



IEEE-SA Standards Board Project Authorization Request (PAR) Form (2000-Rev 1)

1. Sponsor Date
of Request
2000 Oct 12

2. Assigned Project
Number
802.16.1b

3. PAR Approval
Date
7 December 2000

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

[X] PAR Signature Page on File {IEEE Staff to check box}

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}

Title: Telecommunications and Information Exchange Between Systems - LAN/MAN Specific Requirements - Air Interface for Fixed Broadband Wireless Access Systems including 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/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: [X] (Staff to check box)

Contact Information:

Telephone +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:

Telephone [] 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

IEEE-Standards Staff has verified that the Sponsor is an IEEE and an IEEE-SA member: ☒ (Staff to check box)

Contact Information:

Telephone +1 214 693-1776 FAX: +1 214 853 5274

E-mail: jcarlo@ti.com

5. Type of Project

a. Is this an update to an existing PAR? No

If YES, indicate PAR Number/Approval Date
If YES, is this project in ballot now?

b. Choose one from the following:

- ☐ New Standard
 - ☐ Revision of existing Standard {number and year} ☐
 - ☒ Amendment (Supplement) to an existing standard {number and year} [802.16.1]
 - ☐ Corrigenda 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 19]

8. Fill in Projected Completion Date for Submittal to RevCom [2002 Mar 31]

9. Scope of Proposed Project:

This standard specifies the medium access control layer and physical 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:

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

10. 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 802.11 and 802.15. ~~It will identify techniques to tolerate interference in the unlicensed bands, facilitate strategies for coexistence with other unlicensed band systems such as 802.11a, and maximize the carrying capacity in the unlicensed bands.~~ 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).

11. Intellectual Property {Answer each of the questions below}

Are you aware of any patents relevant to this project?

[No] {Yes, with detailed explanation below / No}

[] {Explanation}

Are you aware of any copyrights relevant to this project?

[No] {Yes, with detailed explanation below / No}

[] {Explanation}

Are you aware of any trademarks relevant to this project?

[No] {Yes, with detailed explanation below / No}

[] {Explanation}

Are you aware of any **registration** of objects or numbers relevant to this project?

[No] {Yes, with detailed explanation below / No}

[] {Explanation}

12. 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 1910-1930MHz and 2390-2400MHz. This Amendment is specifically directed towards ~~longer-range~~ 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.

13. **International** Harmonization

Is this standard planned for adoption by another international organization?

Yes

If Yes: Which International Organization **ITU-R**

If Yes: Include coordination in question 15 below

If No: Explanation []

14. Is this project intended to focus on **health, safety or environmental issues**?

No

If Yes: Explanation []

15. Proposed Coordination/Recommended Method of Coordination

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**

Coordination requested by Sponsor:

ITU-R,

including Joint

Working Group

8A/9B

by **LI**

{circulation of **DR**afts/**LI**aison memb/**CO**mmun memb}

ETSI BRAN
HIPERLAN/2 by LI {circulation of **DR**afts/**LI**aison memb/**CO**mmon memb}

..... by [] {circulation of **DR**afts/**LI**aison memb/**CO**mmon memb}

..... by [] {circulation of **DR**afts/**LI**aison memb/**CO**mmon memb}

Coordination Requested by Others :

[] {added by staff}

16. Additional Explanation Notes: {Item Number and Explanation}

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

Feb 2002

Submit to RevCom

The PAR Copyright Release and Signature Page must be submitted by FAX to 732-562-1571 before this PAR will be sent on for NesCom and Standards Board approval.