

Review of the 5 Criteria

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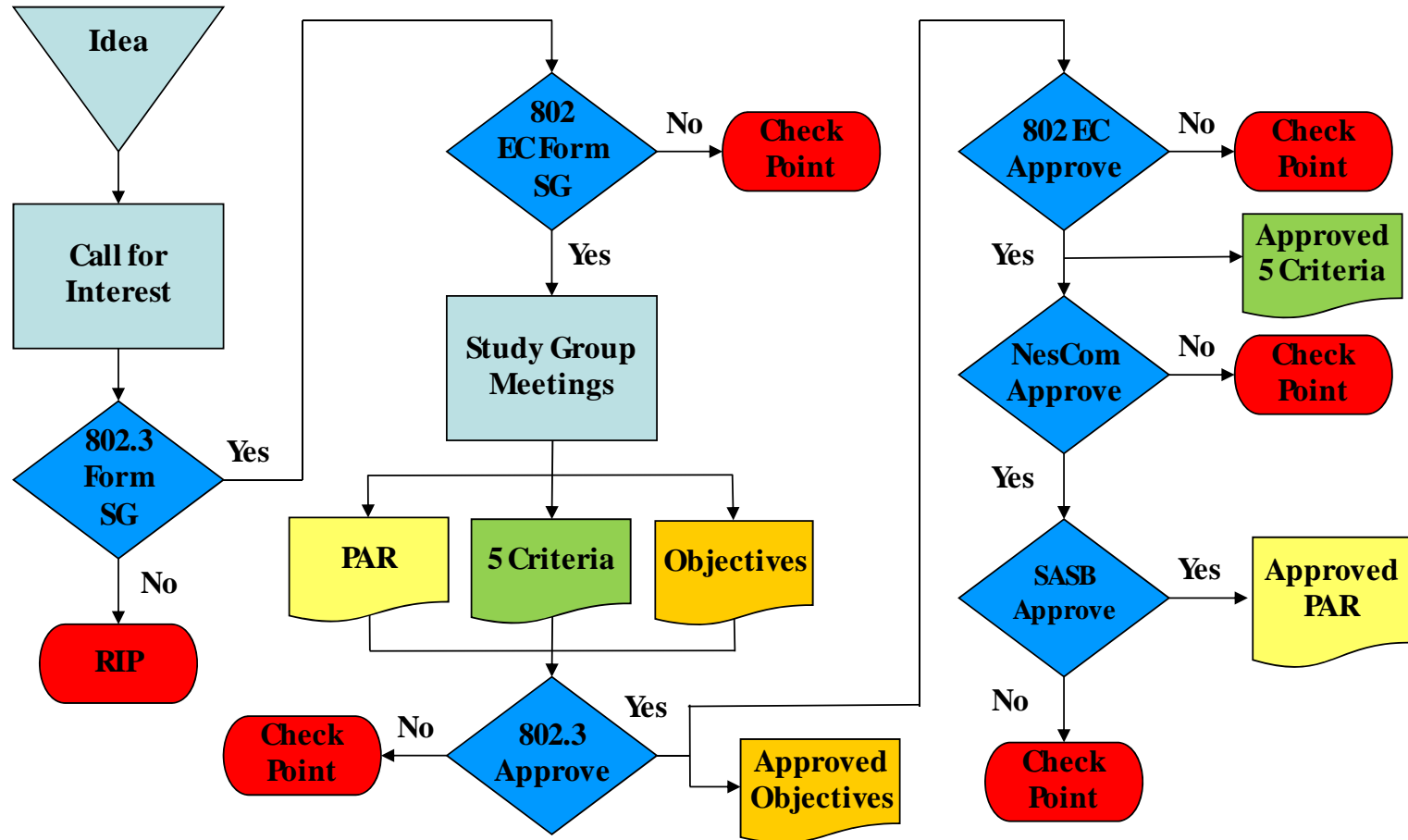
Updated by George Zimmerman, CME

Consulting 12/4/17

Outline

- Introduction
- Audience
- Purpose
- 5 Criteria and the additional CSDs
- Guidelines for responses
- Summary
- Successful examples

Introduction



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

Approval Requirements

	Study Group	Working Group	802 EC	IEEE-SA Std Board
Project Authorization Request (PAR)	✓	✓	✓	✓
Criteria for Standards Development (including 5 Criteria)	✓	✓	✓	
Objectives	✓	✓		

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”
- The 5C's have been supplemented to make the "CSD"s

IEEE 802.3 Criteria for Standards Development (CSD)

The IEEE 802 Criteria for Standards Development (CSD) are defined in Clause 14 of the IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual. The criteria include project process requirements (“Managed Objects”) and 5 Criteria (5C) requirements. The 5C are supplemented by subclause 7.2 ‘Five Criteria’ of the ‘Operating Rules of IEEE Project 802 Working Group 802.3, CSMA/CD LANs’.

