**HRCPIEEE P802.15**

**Wireless Personal Area Networks**

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

1. 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 is a need for close proximity high rate communications to service the transmission and rapid exchange of large data files, based on close proximity, point-to-point connections. This proposed amendment consists of a modified IEEE 802.15.3 MAC and an unlicensed 60GHz Physical layer for use in a wide variety of use cases such as rapid large multimedia data downloads and file exchanges between two close proximity products, i.e. mobile products, stationary products (kiosks, toll gates, etc.), and other wireless data storage devices.

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1. Multiple vendors and numerous users.

Participants of IEEE 802.15 have shown interest in communications capabilities of this type. Participants include international wireless carriers/service providers, academic researchers, semiconductor manufacturers, communication equipment manufacturers, system integrators and end users. (Study group attendance figures)

### 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

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

### 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.

There is currently no wireless standard optimized for close proximity, point-to-point applications, including kiosk downloading, data exchange at toll gates and other high speed use cases requiring a transfer speed up to 100 Gbps. Standards addressing wireless links with data rates below10 Gbps operating at 60 GHz include IEEE 802.15.3c, IEEE 802.11ad, ECMA387 and WirelessHD. Amendments to the IEEE802.15.3 MAC will enable a close proximity communications scheme, which requires quick link setup and release, for exchanging large amounts of data almost instantaneously by means of a simple, impromptu touch action

### 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 sequence of link setup, data transfer and link release occurring within a short duration has already been implemented for point-to-point wireless communication systems, e.g. TransferJet.

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

The main components of the technology and signaling are already used in today’s systems, e.g. TransferJet. Hence, the involved testing overhead associated with a commercial development undertaken by manufacturers is reasonable.

### 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.

**a) Balanced costs**

The cost of the communications technology proposed here is only a small fraction of the cost of building any infrastructure to serve this application.

**b) Known cost factors**

There are no cost factors which would inhibit the effective deployment or use of this technology.

**c) Consideration of installation costs**

This proposed amendment has no known impact on installation costs.

**d) Consideration of operational costs**

There could eventually be up to a billion mobile and stationary products deployed in the market worldwide. This close proximity model will provide new business opportunities, which include downloading/exchanging movies, music, pictures, documents, games, coupons, ads, software, and other types of content for both personal and commercial usage models.

The total operational cost is low and the system will provide substantial benefits for users and service operators.

This standards amendment will achieve improved power savings in terms of per-bit data transfer.