

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Update on Wireless Access Activities in ITU-R JRG 8A-9B	
Date Submitted	2001-05-04	
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Re:	Liaison Report (see previous report in document 802.16l-00/40)	
Abstract	This contribution provides an update on ITU-R activities on Wireless Access, based on the results of the meeting of ITU-R Joint Rapporteur Group 8A-9B, held on 12-16 March 2001, Geneva, Switzerland.	
Purpose	For information only.	
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Update on Wireless Access Activities in ITU-R Joint Rapporteur Group 8A-9B (JRG 8A-9B)

José M. Costa
Nortel Networks

Introduction

ITU-R Joint Rapporteur Group 8A-9B (JRG 8A-9B) on Wireless Access met in Geneva on 12-16 March 2001. The report of the meeting is contained in Document [8A-9B/55](#).

Subsequent to the March meeting of JRG 8A-9B, the ITU-R secretariat received the liaison contribution from IEEE 802.16 (Document [IEEE 802.16I-01/10](#)) on Wireless High-Speed Unlicensed Metropolitan Area Networks and it was distributed on 19 April 2001 (with editorial changes) to ITU-R members (refer to ITU-R Documents [8A-9B/58](#), [7C/68](#) and [4-7-8-9/12](#)). *This document is attached below.*

Future Work

The work of JRG 8A-9B will continue by correspondence through the e-mail reflector address: jrg8a-9bwas@itu.int

Those wishing to subscribe to the e-mail reflector should send an e-mail to the following address: "mailev@itu.int" with the following single line in the text: "subscribe jrg8a-9bwas".

The URL for the JRG 8A-9B web page is: <http://www.itu.int/was>

The next JRG 8A-9B meeting is scheduled to be held on 22-26 October 2001 in conjunction with the Working Party 8A meeting period (Geneva, 22-30 October 2001).



INTERNATIONAL TELECOMMUNICATION UNION

**RADIOCOMMUNICATION
STUDY GROUPS**

**Document 7C/68-E
Document 4-7-8-9/12-E
Document 8A-9B/58-E
19 April 2001
English only**

Received: 19 April 2001

Subject: Resolution 736 (WRC-2000)

Source: IEEE 802.16 Working Group on Broadband Wireless Access¹

**Chairmen, Working Party 7C, Joint Task Group 4-7-8-9
and Joint Rapporteur Group 8A-9B**

**WIRELESS HIGH-SPEED UNLICENSED METROPOLITAN
AREA NETWORK (WIRELESSHUMAN[™])
(IEEE 802.16 STANDARDS)**

1 Introduction

This text from the IEEE 802.16 Working Group on Broadband Wireless Access provides information relevant to the current ITU-R preparatory studies for the WRC-03, Agenda item 1.5, Resolution 736 (WRC-2000).

The IEEE 802.16 Working Group is developing a standard for fixed broadband wireless access systems operating in license-exempt 5 to 6 GHz bands. We call this the WirelessHUMAN[™] (Wireless High-Speed Unlicensed Metropolitan Area Networks) standard. The project number is IEEE P802.16b.

Systems based on the WirelessHUMAN[™] standard may share the bands that the 1997 World Radiocommunications Conference (WRC 97) allocated on a worldwide primary basis for Earth Exploration Satellite Services (EESS) and Space Research Services (SRS), including Synthetic Aperture Radar (i.e., SAR 1-4) active space-borne sensors in the 5 to 6 GHz band. The IEEE 802.16 Working Group is aware of coexistence issues and would welcome mutual efforts to address them.

The attached IEEE P802.16b Project Authorization Request describes the WirelessHUMAN[™] project. Further information is available <<http://ieee802.org/16/tg4>>.

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2 Scope of proposed project

This standard specifies the medium access control (MAC) layer and physical (PHY) layers of the air interface of interoperable fixed point-to-multipoint broadband wireless access systems. The specification enables transport of data, video, and voice services. Physical layers are specified for both licensed and license-exempt bands.

This Amendment expands the scope of the original project by extending it to license-exempt bands (thereby defining the Wireless High-Speed Unlicensed Metropolitan Area Network [WirelessHUMAN“] Standard). It specifies the physical layer and medium access control layer of the air interface of interoperable fixed broadband wireless metropolitan area network systems, including point-to-multipoint. The standard enables access to data, video, and voice services with quality of service in unlicensed (i.e., license-exempt) bands designated for public network access. It will focus on the 5-6 GHz range and may be applied to unlicensed bands between 2 and 11 GHz. It will address strategies for coexistence with other unlicensed applications. The project will utilize or modify applicable elements from the following standards:

- MAC: IEEE 802.16
- PHY: IEEE 802.11a; ETSI BRAN HIPERLAN/2

3 Purpose of proposed project

To enable rapid worldwide deployment of innovative, cost-effective, and interoperable multivendor broadband wireless access products. To facilitate competition in broadband access by providing alternatives to wireline broadband access. To facilitate coexistence studies, encourage consistent worldwide allocation, and accelerate the commercialization of broadband wireless access spectrum.

This Amendment enhances the original project by extending it to license-exempt bands. It will identify techniques to tolerate interference in the unlicensed bands and facilitate strategies for coexistence with other unlicensed band systems such as IEEE 802.11 and 802.15. It will encourage consistent worldwide spectrum allocation and accelerate the commercialization of unlicensed broadband wireless access spectrum. Utilization of unlicensed frequencies will address a market that includes residences, small office-home office (SOHO), telecommuters, and small and medium enterprises (SME).