The following are the CSD Responses in relation to the IEEE P802.3?? PAR

Items required by the IEEE 802 CSD are shown in Black text and supplementary items required by IEEE 802.3 are shown in blue text.

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.**

COMMON RESPONSES:

- The definition of protocol independent managed objects will be part of this project.**
- In addition, it is expected that the protocol-specific definition of managed objects will be added in a future amendment to an IEEE 802.3 Standard for Management.**

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**

COMMON RESPONSE (FOR 802.3):

- A CA document is not applicable because the proposed project is not a wireless project.**

The 5 Critters



Broad
Market
Potential



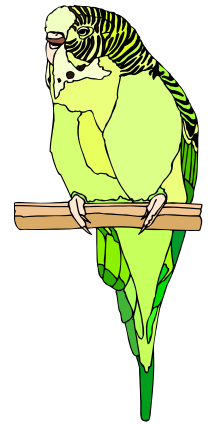
Compatibility



Distinct
Identity



Technical
Feasibility



Economic
Feasibility



Broad Market Potential

- A standards project authorized by IEEE 802 LMSC shall have a broad market potential. Specifically, it shall have the potential for:
 - a) Broad sets of applicability.
 - b) Multiple vendors and numerous users.



Compatibility

- IEEE 802 LMSC defines a family of standards. All standards should be in conformance : 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. In order to demonstrate compatibility with this criterion, the Five Criteria statement must answer the following questions.
 - 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 a 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



Distinct Identity

Old Critter Wording:

- Each IEEE 802 LMSC standard shall have a distinct identity. To achieve this, each authorized project shall be:
 - a) Substantially different from other IEEE 802 LMSC standards.
 - b) One unique solution per problem (not two solutions to a problem).
 - c) Easy for the document reader to select the relevant specification.
 - d) *Substantially different from other IEEE 802.3 specifications/solutions*

NEWER CSD Wording:

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

Additionally for IEEE 802.3 - identify that the solution is:

Substantially different from other IEEE 802.3 specifications/solutions



Technical Feasibility

- Each proposed IEEE 802 LMSC standard shall provide evidence that a 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

Old Critter Wording:

- For a project to be authorized, it shall be able to show economic feasibility (so far as can reasonably be estimated) for its intended applications. At a minimum, the proposed project shall show:
 - a) Known cost factors, reliable data
 - b) Reasonable cost for performance
 - c) Consideration of installation costs

NEWER CSD Wording:

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.**

Guidelines for responses

- Respond to each criterion on a separate slide
- Repeat the criterion verbatim at the top of each slide

There is a template provided for CSD responses, available from the 802.3 "Tools and Resources" webpage, at:

http://www.ieee802.org/3/WG_tools/templates/802d3_CSD_V2p4.pptx

- Respond to each point of the criterion
- Be prepared to defend every word of the responses
- Responses must be specific

Guidelines for responses

- Responses must be succinct
- Responses must be honest
- A project must satisfy all 5 of the criteria simultaneously
- Track the project against the criteria as the project progresses
- Update them as necessary, and get them re-approved

Reaffirmation of CSD Requirements

After initial approval of CSD, subsequent reaffirmations of the CSD are required

- Prior to submission for Working Group Ballot
- Prior to submission for Sponsor Ballot
- Prior to submission to RevCom

It is a valid for a member of the balloting pool to submit comments during WG / Sponsor Ballots that questions a draft meeting a 5 Criteria Response.

The CSD is a living document.

Summary

- The CSDs (5 criteria) are an important output of a study group, along with the PAR and objectives
- Presentations should address the CSDs
- Be thorough and exercise due diligence

Successful examples

- 802.3.1 Ethernet MIB definitions

http://www.ieee802.org/3/maint/public/frazier_2_0908.pdf

- 802.3ba 40G/100G

http://www.ieee802.org/3/ba/PAR/P802.3ba_5C_0908.pdf

- 802.3av 10G-EPON

http://www.ieee802.org/3/av/tf_docs/10gepon_5criteria_0506.pdf

- 802.3ah EFM

http://www.ieee802.org/3/efm/public/jul01/presentations/par_1_0701.pdf

- 802.3ae 10 Gigabit Ethernet

<http://www.ieee802.org/3/ae/criteria.pdf>

See the 802.3 webpage for recent projects similar to yours!