

SPMD Study Group

Draft PAR

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Major PAR form questions

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The PAR form is completed on-line in through the myProject system. Many of the PAR question are proforma and are automatically complete by selecting a IEEE 802.3 amendment project. These items include sponsor and the Working Group officers.

This slideset therefore provides the nine major items from the PAR form to assist in consensus building leading up to approving a completed draft PAR form.

PAR item 2.1 – Project title

Project title: Standard for Ethernet Amendment:

Physical Layer Specifications and Management Parameters for 10 Mb/s Operation over Single Balanced Pair Cabling Multidrop Enhancements

Help text: The title of the base standard is uneditable. Please enter the amendment title in the text box. The title should be sufficiently unambiguous, understandable by a NesCom member not from the society that submitted the PAR. All acronyms shall be spelled out in the title.

PAR item 4.2 and 4.3 Project dates

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:

| 11/2022

Help text: Additional communication and input from other organizations or other IEEE Standards Sponsors should be encouraged through participation in the working group or the invitation pool prior to Sponsor Ballot.

4.3 Projected Completion Date for Submittal to RevCom:

| 08/2023

Help text: Enter the date the draft standard is planned to be submitted to RevCom for processing (not to exceed four years from the date of PAR submission). **It is suggested to allow at least six months after Initial Sponsor Ballot for the ballot process.** Cutoff dates for submitting draft standards to RevCom are generally in February, May, August, and October. Check the appropriate calendars for the specific dates as the draft matures. Use a best guess estimate for the PAR.

PAR item 5.2A – Standard scope

5.2A Scope of the complete standard:

This standard defines Ethernet local area, access and metropolitan area networks. Ethernet is specified at selected speeds of operation; and uses a common media access control (MAC) specification and management information base (MIB). The Carrier Sense Multiple Access with Collision Detection (CSMA/CD) MAC protocol specifies shared medium (half duplex) operation, as well as full duplex operation. Speed specific Media Independent Interfaces (MIIs) provide an architectural and optional implementation interface to selected Physical Layer entities (PHY). The Physical Layer encodes frames for transmission and decodes received frames with the modulation specified for the speed of operation, transmission medium and supported link length. Other specified capabilities include: control and management protocols, and the provision of power over selected twisted pair PHY types.

Help text: If this Amendment will change the scope statement of the complete document (base + Amendment), it can be edited and should be explained in the Additional Explanatory Notes field at the end of the PAR form. If this Amendment will not change the scope statement of the complete document the pre-populated text should be left as is.

PAR item 5.2B – Project scope

5.2B Scope of the Project:

Specify additions to, and appropriate modifications of IEEE Std 802.3, to enhance the 10BASE-T1S Physical Layer (PHY) multidrop mode and the PLCA reconciliation sublayer, such as increasing maximum reach, increasing maximum node count, supporting the Time Synchronization Service Interface (TSSI), and adding optional power delivery.

Help text: State what the Amendment is changing or adding.

PAR item 5.3 – Project contingency

5.3 Is the completion of this standard contingent upon the completion of another standard (Yes or No)? If **yes**, please explain below:

No

Help text: Your explanation should include how the standard is dependent upon the completion of another standard. Also, if applicable, why a PAR request is being submitted if the standard currently under development is not yet complete. The title and number of the standard which this project is contingent upon shall be included in the explanation.

PAR item 5.4 – Project purpose

5.4 Will the completed document (base + amendment) contain a purpose clause:

☐ Yes ☒ No

Note: IEEE Std 802.3 does not contain a Purpose Clause.

PAR item 5.5 – Project need

5.5 Need for the Project:

Many applications such as those used in automotive and automation industries have begun the transition of legacy networks to Ethernet. A number of these applications require the use of large multidrop topologies that also support power delivery.

- IEEE Std 802.3cg-2019 mixing segment is specified for 25 meters and 8 nodes, and does not support power delivery.

- Enhancing IEEE Std 802.3cg-2019 by extending the mixing segment reach and node count, and adding optional power deliver on the mixing segment will increase the applications addressed by this technology.

Help text: The need for the project details the specific problem that the standard will resolve and the benefit that users will gain by the publication of the standard. The need statement should be brief, no longer than a few sentences.

PAR item 5.6 – Stakeholders

5.6 Stakeholders for the Standard:

End-users, vendors, system integrators, and providers of systems and components (e.g., sensors, actuators, instruments, controllers, elevator systems, HVAC systems, lighting systems, network infrastructure, security systems, user interfaces) for building (commercial and residential) industrial, and transportation (e.g. automotive, trains/trams) automation.

Help text: The stakeholders (e.g., telecom, medical, environmental) for the standard consist of any parties that have an interest in or may be impacted by the development of the standard.

Thank You!