
myProject™ - P1900.6 PAR Detail

Submitter Email: k.moessner@surrey.ac.uk

Type of Project: New IEEE Standard

PAR Request Date: 31-Jul-2008

PAR Approval Date: 26-Sep-2008

PAR Expiration Date: 31-Dec-2012

Status: PAR for a New IEEE Standard

Project Record:

1.1 Project Number: P1900.6

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Spectrum Sensing Interfaces and Data Structures for Dynamic Spectrum Access and other Advanced Radio Communication Systems.

3.1 Working Group: Spectrum Sensing in Advanced Radio Systems (SASB/SCC41/P1900.6)

Contact Information for Working Group Chair

Name: Klaus Moessner

Email: k.moessner@surrey.ac.uk

Phone: +441483683468

Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE-SASB Coordinating Committees/SCC41 - Dynamic Spectrum Access Networks (SASB/SCC41)

Contact Information for Sponsor Chair

Name: Joanna N Guenin

Email: j.guenin@motorola.com

Phone: 847-576-3517

Contact Information for Standards Representative

None

4.1 Type of Ballot: Individual

4.2 Expected Date of Submission for Initial Sponsor Ballot: 01/2010

4.3 Projected Completion Date for Submittal to RevCom: 03/2011

5.1 Approximate number of people expected to work on this project: 15

5.2 Scope: This standard defines the information exchange between spectrum sensors and their clients in radio communication systems. The logical interface and supporting data structures used for information exchange are defined abstractly without constraining the sensing technology, client design, or data link between sensor and client.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The purpose of this standard is to define spectrum sensing interfaces and data structures for DSA (Dynamic Spectrum Access) and other advanced radio communications systems which will facilitate interoperability between independently developed devices and thus allow for separate evolution of spectrum sensors and other system functions.

5.5 Need for the Project: Background: Due to the proliferation of spectrum-dependent devices, new technologies are being

introduced which allow devices to dynamically access the spectrum and therefore increase spectrum utilization. These devices will require reliable, dependable, and trusted spectrum sensing capabilities in order to make accurate assessments of the spectrum usage in the surrounding operational area. Problem: Recently proposed advanced radio systems based on sensing technology (e.g. 802.22) combine sensing and the protocols and cognitive engines that use the sensing results into proprietary architectures. This model of development reduces innovation and limits the opportunities for integrating new component technologies for better system performance. Further the results of sensing extend beyond the activities of a single system and are ideally integrated into the larger spectrum management process to including the development of spectrum use monitoring and enforcement activities. Many different sensing techniques have been defined so far, there has been no effort to ensure interoperability between sensors and clients provided by different manufacturers. Sensing techniques have been defined without considering their compatibility with other existing solutions. Solution: Development of a standard that defines the interfaces and data structures required for exchange of sensing related information. How standard applies: The standard will provide a formal definition of data structures and interfaces for exchange of spectrum sensing related information.

5.6 Stakeholders for the Standard: A range of stakeholders will benefit from this standard. Regulators can draw on the standard when setting radio system and band usage requirements. Manufacturers will be able to design and implement sensing methodologies and decision making logic in Cognitive Radio independently and thus facilitate interoperability between systems. Operators or spectrum rights holders can use the standard to ensure that the sensing equipment of different manufacturers will interoperate. Finally, this standard will open the market for specialized sensing as well as DSA decision making mechanism, thus potentially allowing new players to enter the market

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes

If yes, state date: 05/20/2008

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

7.1 Are there other standards or projects with a similar scope? No

7.2 International Activities

a. Adoption

Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization? Do Not Know

Organization:

Technical Committee Name:

Technical Committee Number:

Contact Person Name:

Contact Person Phone:

Contact Person Email:

b. Joint Development

Is it the intent to develop this document jointly with another organization? No

c. Harmonization

Are you aware of another organization that may be interested in portions of this document in their standardization development efforts? No

8.1 Additional Explanatory Notes (Item Number and Explanation):