

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 P802.3dq 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:
Physical Layer Specifications and Management Parameters for a Pin
Optimized Interface Between a MAC and a PHY

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:

TBD 1.0 -1.5y

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:

TBD 1.5 – 2.0 y

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:

20

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

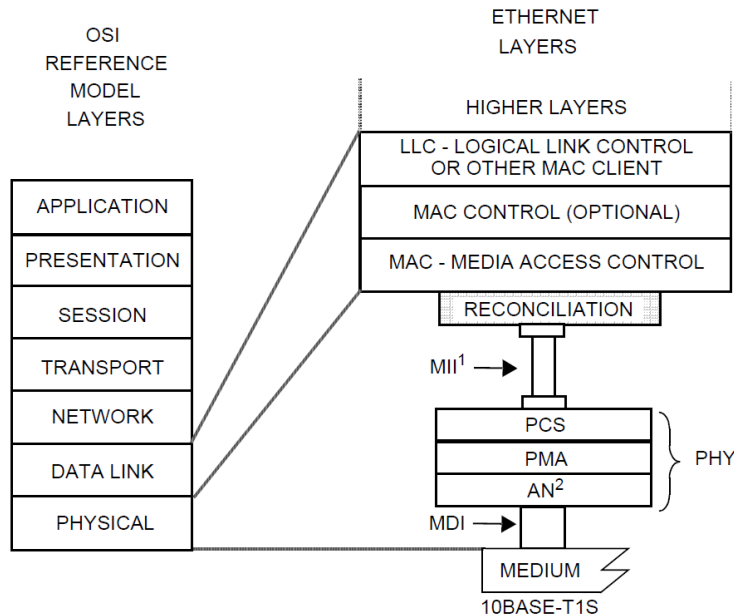
5.2B Scope of the Project:

This project will specify additions and modifications to IEEE Std 802.3 to add one or more new Media Independent Interfaces (MIIs) that are optimized for exposed interconnects. Each interface may support connections between a single MAC and a single port PHY or between multiple MACs and a multi-port PHY.

This project will specify additions and modifications to IEEE Std 802.3 to add one or more new interfaces between a MAC and a PHY, known as Media Independent Interfaces (MIIs), optimized for exposed interconnects. Each interface may support connections between a single MAC and a single-port PHY or between multiple MACs and a multiport PHY.

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

Continued



MDI = MEDIUM DEPENDENT INTERFACE
MII = MEDIA INDEPENDENT INTERFACE

NOTE 1—MII is optional
NOTE 2—Auto-Negotiation is optional

PCS = PHYSICAL CODING SUBLAYER
PMA = PHYSICAL MEDIUM ATTACHMENT
PHY = PHYSICAL LAYER DEVICE
AN = AUTO-NEGOTIATION

Question for Mr. Law:

Does MII between MAC and PHY over-constrain or cause issues with supporting PLCA?

Response Summary:

The PAR scope should include reference to either updated or new RSs to support the new MII.

Figure 148-1—Relationship of PLCA Reconciliation Sublayer to the ISO/IEC OSI reference model and the IEEE 802.3 Ethernet model

Discussion, Not for PAR Inclusion

Figure 22–3 depicts a schematic view of the Reconciliation sublayer inputs and outputs, and demonstrates that the MII management interface is controlled by the station management entity (STA).

