Project documents: Overview and Guidance

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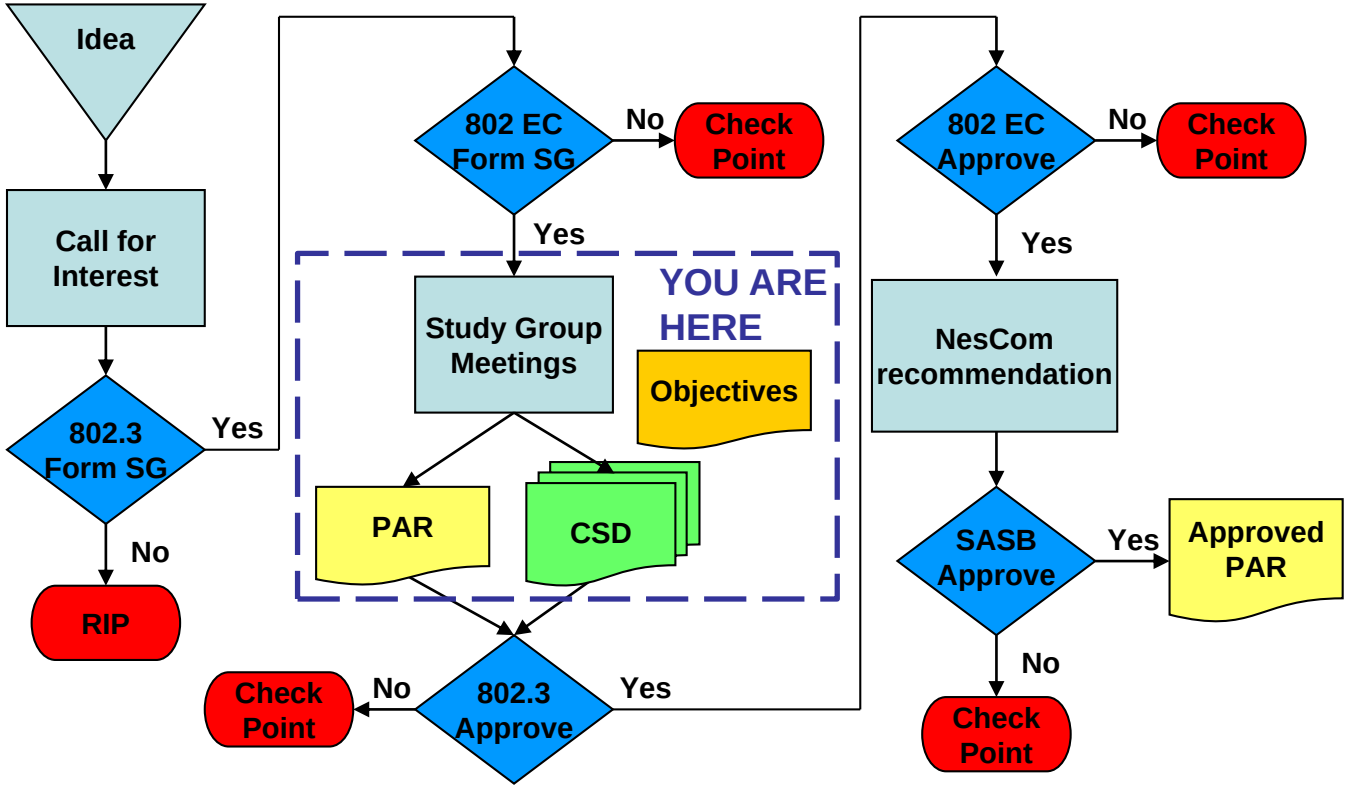
Process overview for Study Group phase



Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

Project documents and initial approvals

Document	Study Group	IEEE 802.3 Working Group	IEEE 802 LMSC	IEEE-SA Standards Board
Project Authorization Request (PAR)	✓	✓	✓ *	✓
Criteria for Standards Development (CSD)	✓	✓	✓ *	
Project Objectives	✓	✓		

* Subject to review (and comment) from each and every other working group in IEEE 802.

Project Authorization Request (PAR)

Project Authorization Request (PAR)

- It is a form completed on-line using the IEEE-SA myProject system
- Many of the questions are pro forma and are automatically completed for an IEEE 802.3 amendment project
- Major questions include
  - Project Title
  - Project Scope
  - Need for the Project
  - Stakeholders for the Standard

PAR item 2.1 – Project title

Project title: Standard for Ethernet Amendment:

[Amendment title]

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 5.2.b – Project scope

5.2.b: Scope of the Project:

[Project scope]

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

PAR item 5.5 – Project need

5.5: Need for the Project:

[Project need]

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 – Stakeholders

5.6: Stakeholders for the Standard:

[List of stakeholders]

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.

Notes on project scope

- Project scope must be within the Study Group charter
- Ideas that are outside of the Study Group charter can be the subject of a new Call for Interest
- Eventual project must constraint itself to the approved project scope
- Ideas that are outside of approved project scope can be the subject of a new Call for Interest
- The project title does not define the project scope

Criteria for Standards Development (CSD)

CSD purpose

- Responses to the CSD are used to evaluate proposed projects
- They are used to filter out projects that are not appropriate for standardization in IEEE 802
- They are unique to IEEE 802
- They are one of the reasons why IEEE 802 standards are relatively successful
- They help perpetuate the “IEEE 802 culture”

CSD components

- Project process requirements
  - Managed objects
  - Coexistence
- Five Criteria (5C) requirements, or “The 5 Critters”
- Defined in the IEEE 802 LMSC Operations Manual
- Supplemented by the IEEE 802.3 Operations Manual

Managed Objects

Describe the plan for developing a definition of managed objects. The plan shall specify one of the following:

a) The definitions will be part of this project.

b) The definitions will be part of a different project and provide the plan for that project or anticipated future project.

c) The definitions will not be developed and explain why such definitions are not needed.

