Project	**IEEE 802 Executive Committee Study Group on Mobile Broadband Wireless Access** <**http://grouper.ieee.org/groups/802/mbwa**>
Title	**Mobile Broadband Wireless Access PAR as Approved by MBWA ECSG**
Date Submitted	**2002-10-03 (Original Created 2002-09-11)**
Source(s)	MBWA ECSG Contact: Mark Klerer	Voice: 908-997-2069 Fax: 908-997-2050 Email: m.klerer@flarion.com
Re:	
Abstract	The attached PAR contains the text of the PAR as approved on 2002-09-10 by the MBWA ECSG and as submitted to the SEC on 2002-10-03. The text has been editorialy revised in consultation NesCom staff to assure that the formatting is correct.
Purpose	To be submitted to the LMSC Executive Committee for approval. This PAR will also be forwarded to NesCom by 2002-11-01 as Conditinal Submission for scheduling for the December IEEE-SA Board meeting.

IEEE-SA Standards Board
Project Authorization Request (PAR) Form (2002)

For a review of the Standards Development Process (designed to assist the Working Group, Working Group Chair, Sponsor Chair, and Society Liaison), please click here. ☐

1. Assigned Project Number (Please contact the NesCom Administrator if this is a new PAR): P802.20 (Tentatively Proposed)

2. Sponsor Date of Request: 2002-11-01

3. Type of Document (Please check one)
☒ 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"}

4. Title of Document: Draft Local and Metropolitan Area Networks – Standard Air Interface for Mobile Broadband Wireless Access Systems Supporting Vehicular Mobility – Physical and Media Access Control Layer Specification

5. Life Cycle
☒ Full Use (5-year life cycle)
☐ Trial Use (2-year life cycle)

6. Type of Project:
☒ New standard
☐ Revision of existing standard (indicate Number and year existing standard was published in box to the right)   (####-YYYY)
☐ Amendment to an existing standard (indicate Number and year existing standard was published in box to the right)   (####-YYYY)
☐ Corrigendum to an existing standard (indicate Number and year existing standard was published in box to the right)   (####-YYYY)
☐ Revised PAR (indicate PAR Number and Approval Date here: P   -
(YYYY-MM-DD)
    Is this project in ballot now? No
    State reason for revising the PAR in Item #18.

7. Contact information of Working Group Chair who must be an SA member as well as an IEEE and/or Affiliate Member

Name of Working Group(WG) : IEEE 802.20 Working Group on Mobile Broadband Wireless Access

Name of Working Group Chair:
First Name: Last Name:
Telephone:
FAX:
EMAIL:

8. Contact Information of Official Reporter, Project Editor or Document Custodian if different from the Working Group Chair. The Official Report must be an SA member as well as an IEEE and/or Affiliate Member

Name of Official Reporter (if different than Working Group Chair):
First Name: Last Name:
Telephone:
FAX:
EMAIL:

9. Contact information of Sponsoring Society or Standards Coordinating Committee

Sponsoring Society and Committee: Computer Society, LAN/MAN Standards Committee
Sponsor Committee Chair:
First Name: Paul   Last Name: Nikolich
Telephone: 978-749-9999 x246
FAX: 978-749-8888
EMAIL: p.nikolich@ieee.org

10. Sponsor Balloting Information (Please choose one of the following)
Choose one from the following:
☒ Individual Balloting
☐ Entity Balloting
☐ Mixed Balloting (combination of Individual and Entity Balloting)

Expected Date of Submission for Initial Sponsor Ballot: 2004-05-26

Please review the PAR form three months prior to submitting your draft for ballot to ensure that the title, scope and purpose on the PAR form match the title, scope and purpose on the draft. If they do not match, you will need to submit a revised PAR.

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.

11. Projected Completion Date for Submittal to RevCom: 2004-10-01

    If this is a REVISED PAR and the completion date is being extended past the
    original four-year life of the PAR, please answer the following questions.
    If this is not a revised PAR, please go to question #12

Statement of why the extension is required:

When did you begin writing the first draft?:

How many people are actively working on the project?:

How many times a year does the working group meet in person?:

How frequently is a draft version circulated to the working group via electronic means?:

How much of the Draft is stable (Format: NN%)?:   %

How many significant working revisions has the Draft been through?:

Briefly describe what the development group has already accomplished, and what remains to be done:

12. Scope of Proposed Project
[Projected output including technical boundaries. REVISED STANDARDS - Projected output including the scope of the original standard, amendments and additions. Please be brief (less than 5 lines).]:

