**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 | [16 July, 2014] | |
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| 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.

**Intended plan for developing a definition of managed objects:**

* Understand the common capabilities associated with spectrum resource and network performance metrics of all the PHYs currently defined in the IEEE 802.15.4-2011 plus completed amendments. Also identify and record specific unique capabilities as needed.
* Where necessary, understand how to express those capabilities in a common manner, for example, if latency is such a capability then determine if it is used in a consistent manner from PHY to PHY. If not, define a mechanism to normalize.
* Define a transport mechanism, like an IE.
* Reduce the above to a set defined managed objects.

### 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.

There are now close to 1 billion 15.4 chip sets deployed in a large variety of applications including consumer electronics, building automation, medical applications,SmartGrid, industrial control and many more. The majority of these are in bands shared with other wireless communications applications. A standardized set of definitions and procedures for spectrum resource measurement, which facilitates effective management functions in these networks, is expected to have a lot of value.

1. Multiple vendors and numerous users. See response to a)

### 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? No
2. If the answer to a) is no, supply the response from the IEEE 802.1 WG. 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.

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 defines Spectrum Resource Measurement functions unique to IEEE802.15.4.

### 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.

No new ground is being broken here. This amendment is merely adding the appropriate MAC modifications to support Spectrum Resource Management functions.

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

Same as 1.2.4 a). Plus-similar capabilities have already been demonstrated and deployed in many proprietary implementations.

### 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).

Since there are no added hardware costs, the balance remains unchanged

1. Known cost factors.

Firmware change - no added hardware costs

1. Consideration of installation costs.

No change to installation costs

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

No change to operational costs

1. Other areas, as appropriate.

None.