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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** | |
| Title | ***Standardization of Mobile Broadband Network Performance Measurements:*** ***Proposed PAR*** | |
| Date Submitted | **2012-05-16** | |
| Source(s) | Roger B. Marks  Consensii LLC; Mobile Pulse, Inc.  4040 Montview Blvd  Denver, CO 80207 USA | Voice: +1 619 393 1913 E-mail: roger@consensii.com  \*<<http://standards.ieee.org/faqs/affiliationFAQ.html>> |
| Re: | Solicitation of input contributions by IEEE 802.16’s Metrology Study Group <<http://ieee802.org/16/sg/met>> for IEEE 802.16’s Session #79 of 14-17 May 2012 | |
| Abstract | This document proposes a draft PAR for a project within the IEEE 802.16 Working Group on Mobile Broadband Network Performance Measurements. | |
| Purpose | This proposal requests that the Metrology Study Group review the proposal and forward it as a draft PAR. | |
| Notice | *This document does not represent the agreed views of the IEEE 802.16 Working Group or any of its subgroups*. It represents only the views of the participants listed in the “Source(s)” field above. It is offered as a basis for discussion. It is not binding on the contributor(s), who reserve(s) the right to add, amend or withdraw material contained herein. | |
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Standardization of

Mobile Broadband

Network Performance Measurements:

Proposed PAR

Roger B. Marks

Consensii LLC; Mobile Pulse, Inc.

# Abstract

This document proposes a draft PAR for a project within the IEEE 802.16 Working Group on Mobile Broadband Network Performance Measurements.

# Purpose

This proposal requests that the Metrology Study Group review the proposal and forward it as a draft PAR.

# Introduction

The IEEE 802.16 Working Group’s [Metrology Study Group](http://ieee802.org/16/sg/met) was initiated on 16 March 2012, initially through 20 July 2012. The scope of the group includes a broad range of issues related to measurement.

Contribution IEEE 802.16-12-0342-00-Smet proposes that the Metrology Study Group consider a new project to standardize Mobile Broadband Network Performance Measurements.

This contribution proposes a draft PAR on the topic, as presented in the Annex.

# Companion Contributions

This contribution is one of a set of contributions:

•IEEE 802.16-12-0342-00-Smet: Standardization of Mobile Broadband Network Performance Measurements

•IEEE 802.16-12-0343-00-Smet: Standardization of Mobile Broadband Network Performance Measurements: Proposed PAR

•IEEE 802.16-12-0344-00-Smet: Standardization of Mobile Broadband Network Performance Measurements: Proposed Five Criteria Statement

•IEEE 802.16-12-0345-00-Smet: Standardization of Mobile Broadband Network Performance Measurements: Proposed Call for Contributions

**Annex: Proposed DRAFT PAR**

**P802.16.3**

**Submitter Email:** [r.b.marks@ieee.org](mailto:r.b.marks%40ieee.org)  
**Type of Project:** New IEEE Standard  
**PAR Request Date:** 20-Jul-2012  
**PAR Approval Date:**   
**PAR Expiration Date:**   
**Status:** Unapproved PAR, PAR for a New IEEE Standard

**1.1 Project Number:** P802.16.3  
**1.2 Type of Document:** Standard  
**1.3 Life Cycle:** Full Use

**2.1 Title:** Mobile Broadband Network Performance Measurements

**3.1** **Working Group:** Broadband Wireless Access Working Group (C/LM/WG802.16)  
**Contact Information for Working Group Chair**  
   **Name:** Roger Marks  
   **Email Address:** [r.b.marks@ieee.org](mailto:r.b.marks%40ieee.org)  
   **Phone:** 1 619 393 1913  
**Contact Information for Working Group Vice-Chair**  
None

**3.2** **Sponsoring Society and Committee:** IEEE Computer Society/LAN/MAN Standards Committee (C/LM)  
**Contact Information for Sponsor Chair**  
   **Name:** Paul Nikolich  
   **Email Address:** [p.nikolich@ieee.org](mailto:p.nikolich%40ieee.org)  
   **Phone:** 857.205.0050  
**Contact Information for Standards Representative**  
None

**4.1 Type of Ballot:** Individual  
**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 07/2013  
**4.3 Projected Completion Date for Submittal to RevCom:** 10/2013

**5.1 Approximate number of people expected to be actively involved in the development of this project:** 30  
**5.2 Scope:** This standard specifies procedures for characterizing the performance of deployed mobile broadband networks from a user perspective. It specifies metrics and test procedures as well as communication protocols and data formats allowing a network-based server to coordinate and manage test operation and data collection.  
  
**5.3 Is the completion of this standard dependent upon the completion of another standard:** No  
**5.4 Purpose:** By standardizing the metrics and methods, the standard provides a framework for characterizing and assessing the performance of various mobile broadband networks. By standardizing the protocols and data formats, it allows for a measurement server to collect information from a disparate set of devices on the network.  
  
**5.5 Need for the Project:** Users of broadband mobile networks, including enterprises such as corporations and governments, lack reliable, comparable data on which to base their assessment of network performance. Such data can be valuable to determine overall network quality and to pinpoint specific weaknesses, including limitations in deployment. Improved knowledge of system performance will lead the market toward more effective networks and therefore encourage the redeployment of scarce spectrum using the most efficient technologies and implementations. Also, policy makers seeking information on performance of available networks will directly benefit by the opportunity to apply the standardized metrics and methods. Researchers will also gain by the ability to compare measured performance data to simulated results and thereby assess the theoretical models. One application of such information is the assessment of technology elements proposed during standards development.  
  
**5.6 Stakeholders for the Standard:** Individual and enterprise users of mobile broadband networks; government policy agencies studying broadband deployments; companies and universities engaged in network performance assessment; operators of mobile broadband networks.

**Intellectual Property**  
**6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:** No  
**6.1.b. 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 Joint Development**  
   **Is it the intent to develop this document jointly with another organization?:** No

**8.1 Additional Explanatory Notes (Item Number and Explanation):**

* (7.1) Standardization activities relevant to this work, though not with a similar scope and primarily oriented to fixed networks, include:

•IETF Working Group on IP Performance Metrics (ippm)

•IETF pre-standardization activity “lmap” on Large Scale Measurement of Access Network Performance

• ITU-T Study Group 12