Coexistence

A Working Group proposing a wireless project shall prepare a Coexistence Assessment (CA) document unless it is not applicable.

a) Will the Working Group create a CA document as part of the Working Group balloting process as described in Clause 13? (yes/no)

b) If not, explain why the CA document is not applicable.

- No. A CA document is not applicable because the proposed project is not a wireless project.

The 5 Critters

Broad Market Potential

Compatibility

Distinct Identity

Technical Feasibility

Economic Feasibility

Broad Market Potential

Each proposed IEEE 802 LMSC standard shall have broad market potential. At a minimum, address the following areas:

a) Broad sets of applicability.

b) Multiple vendors and numerous users.

Compatibility

Each proposed IEEE 802 LMSC standard should be in conformance with IEEE Std 802, IEEE 802.1AC, and IEEE 802.1Q. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with IEEE 802.1 Working Group prior to submitting a PAR to the IEEE 802 LMSC.

a) Will the proposed standard comply with IEEE Std 802, IEEE Std 802.1AC and IEEE Std 802.1Q?

b) If the answer to a) is no, supply the response from the IEEE 802.1 Working Group.

c) Compatibility with IEEE Std 802.3

d) Conformance with the IEEE Std 802.3 MAC

Distinct Identity

Each proposed IEEE 802 LMSC standard shall provide evidence of a distinct identity. Identify standards and standards projects with similar scopes and for each one describe why the proposed project is substantially different.

Substantially different from other IEEE 802.3 specifications/solutions.

Technical Feasibility

Each proposed IEEE 802 LMSC standard shall provide evidence that the project is technically feasible within the time frame of the project. At a minimum, address the following items to demonstrate technical feasibility:

a) Demonstrated system feasibility.

b) Proven similar technology via testing, modeling, simulation, etc.

c) Confidence in reliability

Economic Feasibility

Each proposed IEEE 802 LMSC standard shall provide evidence of economic feasibility. Demonstrate, as far as can reasonably be estimated, the economic feasibility of the proposed project for its intended applications. Among the areas that may be addressed in the cost for performance analysis are the following:

a) Known cost factors.
b) Balanced costs.
c) Consideration of installation costs.
d) Consideration of operational costs (e.g., energy consumption).
e) Other areas, as appropriate.

Guidelines for CSD responses

- Respond to each point of each criterion
- Be prepared to defend every word of the responses
- Responses must be specific
- Responses must be succinct
- Responses must be honest
- A project must satisfy all the criteria simultaneously
- Projects are tracked against the criteria as they progress
- Update them as necessary, and get them reapproved

Recent examples of CSD responses

- IEEE P802.3bs 200 Gb/s and 400 Gb/s Ethernet Task Force
- IEEE P802.3ca 25 Gb/s and 50 Gb/s Ethernet Passive Optical Networks Task Force
- IEEE P802.3ch Multi-Gig Automotive Ethernet PHY Task Force

Project objectives

History and traditions

- Project objectives are brief statements, usually written in bullet form, that summarize the technical objectives for a project in IEEE 802.3
- They represent a distilled set of high-level technical requirements
- They are created by the Study Group, approved by the Working Group, and are fulfilled by the Task Force
- The Task Force may modify them, with the approval of the Working Group
- Typically address areas such as operating speed (bit rate), media, reach, BER, compatibility, impairments, coexistence
- Every project undertaken in the IEEE 802.3 Working Group since (at least) 1992 has been guided by a set of objectives

Guidelines for writing objectives

- Objectives must be succinct
- Objectives must be unambiguous
- Objectives must be technical, but written in plain English
- Objectives must be definitive statements of requirements, not plans for future work, study, or evaluation
- Objectives do not have to identify every minute item of work
- Objectives must endure through the life of the project
- Objectives are problem statements, not solution statements

Recent examples of project objectives

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Additional considerations

Re-affirmation of project documents

- Draft standards are checked against the project document over the course of their development
  - Is the draft meeting the project objectives?
  - Is the draft consistent with the project scope?
- CSD are explicitly re-affirmed (by the Task Force, Working Group, and IEEE 802 executive committee) at the following check-points
  - Approval to progress to Working Group ballot
  - Approval to progress to Standards Association ballot
  - Approval to submit to RevCom (for Standards Board approval)
- If something changes during draft development, project documents must be updated accordingly

Suggestions for a path forward

- Contributions to the Study Group should address project objectives and responses to the CSD
- Objectives help bring focus to **what** requirements will be addressed in the proposed standard
- Responses to the CSD will justify **why** a new standard is needed to address those requirements
- The Study Group does not decide **how** the requirements will be addressed (proposal selection is the work of the Task Force)
- Responses to major PAR form questions should be clear once the project objectives and CSD responses are established

References

- H. Frazier, “Review of the 5 Criteria”, IEEE 802.3 400 Gb/s Ethernet Study Group meeting, May 2013.
- H. Frazier, “Guidelines for Project Objectives”, IEEE 802.3 400 Gb/s Ethernet Study Group meeting, May 2013.

- Templates for major PAR form questions and CSD responses are available at the IEEE 802.3 Templates page