

Explanation of Changes

Header – added PAR amendment designator (P802.3de)

5.2B Project Scope –

undated IEEE Std 802.3, since it is likely this will be an amendment to the revision, not IEEE Std 802.3-2018

5.5 Need for the Project - Change “IEEE 802.1 TSN” to “frame preemption as specified by IEEE Std 802.1Q and the generalized precision time protocol as specified by IEEE Std 802.1AS”, per 802.1 comment.

8.1 Additional Notes – Added note to indicate why Mac Merge was not an expanded acronym in 5.5. Per 802.11 comment

Added note to indicate title of IEEE Std 802.3cg-2019 used in 5.5. Per 802.1 comment

IEEE 802.3 Major PAR form questions

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 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 P802.3de 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:
Enhancements to the MAC Merge function and the Time
Synchronization Service Interface (TSSI) to include Point-to-Point 10
Mb/s Single Pair Ethernet.

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 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:

March 1, 2022

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:

September 1, 2022

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:

30

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:

Specify additions to and appropriate modifications of the IEEE Std 802.3 MAC Merge function and the Time Synchronization Service Interface (TSSI) to support 10 Mb/s Single Pair Ethernet point to point PHYs.

Extend IEEE Std 802.3-~~2018~~ to add 10 Mb/s Single Pair Ethernet point to point PHYs to the PHYs supporting the MAC Merge function and the Time Synchronization Service Interface (TSSI).

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:

IEEE Std 802.3cg-2019 defined point-to-point 10Mb/s PHYs with characteristics suitable for use in automotive, building and industrial automation environments. Many of the targeted application areas require Time-Sensitive Networking (TSN) functionality and benefit from support of IEEE 802.3 functions used by ~~IEEE 802.1 TSN~~ frame preemption as specified by IEEE Std 802.1Q and the generalized precision time protocol as specified by IEEE Std 802.1AS.

This project seeks to enable the use of MAC Merge and TSSI with these PHYs. The 10 Mb/s point-to-point PHYs specified in IEEE Std 802.3cg-2019 are currently excluded from one or both of these functions.

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, network infrastructure, user interfaces, and servers) for networks including enterprise and data center networking, automotive, other transportation, industrial, and building 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:

(Sec 2.1) While 'MAC' (Medium Access Control) is an acronym, the term 'MAC Merge' in the title is the proper name of a function within IEEE Std 802.3 and the term used in the title of the candidate clause for amendment, Clause 99, "MAC Merge sublayer." Using it as a proper name, not expanded, improves clarity and the ability of the reader of the PAR to find the appropriate clause in IEEE 802.3 which is being modified, as named above. The proposed project would consider amendments to Clause 99 specification for this function in IEEE Std 802.3 to support 10 Mb/s single-pair Ethernet point-to-point PHYs.

(Sec 5.5) IEEE Std 802.3cg-2019 is IEEE Standard for Ethernet Amendment 5: Physical Layers Specifications and Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced Pair of Conductors

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.

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