico_01_0317.pdf for the 1000 m link segment baseline
- Incorporated slide 9 of Mueller_3cg_02_0517.pdf as the strawman for PHY noise evaluation for the 1000m PHY objective
- Incorporated slides 4 and 5 of Graber_3cg_08a_0517.pdf as a baseline for Modulation and Symbol rate for the 1000m PHY objective
- Incorporated slide 6 of Graber_3cg_08a_0517.pdf as an example Transmitter Test Setup for the 1000m PHY objective

Annex: Draft 0.3 Items Completed, cont.

- Incorporated slide 6 of Graber_3cg_08a_0517.pdf as an example Transmitter Test Setup
- Incorporated a transmitter level specification that includes 2 transmit voltage levels, 2.4Vpp and 1.0Vpp (at the MDI), with +/- 5% tolerances for the 1000m PHY objective
- Incorporated slides 10 and 11 of Graber_3cg_08a_0517.pdf as clock frequency and jitter tolerance for the 1000m PHY objective
- Incorporated slide 12 of Graber_3cg_08a_0517.pdf as test patterns for the up to 1000m PHY objective
- Incorporated a blind link training technique without the need for dedicated training sequences as the link training method for the 1000m PHY objective

Annex: Draft 0.3 Items Completed, cont.

- Incorporated the table of electromagnetic classifications in slide 13 of diminico_01_0517.pdf for the 1000m PHY objective
- Created a normative baseline “Optional Power Distribution annex” (Chris DiMinico)
- Incorporated baseline power requirements for (point-to-point/plug-and-play) powered devices as shown below

Class	Vpse, min V	Ipi, max (A)	Rloop (60C) ohm	Ppd (1000m) W
new 1	20	.102	59	1.4
new 2	20	.155	39	2.2
new 3	50	.255	59	8.9
new 4	50	.388	39	13.6

Annex: Draft 0.3 Items Completed, cont.

- Incorporated baseline optional power distribution annex baseline power requirements for “engineered” power delivery devices given in Table on slide 18 of [diminico_02_0517.pdf](#), with the deletion of “in the daisy chain”