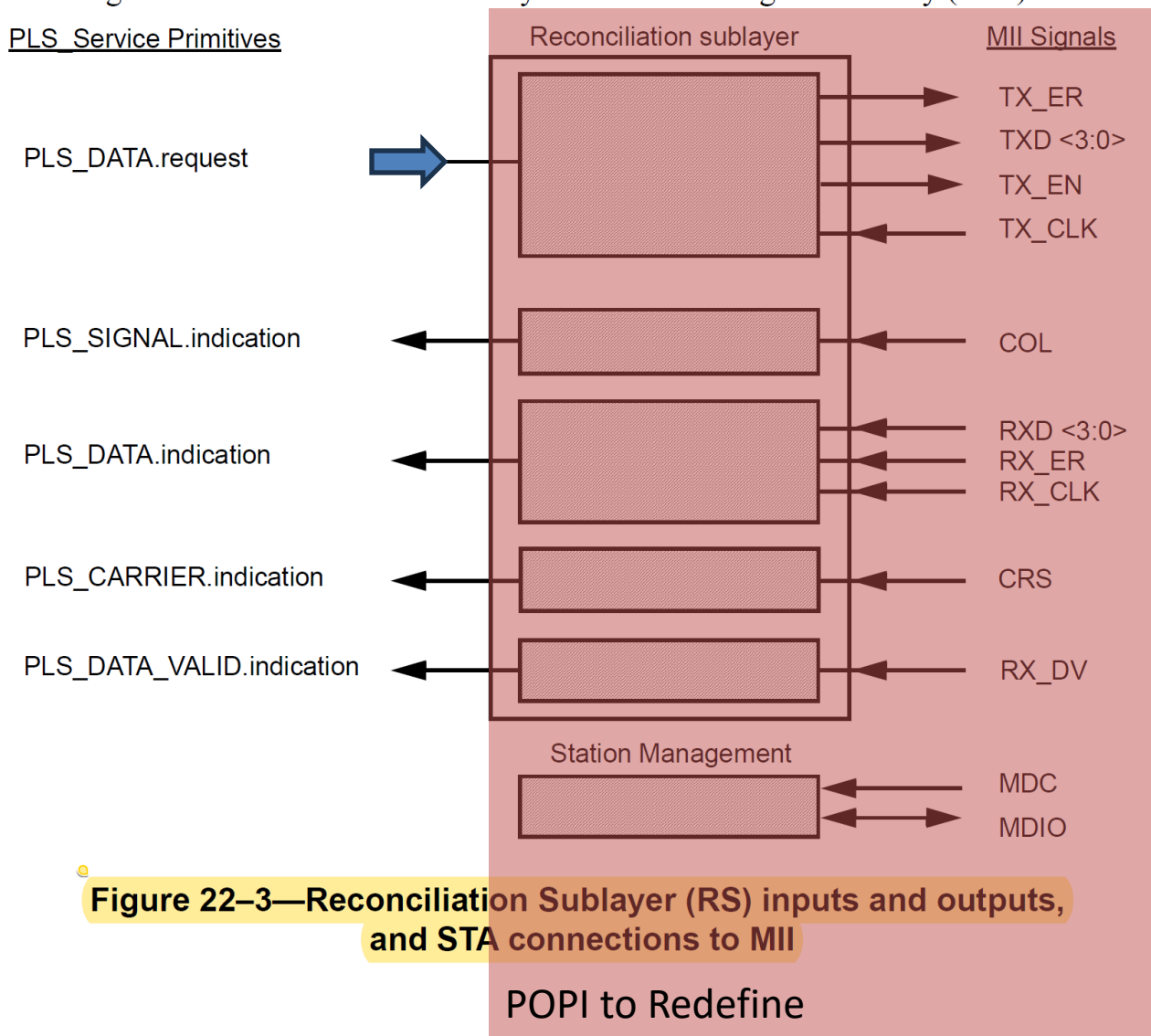


Figure 22–3—Reconciliation Sublayer (RS) inputs and outputs, and STA connections to MII

Discussion, Not for PAR Inclusion

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:

N/A

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 growing body of IEEE 802.3 electrical physical layer devices operating at speeds below 1 Gb/s has intensified the demand for a modern, optimized interface between MACs and PHYs. 10BASE-T1L, 10BASE-T1S, proposed 100BASE-T1L, proposed 10BASE-T1M, and potentially future other PHYs would see benefit in both single and multi-port implementations. Such an effort may afford reduced pin count and implementation complexity while enabling data for multiple ports on a single interface and support for features such as Physical Layer Collision Avoidance (PLCA) and integrated Station Management. Most importantly, it could provide a modern alternative interface for PHYs that would otherwise use various industry specifications not currently in IEEE Std 802.3.

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:

Providers of systems and components (e.g., CPUs, MCUs, stand-alone MACs, as well as Ethernet PHY chip and IP developers) for networked devices, vendors, system integrators, and end-users that benefit from further adoption of Ethernet.

Providers of systems and components (e.g., processors, controllers, stand-alone MACs, as well as Ethernet PHY chip and IP developers) for networked devices, vendors, system integrators, and end-users that benefit from further adoption of Ethernet.

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:

N/A

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:

~~The use of the term “Media Independent Interface(s)” in this PAR is intended to align with the generic meaning of the term MII. This is defined as a compatibility interface as defined in IEEE Std 802.3 Clause 1, not the specific instance of an MII known as “MII” in Clause 22.~~

5.2B - The interface between the MAC and PHY is commonly known as the Media Independent Interface ("MII" or "xMII"). However, the common usage differs from the specific definition in IEEE Std 802.3 and may include other aspects such as the Reconciliation Sublayer, Extender Sublayers, and Station Management.

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.