

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >
Title	Plan to Update 802.16 PARs
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Re:	IEEE 802.16.1-99/00, 802.16.2-99/00, 802.16.3-00/00r1, and 802.16.4-00/00. This is an update of IEEE 802.16-00/21, discussion of which was postponed, by a decision at Session #10, until the closing plenary of Session #11.
Abstract	This document proposes maintenance changes of 802.16's PARs to reflect the Working Group's integrated portfolio of projects. This Revision 2 is identical to Revision 1 (as approved by IEEE 802.16 on 2001-01-26) except that the Task Group 2 New Scope and New Purpose now highlight, in blue, the changes with respect to the previous PAR.
Purpose	For approval at the Closing Plenary of 802.16 Session #11.
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Plan to Update 802.16 PARs

Roger Marks, Phil Whitehead, Brian Kiernan, Durga Satapathy

Abstract

This document proposes maintenance changes of 802.16's PARs to reflect the Working Group's integrated portfolio of projects.

Introduction

IEEE 802.16 currently has four active Project Authorization Requests (PARs). As the existing PARs were developed, the Working Group did not fully foresee future projects and their implications. As a result, the existing PARs are not fully aligned with the current plans of the Working Group. A maintenance update is necessary.

Philosophy

The basic intent is to bring all of the air interface projects into a single standard, to be numbered simply "802.16". Each additional air interface specification would be developed as an amendment (which IEEE formerly called a "supplement"). According to the IEEE definition, amendments are "additions to existing standards and may contain substantive corrections and/or errata to the standard." Each Amendment could add a physical layer and make changes to the MAC to support it. These Amendment projects would be labeled "802.16a" and "802.16b" and would be published initially as separate documents. This is the model followed by other 802 Working Groups (for example, 802.11a and 802.11b are amendments to 802.11). At some point, 802.16 would consolidate all of these into a revised 802.16 standard that would include all of the material in one document (following the example of the 802.3 standard that includes the Ethernet MAC plus all of the PHYs). The Task Group 4 PAR is already defined as an amendment to the Task Group 1 standard.

One problem with this numbering scheme is that the 802.16.2 project number does not fit in. Since this document is a "Recommended Practice," it cannot be published as part of a "Standard." An earlier proposal to use the number "802.16RP", where the "RP" stands for "Recommended Practice", was vetted with the appropriate IEEE-SA standards staff and was roundly rejected as falling outside normal practices. The recommendation of staff was to leave the number as 802.16.2.

Title Simplification

The current PAR titles include some prefix material that was intended to reflect 802 convention but did so erroneously. Some of the conventional 802 prefix material arose out of the need to incorporate the 802 standards as ISO/IEC standards. Since 802.16 is not looking to ISO/IEC for internationalization, much of the prefix material is superfluous and distracting.

Purpose and Scope

In the case of Task Group 2, the purpose and scope statements in the PAR are broader than the material in the draft. IEEE is satisfied as long as the project scope stays within the bounds defined in the PAR. Still, the scope and purpose do provide a good source of information to outsiders and can easily be updated along with the other changes. Task Group 2 proposed the new, more accurate, Scope and Purpose statements below.

Proposed Changes

Task Group 2

Title:

~~Telecommunications and Information Exchange Between Systems – LAN/MAN Specific Requirements – Coexistence of Broadband Wireless Access Systems~~

Local and metropolitan area networks – Recommended Practice for Coexistence of Fixed Broadband Wireless Access Systems

New Scope:

This project covers development of a Recommended Practice for the design and coordinated deployment of fixed broadband wireless access (BWA) systems operating from 10-66 GHz (with a focus on 23.5-43.5 GHz) in order to minimize interference so as to maximize system performance and/or service quality. This practice will provide for coexistence using frequency and spatial separation and will cover three areas. First, it will recommend limits of in-band and out-of-band emissions from BWA transmitters through parameters including radiated power, spectral masks and antenna patterns. Second, it will recommend receiver tolerance parameters, including noise floor degradation and blocking performance, for interference received from other BWA systems as well as from other terrestrial and satellite systems. Third, it will provide coordination parameters, including band plans, separation distances, and power flux density limits, to enable successful deployment of BWA systems with tolerable interference. The scope includes interference between systems deployed across geographic boundaries in the same frequency band and systems deployed in the same geographic area in different frequency bands (including different systems deployed by a single license-holder in sub-bands of the licensee's authorized bandwidth). The scope does not cover coexistence issues due to intrasystem frequency re-use within the operator's licensed band, and it does not consider the impact of interference created by BWA systems on non-BWA terrestrial and satellite systems.

New Purpose:

The purpose of this recommended practice is to provide coexistence guidelines to license holders, service providers, deployment groups, and system integrators. The equipment parameters contained within this practice will benefit equipment and component vendors and industry associations by providing design targets. The benefits of this practice will include:

- Coexistence of different systems with higher assurance that system performance objectives will be met.
- Minimal need for case-by-case interference studies and coordination between operators to resolve interference issues.
- Preservation of a favorable electromagnetic environment for deployment and operation of BWA systems, including future systems compliant to the IEEE 802.16 interoperability standards.
- ~~Optimization of coverage and spectrum utilization.~~ Improved spectrum utilization.
- Cost-effective system deployment.

Task Group 1Project Number: ~~802.16.1~~ 802.16

Title:

~~Telecommunications and Information Exchange Between Systems – LAN/MAN Specific Requirements – Air Interface for Fixed Broadband Wireless Access Systems~~~~Local and metropolitan area networks - Part 16: Standard Air Interface for Fixed Broadband Wireless Access Systems~~

Task Group 4Assigned Project Number: ~~802.16.1b~~ 802.16b

Title:

~~Telecommunications and Information Exchange Between Systems – LAN/MAN Specific Requirements – Air Interface for Fixed Broadband Wireless Access Systems including License Exempt Frequencies~~~~Local and metropolitan area networks – Amendment to Standard Air Interface for Fixed Broadband Wireless Access Systems – Media Access Control Modifications and Additional Physical Layer for License-Exempt Frequencies~~

Task Group 3Project Number: ~~802.16.3~~ 802.16aTitle: ~~Telecommunications and Information Exchange Between Systems – LAN/MAN Specific Requirements – Air Interface for Fixed Broadband Wireless Access Systems in Licensed Bands from 2 to 11 GHz~~~~Local and metropolitan area networks – Amendment to Standard Air Interface for Fixed Broadband Wireless Access Systems – Media Access Control Modifications and Additional Physical Layer for 2-11 GHz~~

Choose one from the following:

- * New Standard
 - * Revision of existing standard {number and year}
 - * Amendment (Supplement) to an existing standard {802.16}
 - * Corrigenda to an existing standard {number and year}
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