

## P802.16.1b

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**Type of Project:** New IEEE Standard  
**PAR Request Date:** 17-Oct-2011  
**PAR Approval Date:** 07-Dec-2011  
**PAR Expiration Date:** 31-Dec-2015  
**Status:** PAR for a New IEEE Standard

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**1.1 Project Number:** P802.16.1b  
**1.2 Type of Document:** Standard  
**1.3 Life Cycle:** Full Use

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**2.1 Title:** IEEE Standard for WirelessMAN-Advanced Air Interface for Broadband Wireless Access Systems - Amendment: Enhancements to Support Machine-to-Machine Applications

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**3.1 Working Group:** Broadband Wireless Access Working Group (C/LM/WG802.16)

**Contact Information for Working Group Chair**

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None

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**3.2 Sponsoring Society and Committee:** IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

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None

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**3.3 Joint Sponsor:** IEEE Microwave Theory and Techniques Society/Standards Coordinating Committee (MTT/SCC)

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 05/2012

**4.3 Projected Completion Date for Submittal to RevCom:** 02/2013

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 100

**5.2 Scope:** This amendment specifies medium access control (MAC) enhancements and minimal WirelessMAN-Advanced physical layer (PHY) modifications in licensed bands to support lower power consumption at the device, support by the base station of significantly larger numbers of devices, efficient support for small burst transmissions, and improved device authentication.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** Yes

**If yes please explain:** This will amend IEEE Std 802.16.1.

**5.4 Purpose:** This amendment describes enhancements to enable a range of Machine-to-Machine applications in which the device communications require wide area wireless coverage in licensed bands, and are automated rather than human-initiated or human-controlled for purposes such as observation and control.

**5.5 Need for the Project:** Many Machine-to-Machine applications require network access that involves requirements significantly different from those used to support typical human-initiated or human-controlled network access. Such applications include secured access and surveillance, tracking, tracing and recovery, public safety sensors, vehicular telematics, healthcare monitoring of bio-sensors, remote maintenance and control, smart metering, automated services on

consumer devices, retail digital signage management. The current IEEE 802.16.1 standard and the amendments under development do not address the unique requirements of these applications, such as very low power consumption, large number of devices, short burst transmissions, device tampering detection and reporting etc. While these requirements are not all-encompassing to the Machine-to-Machine applications space, they will enable many applications that need the enhancements proposed in this amendment.

**5.6 Stakeholders for the Standard:** Stakeholders for the Standard: Network operators, utility companies, government agencies, network equipment manufacturers, mobile and wireless device manufacturers, semiconductor manufacturers.

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### **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

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**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

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**8.1 Additional Explanatory Notes (Item Number and Explanation):** (Item 5.2) Backward Compatibility: This amendment provides continuing support for WirelessMAN-Advanced Air Interface equipment

Note: This PAR is being submitted as a PAR for a new standard. The actual intent is to amend IEEE 802.16.1. However, the submittal system will not allow it to be filed in this way because IEEE 802.16.1 has not been approved at the time of this submittal.