**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **Working draft of SG SRU CSD** | |
| Date Submitted | [12 May, 2014] | |
| Source | [Shoichi Kitazawa1\*, Masayuki Ariyoshi1, Mineo Takai2, Shusaku Shimada3, Mitsuru Iwaoka4] [1: ATR, 2: Space Time Engineering, 3: Schubiquist Technologies Guild, 4: Yokogawa Electric Corp.] [ ] | Voice: [ ] Fax: [ ] E-mail:[\* kitazawa@atr.jp] |
| Re: | [ ] | |
| Abstract | [This document is working draft of the CSD.] | |
| Purpose | [Submit the CSD to the P802.15 Working Group] | |
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# IEEE 802 LAN/MAN STANDARDS COMMITTEE (LMSC)

# CRITERIA FOR STANDARDS DEVELOPMENT (CSD)

Based on IEEE 802 LMSC Operations Manuals approved 15 November 2013

Last edited 20 January 2014

# IEEE 802 criteria for standards development (CSD)

The CSD documents an agreement between the WG and the Sponsor that provides a description of the project and the Sponsor's requirements more detailed than required in the PAR. The CSD consists of the project process requirements, 1.1, and the 5C requirements, 1.2.

## Project process requirements

### Managed objects

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

1. The definitions will be part of this project. YES
2. The definitions will be part of a different project and provide the plan for that project or anticipated future project.
3. 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.

1. Will the WG create a CA document as part of the WG balloting process as described in Clause 13? (yes/no) YES
2. If not, explain why the CA document is not applicable.

## 5C requirements

### Broad market potential

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

1. Broad sets of applicability.

A standardized set of definitions and procedures for radio resource measurement, which facilitates effective management functions in WPANs, can accommodate wide application spaces of the IEEE 802.15.4 including Hospital/Medical/Healthcare, Industrial Automation, and Social Infrastructure systems.

1. Multiple vendors and numerous users.

There are many semiconductor and system vendors producing systems based on IEEE 802.15.4 capable of implementing the technologies and techniques expected to be including in this amendment.

### 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.

1. Will the proposed standard comply with IEEE Std 802, IEEE Std 802.1AC and IEEE Std 802.1Q? YES
2. If the answer to a) is no, supply the response from the IEEE 802.1 WG.

The review and response is not required if the proposed standard is an amendment or revision to an existing standard for which it has been previously determined that compliance with the above IEEE 802 standards is not possible. In this case, the CSD statement shall state that this is the case.

### 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.

This amendment will focus on radio resource measurement of WPANs. There is no standardized set of definitions and procedures for radio resource measurement, which facilitates effective management functions in WPANs.

### 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:

1. Demonstrated system feasibility.

The definition of information elements that can carry measurement data has already been standardized in the IEEE Std 802.15.4e-2012. This amendment merely defines Type Descriptors and other fields in the information elements for radio resource measurement.

1. Proven similar technology via testing, modeling, simulation, etc.

A variety of radio resource measurement mechanisms have been deployed for the systems operating in shared spectrum bands, e.g., IEEE 802.11k.

### 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:

1. Balanced costs (infrastructure versus attached stations).

The proposed amendment to 802.15.4 will be developed with the aim such that the additional cost of the radio resource measurement capabilities could be a negligible fraction of the entire cost of target applications.

1. Known cost factors.

IEEE 802.15.4 devices implementing the radio resource measurement procedures will make use of the existing high volume applications in the license-exempt frequency bands including 2.4GHz and 915MHz bands. The incremental cost for implementation is expected to be reasonable.

1. Consideration of installation costs.

One of the IEEE 802.15 standard objectives includes low cost installation with minimal or no operator intervention. The radio resource measurement in this amendment facilitates achieving the objectives.

1. Consideration of operational costs (e.g., energy consumption).

This amendment is not expected to change operation costs of existing system.

1. Other areas, as appropriate.

None.

**References:**

Masayuki Ariyoshi, Shoichi Kitazawa “SRU Working draft 5C” IEEE P802.15-13-0616r1 https://mentor.ieee.org/802.15/dcn/13/15-13-0616-01-0sru-sru-working-draft-5c.docx