



Crash course on Study Groups

IEEE 802.3

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Crash course on Study Group goals

For an excellent overviews of the Study Group activities please refer to:

Overview of the Process – Wael Diab

http://www.ieee802.org/3/400GSG/public/13_05/diab_400_01_0513.pdf

Review of the 5 Criteria – Howard Frazier

http://www.ieee802.org/3/400GSG/public/13_05/frazier_400_01_0513.pdf

Guidelines for Project Objectives – Howard Frazier

http://www.ieee802.org/3/400GSG/public/13_05/frazier_400_02_0513.pdf

The following slides are taken from these excellent presentations

What does the Study Group produce?

- 5 Criteria **now called “Criteria for Standards Development” (CSD)**
 - Broad Market Potential, Compatibility, Distinct Identity, Technical Feasibility, Economic Feasibility
- PAR
 - Your “contract” with the IEEE-SA and “authorization” to develop a standard
 - Broadly focuses on what the standard is that group will work on including scope, purpose, broad timeline (not a project plan)
 - Good idea to look at examples of prior projects
- Objectives
 - Your “contract” with 802.3
 - At a high level it is what the group will work on (and what it will not)
 - Somewhat more specific than the scope in the PAR

From:
Overview of the Process –
Wael Diab
http://www.ieee802.org/3/40/0GSG/public/13_05/diab_400_01_0513.pdf

Final Thoughts

- Goal is to get to a Task Force
- To do that, focus on
 - Producing the objectives
 - Producing the PAR
 - Producing the 5 criteria
 - Work on building consensus
 - Leave the rest of it to the Task Force phase
 - Plenty of time to work on solutions
 - Plenty of time to debate the text of the solutions

From:
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http://www.ieee802.org/3/40/OGSG/public/13_05/diab_400_01_0513.pdf

History and traditions

- Project objectives are brief statements, usually written in bullet form, that summarize the technical objectives for a standards 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 parent working group, and are fulfilled by the task force
 - The task force may modify them, with the approval of the working group
- They typically address areas such as operating speed (bit rate), media, reach, BER, compatibility, impairments, coexistence
- Note that some other working groups address such areas in their Project Authorization Request, but we tend not to do this
- Every project undertaken in the IEEE 802.3 working group since (at least) 1992 has been guided by a set of objectives

From:
Guidelines for Project
Objectives – Howard
Frazier

http://www.ieee802.org/3/400GSG/public/13_05/frazier_400_02_0513.pdf

Guidelines for writing and adopting

- Consensus building is key
 - Don't even think about offering up a motion to adopt an objective until you know you have significant support for it, otherwise, things will get ugly
- Offer objectives one at a time, using a motion like this:
 - Example - for illustrative purposes only!**
 - Move that the Study Group adopt the following objective:
 - Provide a BER of 10^{-12} or better at the MAC/PLS service interface
- All votes on objectives are technical, requiring $\geq 75\%$ approval
- Sometimes, we try adopting just the form of an objective, before we can reach agreement on the specific values
 - These are called “Mad-libs” objectives
 - Example - for illustrative purposes only!**
 - Move that the Study Group adopt the following objective:
 - Provide a BER of 10^{-n} or better at the MAC/PLS service interface
 - This is not the preferred approach!

From:
Guidelines for Project
Objectives – Howard
Frazier

http://www.ieee802.org/3/400GSG/public/13_05/frazier_400_02_0513.pdf

Audience

- The 5 criteria are drafted and approved by a study group
- They are reviewed and approved (individually) by the working group
- They are subject to review and approval by each and every other working group in IEEE 802®
- They are reviewed and approved by the IEEE 802 executive committee

Purpose

- The 5 criteria 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”

From:
Review of the 5 Criteria –
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The 5 Critters



Broad
Market
Potential



Compatibility



Distinct
Identity



Technical
Feasibility



Economic
Feasibility

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 WG proposing a wireless project shall demonstrate coexistence through the preparation of a Coexistence Assurance (CA) document unless it is not applicable.

- a) Will the WG create a CA document as part of the WG balloting process as described in Clause 13?**
 - b) If not, explain why the CA document is not applicable**
-
- A CA document is not applicable because the proposed project is not a wireless project.

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 WG prior to submitting a PAR to the Sponsor.

- 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 WG.
- c) **Compatibility with IEEE Std 802.3**
- d) **Conformance with the IEEE Std 802.3 MAC**
- e) **Managed object definitions compatible with SNMP (see Managed Objects)**



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.



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) **Balanced costs (infrastructure versus attached stations).**
- b) **Known cost factors.**
- c) **Consideration of installation costs.**
- d) **Consideration of operational costs (e.g. energy consumption).**
- e) **Other areas, as appropriate.**



Key takeaways

- Study Group priority is to focus on generating the documentation
- The faster you get through that, the sooner you get to the deep technical discussions in the Task Force around baseline selection and adoption