4 Intellectual property {Answer each of the questions below}

Has the sponsor reviewed the IEEE patent policy with the group? **Yes**

Are you aware of the possibility of any copyrights relevant to this project? **Yes**

Are you aware of the possibility of any trademarks relevant to this project? **Yes**

Are you aware of possible registration of objects or numbers due to this project? **Yes**

5 Are you aware of any other standards or projects with a similar scope?

Yes

Explanation:

IEEE 802.11, ETSI HIPERLAN/2, and IEEE 802.15 standards and projects address primarily short range WLAN and WPAN applications, respectively. PACS-UA and PACS-UB address unlicensed operation in the unlicensed personal communication services (UPCS) bands at 1 910-1 930 MHz

and 2 390-2 400 MHz. This Amendment is specifically directed towards wireless point-to-multipoint MAN/WAN systems that provide access to core public networks using the unlicensed band spectrum. These systems typically serve large numbers of dispersed subscribers.

6 International submissions

Will this standard (in part or in whole) be submitted to an international organization for consideration/adoption?

Yes

If Yes, please answer the following questions:

Which International Organization/Committee ITU-R
International Contact Information:
Name: Dr. Jos M. Costa
Address: P.O. Box 3511, Station C, Ottawa, ON K1Y 4H7 Canada
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Fax: +1 613 763 1225
E-mail: costa@nortelnetworks.com

7 Is this project intended to focus on health, safety or environmental issues?

No

8 Mandatory coordination

SCC 10 (IEEE Dictionary)	by DR {Circulation of DR afts}
IEEE Staff Editorial Review by	by DR °
SCC 14 (Quantities, Units and Letter symbols)	by DR °

Additional communication and input from other organizations or other IEEE Standards Sponsors should be encouraged through participation in the working group or the balloting pool.

9 Additional explanatory notes: {Item number and explanation}

8) The intended timetable is:

Nov. 2000: Issue Call for Proposals for PHY and MAC:
— PHY: Modifications of 802.11a and/or HIPERLAN/2
— MAC: Modifications of 802.16

Jan. 2001: Review proposals

Feb. 2001: Select Candidate Proposals at Interim Meeting

Mar. 2001: Decision on specific modifications

May 2001: First Tentative Draft Standard submitted for review

July 2001: Comment Resolutions

Sep. 2001: Second Tentative Draft Standard submitted for Letter Ballot

Nov. 2001: Initiate Sponsor Ballot

Mar. 2002: Submit to RevCom

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8A-9B/58-E

5a) This revision renumbers the PAR from 802.16.1b to 802.16b to reflect renumbering of the base project from 802.16.1 to 802.16. The title is also simplified, and the PAR is also brought into the current format.

ANNEX

**IEEE-SA Standards Board Project Authorization Request (PAR)
Form (2001-Rev.1)**

1 Sponsor Date of Request

2001 Feb. 09°

2 Assigned Project Number

P802.16b

3 PAR Approval Date (to be completed by staff)

2001-03-17

Copyright release must be submitted with appropriate signatures by Fax (1-732-562-1571)}

4 Project Title, Recorder and Working Group/Sponsor for this project

Document type and title: {Place an X in only one option below}

- **Standard for**{document stressing the verb shall }
- **Recommended Practice for**{document stressing the verb should }
- **Guide for** {document in which good practices are suggested, stressing the verb may }

Title: 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

Name of Working Group (WG): **IEEE 802.16 Working Group on Broadband Wireless Access**

Name of Official Reporter (usually the WG Chair) who must be an SA member as well as an IEEE and/or Affiliate Member:

Roger B. Marks

IEEE Standards Staff has verified that the Official Reporter (or Working Group Chair) is an IEEE and an IEEE-SA member:

(Staff to check box)

Contact Information:

Tel.: +1 303 497 3037

Fax: +1 303 497 7828

E-mail: r.b.marks@ieee.org

Name of Working Group Chair (if different than Reporter):

IEEE Standards Staff has verified that the Working Group Chair is an IEEE and an IEEE-SA member:

(Staff to check box)

Contact Information:

Tel.: [...]

Fax: [...]

E-mail: [...]

Name of Sponsoring Society and Committee:

Computer Society, LAN/MAN Standards Committee; Microwave Theory and Techniques Society

Name of Committee Sponsor Chair:

Jim Carlo, Chair, LAN/MAN Standards Committee

IEEE Standards Staff has verified that the Sponsor Chair is an IEEE and an IEEE-SA member:

(Staff to check box)

Contact information:

Tel.: +1 214 340 8837

Fax: +1 214 853 5274

E-mail: jcarlo@ti.com

5 Type of project

a) Is this an update to an existing PAR? [Yes]

If YES, indicate PAR Number/Approval Date [P802.16.1b-2000]

If YES, is this project in ballot now? [No]

[Indicate changes/rationale for revised PAR in Item #16. This should be no more than 5°lines.]

b) Choose one from the following:

[...] New standard

[...] Revision of existing standard {number and year} [...]

[x] Amendment to an existing standard {number and year} [P802.16-2001]

[...] Corrigendum to an existing standard {number and year} [...]

6 Life cycle

Full Use (5-year life cycle)

Trial Use (2-year life cycle)

7 Balloting information

Choose one from the following:

Individual Sponsor Balloting

Entity Sponsor Balloting

Mixed Balloting (combination of Individual and Entity Sponsor Balloting)

Expected Date of Submission for Initial Sponsor Ballot: 2001 Nov 30

8 Fill in projected completion date for submittal to RevCom: 2002 Mar. 31.
