

**Unconfirmed Meeting Minutes:
Meeting of the IEEE P802.3dg Long-Reach Single Pair Ethernet TF
Ad Hoc: Recommendations on Integrating APL Power and Clause 104 Power**

October 24, 2024 Electronic Ad Hoc meeting

Prepared by Mary Sue Haydt

All times in CEST

IEEE P802.3dg Task Force meeting was called to order at 10/24/2024 16:03 by the ad hoc chair, Mary Sue Haydt.

The meeting was held electronically via Teams.

Attendance is listed in Appendix A.

All presentations referenced in these minutes are located on the Task Force Public web page https://www.ieee802.org/3/dg/public/May_2024/index.htm

The Chair displayed and proceeded to review the agenda in https://www.ieee802.org/3/dg/public/May_2024/ad_hoc_agenda_3dg_01_241024.pdf

The agenda was approved at 16:07 by unanimous consent.

The Chair acted as recording secretary.

Members of the Press, at 16:08 the chair asked for any press members to identify themselves. None heard.

Attendance, the Chair advised the group that the attendance would be taken from Teams.

At 16:09 the Chair resumed review of the agenda deck, including the following items – a review of the participation policy, a review of the IEEE copyright policy, a review of the IEEE policy on dominance, and a review of the IEEE Standards process. There were no questions.

IEEE Patent Policy, The Chair read aloud the patent slides, slides 0 through 4. The call for patents was made at 16:16 and **none** responded.

The Chair resumed review of the agenda deck material after the call for patents.

At 16:17, the chair reviewed the IEEE SA Copyright policy, participant behavior, individual process, fair and equitable consideration, showing the requisite slides for each topic.

Presentations and Discussion:

At 16:20, the Chair moved on to the presentations

Presentation: Discussion on Integrating APL and Clause 104 power

(Presented by Michael Brychta, Analog Devices)

- https://www.ieee802.org/3/dg/public/May_2024/Brychta_3dg-adhoc_01_241028.pdf
- Presentation started at 16:20.
- Starting at 16:45 questions were asked and answered.
- The presentation was a good overview overview of the purpose of clause 104, where it key is to probe before applying power.
- Presentatiion suggests a combination of SCCP and 15 V probing that may be used to detect and classify an APL PD.
- There are some issues with potential overlap of turn-on voltage for existing PDs and the voltages for class 10 , 11, and 12. – we may need to add a minimum turn on voltage to item 4f in Table 104-11.
- There may be an issue with turn on of the 12 V and 24V classes (0 through 7) and a 15 V problems.

Next Steps

- Beginning at 17:50 At the request of the Chair, George Zimmerman made the following suggestions for next steps.
- We need to figure out:
 - Are we talking a new “type” (and if so, for 10BASE-T1L & 100BASE-T1L or just for 100BASE-T1L) or is it better to consider a new clause using clause 104 as a basis... (this would allow us to exclude certain power classes and make more extensive changes)
 - How complex would state diagram changes be? – we need an outline of the proposal in state diagram form.
 - How do we want to handle backwards compatibility with the existing clause 104 PSE & PD classes?
 - How does the system handle non-powered devices? (specifically, not interrupting data traffic)
 - Are there changes to the APL spec that are desired?
- Inputs we need:
 - Which safety specifications are relevant for the target environments (and which environments in them – e.g., wet, intrinsically safe, or just dry...)
 - Information on the current and voltage limits for safety specification
- Continuation of the ad hoc with a meeting following the November plenary
- Meeting adjourned at 18:10.

Appendix A: IEEE P802.3dg Long-Reach Single Pair Ethernet Task Force Ad Hoc: Recommendations on Integrating APL Power and Clause 104 Power Attendance

Last Name	First Name	Affiliation
Beauregard	Francois	Belden
Brandt	David	Rockwell Automation
Brychta	Michal	Analog Devices
Eitel	Cornelia	Hirschmann Automation and Control
Fritsche	Matthias	Harting
Graber	Steffen	Pepperl Fuchs
Haydt	Mary Sue	Microchip
Kehrer	Stephan	Belden
Kock	Jörg	NXP
Law	David	HPE
Lickay	Dennis	Hirschmann Automation and Control / Belden
Müller	Harald	Endress+Hauser
Murray	Brian	Analog Devices
Paul	Michael	Analog Devices
Rebel	Felix	Microchip
Zhang	Tingting	Huawei
Zimmerman	George	CME Consulting/ADI, APLGp, Cisco, Marvell, OnSemi, Sony, SenTekSe