This standard specifies the physical and medium access control layers of the air interface for interoperable mobile broadband wireless access systems with peak data rates per user in excess of 1 Mbps. This standard targets spectral efficiencies, sustained user data rates and numbers of active users, which are all significantly higher than those achieved by existing mobile communications systems. This standard supports a cellular system with cell sizes appropriate to ubiquitous metropolitan-area networks and supports various vehicular mobility classes (as defined in ITU-R M.1034-1) up to 250 Km/h. It applies to systems operating in licensed bands below 3.5 GHz allocated to mobile services. The standard shall allow for use of FDD (Frequency Division Duplexing) and/or TDD (Time Division Duplexing). The air-interface is optimized for carrying IP-based wireless data traffic. (See also Item 18)

13. Purpose of Proposed Project:
[Intended users and user benefits. REVISION STANDARDS - Purpose of the original standard and reason for the standard's revision. Please be brief (less than 5 lines).]:
To enable worldwide deployment of cost effective, spectrum efficient, ubiquitous, always-on and interoperable multi-vendor mobile broadband wireless access networks. To provide an efficient packet based air interface optimized for IP. The standard will address end user markets that include access to Internet, intranet, and enterprise applications by mobile users as well as access to infotainment services.

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

Sponsor has reviewed the IEEE patent policy with the working group?
Yes

Sponsor is aware of copyrights relevant to this project?
Yes

Sponsor is aware of trademarks relevant to this project?
Yes

Sponsor is aware of possible registration of objects or numbers due to this project?
Yes

15. Are there other standards or projects with a similar scope?
Yes, with explanation below
Explanation: The 3G partnership projects are developing mobile data air-interface specifications. The approach taken in these specifications is an extension/derivation from existing voice and circuit-switched architectures that impose performance and cost penalties on data transport. This project adopts an approach of defining an air-interface optimized for IP data that will result in a cost effective mobile broadband wireless data solution.

Related but non-duplicative work is ongoing in ITU-R Working Party 8F, in the ITU-T SSG on "IMT-2000 and Systems Beyond", in the 3GPP RAN Technical Specification Group and in the 3GPP2 TSG-C.

In addition T1P1.4 has a project on WWINA which addresses standards related to the radio and network aspects of systems optimized for internet data applications in low mobility (handoff) environments.

    If Yes, please answer the following:
    Sponsor Organization:
    Project Number:
    Project Date:
    Project Title:

16. International Sponsor Organization
Is there potential for this standard (in part or in whole) to be submitted to an international organization for review/adoption?
Yes{Yes/No/?? if you don't know at this time}

If Yes, please answer the following questions:
International Committee Name and Number: Potential inclusion by international and nationally recognized Standards Development Organizations (e.g., the ITU, TIA, ETSI,ARIB, TTC, TTA, CWTS, and T1 Standards Committee)

International Organization Contact Information:

Organization Name	Contact Name	Contact Phone Number	Contact Fax Number	Contact E-mail Address
ARIB	Eiko IRYO	+81 3 5510 8593	+81 3 3592 1103	iryo@arib.or.jp
ARIB	Fumihiko HADA	+81-3-5510-8594	+81-3-3592-1103	f-hada@arib.or.jp
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17. Will this project focus on health, safety or environmental issues?
No{Yes/No/?? if you don't know at this time}
If Yes: Explanation? [ ]

18.   Additional Explanatory Notes: {Item Number and Explanation}

Additional Information for Item 12.
As stated in item 12, the standard to be developed "targets spectral efficiencies, sustained user data rates and numbers of active users, which are all significantly higher than those achieved by existing mobile communications systems". The table below provides additional information on air interface charateristics and performance targets that are expected to be achieved.

Characteristic	Target Value
Mobility	up to 250 km/hr
Sustained spectral efficiency	> 1 b/s/Hz/cell
Peak user data rate (Downlink (DL))	> 1 Mbps*
Peak user data rate (Uplink (UL))	> 300 Kbps*
Peak aggregate data rate per cell (DL)	> 4 Mbps*
Peak aggregate data rate per cell (UL)	> 800 Kbps*
Airlink MAC frame RTT	<10 ms
Bandwidth	e.g., 1.25 MHz, 5 MHz
Spectrum (Maximum operating frequency)	<3.5 GHz

* Targets for 1.25 MHz channel bandwidth. This represents 2 x 1.25 (MHz paired) channels for FDD and a 2.5 MHz (unpaired) channel for TDD. For other bandwidths, the data rates may change.

The PAR Copyright Release and Signature Page must be submitted either by FAX to 732-562-1571 or as an e-mail attachment in .pdf format to the NesCom
Administrator before this PAR will be sent on for NesCom and Standards Board approval.