CRITERIA FOR STANDARDS DEVELOPMENT (CSD)

Based on IEEE 802 LMSC Operations Manuals approved 15 November 2013

Last edited 20 January 2014

**Amendment to IEEE Std 802.15.10:**

***Recommended Practice for Routing Packets in IEEE 802.15.4 Dynamically Changing Wireless Networks:*** Amendment to fully define use of addressing and route information currently in the standard

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# 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. While no new managed objects are anticipated, any managed objects that are required will be defined as part of the project.
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) No
2. If not, explain why the CA document is not applicable. This is a Layer 2 (LLC) project and does not involve any PHY layers

## 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.
2. Mesh networking, both mesh under and mesh over, has become an essential capability in the Internet of Things. IEEE Std 802.15.10 addresses the mesh under environment. This amendment allows for the use of the addressing and route information used in non-storing routing modes to be completely specified, permitting full support for all of the non-storing routing modes defined in the initial standard. This expands the use environment for the base standard in the very large Internet of Things (IoT) market.
3. Multiple vendors and numerous users.

Multiple vendors are already producing devices and systems based on IEEE Std 802.15.10 layer 2 routing. These devices and systems are being used in products deployed for home area networking and field area networking.

### 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.

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

* + 1. 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 specifically addresses added functionality for 801.15.10

### 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.

Route handling of dynamically changing networks are being implemented today using the IEEE Std 802.15.10-2017 Recommended Practice.

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

Many examples of route handling of dynamically changing networks have not only been published in the literature and demonstrated in laboratories worldwide, but have deployed in operational networks (see 1.2.4a).

### 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).
2. Known cost factors.
3. Consideration of installation costs.
4. Consideration of operational costs (e.g., energy consumption).
5. Other areas, as appropriate.

This project will add no new capabilities or complexity that would increase cost.