IEEE 802.3 Major PAR form questions

The PAR form is completed on-line in though 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 Standards Committee and the Working Group officers. This slideset therefore provides the major items from the PAR form to assist in consensus building leading up to approving a completed draft PAR form.

All acronyms shall be spelled out at first use.

The following are the Major PAR responses for the IEEE P802.3dw draft PAR

To add a continuation slide: CTRL-M -> right click new slide -> Layout -> select 'Continued' layout

PAR item 2.1 – Project title

Project title: Standard for Ethernet Amendment:
Ethernet and Fault Managed Power (FMP)

Help text: The title of the base standard is uneditable. Please enter the amendment title in the text box. The title should be sufficiently unambigious, understandable by 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 Standards Association Ballot:

July 2029

Help text: Enter the date the draft standard is planned to be submitted to IEEE-SA for Initial Standards Association Ballot.

4.3 Projected Completion Date for Submittal to RevCom:

March 2030

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 Standards Association Ballot for the ballot process.** Cutoff dates for submitting draft standards to RevCom can be found in the yearly calendar located: http://standards.ieee.org/about/sasb/meetings.html.

PAR item 5.1 – Project participation

5.1 Approximate number of people expected to be actively involved in the development of this project:

60

Help text: This includes Working Group members, additional non-voting participants.

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:

The scope of the project is the specification of additions and modifications to IEEE Std 802.3 for the use of Fault Managed Power (FMP) with Ethernet on a variety of transmission media, including Physical Layer and management parameters required to support FMP.

The scope of the project is the specification of optional Fault Managed Power (FMP) delivery on Ethernet cabling, and additions and modifications to Physical Layer (including reconciliation sublayer) specifications and management parameters to support FMP.

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

5.3.1 If yes, please explain:

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:

The success of Power over Ethernet (PoE) has created demand that exceeds the power available from PoE. Until recently, safety standards limited such power delivery to the levels currently specified in IEEE Std 802.3-2022 for Power over Ethernet (PoE). Recent enhancements to safety standards have enabled a new method that can deliver up to several kilowatts while constraining energy levels into a fault. Systems are emerging from multiple manufacturers using varying techniques to detect faults and deliver the power within the new safety standards. Like PoE, these systems involve interaction between devices at the power source and at the powered device, creating a corresponding need for specifications for interoperability. This project's goal is to create the necessary specifications so that independently developed implementations can provide interoperable power to Ethernet devices.

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 5.5 – Project need

5.5 Need for the Project:

The success of Power over Ethernet (PoE) has created demand for power over Ethernet cabling that exceeds the maximum PoE power of 71.3 W. Updates to safety standards have enabled a new method, FMP, that can deliver up to several kilowatts over Ethernet Cabling while constraining the energy delivered into a fault. The specification of FMP operation on Ethernet cabling is needed to meet the increased power demands. It is also necessary to specify concurrent operation between FMP and Ethernet to mitigate potential interference from FMP, which could otherwise cause data loss. This interference could occur within the cabling for twisted-pair Ethernet as well as within the port for both twisted-pair and fiber-optic Ethernet.

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:

Ethernet component providers (e.g., cabling, magnetics, and integrated circuit), system product providers (e.g., switch and end stations), network providers (e.g., installers, network support), and network implementers (e.g., enterprise, building automation, and industrial automation).

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.

PAR item 7.1 – Similar scope

7.1 Are there other standards or projects with a similar scope? (Yes or No)?

No

If yes, please explain:

Help text: Identify any standard(s) or project(s) of similar scope(s), both within or outside of the IEEE, and explain the need for an additional standard in this area.

For any standard(s) or project(s) of similar scope(s) add ‘Project slide(s)’
To add: CTRL-M -> right click new slide -> Layout -> select ‘Project’ layout

PAR item 8.1 – Additional notes

Additional Explanatory Notes:

An Ethernet cable is the electrical or optical Ethernet transmission medium and, optionally, additional electrical conductors (e.g., twisted pairs and/or power-conductor pairs) in a shared outer jacket or sheath. Ethernet cabling is cable(s) and associated components (e.g., connectors) used as an assembly for the transmission of data and optionally the supply of power between Ethernet ports.

If there is any further information that may assist NesCom in recommending approval for this project, include this information here. The title of any documents referenced in the PAR should be listed here.