Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>
Title	Mobile MIB PAR language edits
Date Submitted	2005-09-16
Source(s)	Netman TG Phillip Barber Netman TG Chair Huawei
Re:	Mobile MIB PAR language edits
Abstract	Mobile MIB PAR language edits
Purpose	Mobile MIB PAR language edits
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.
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Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:chair@wirelessman.org> as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.16 Working Group. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/notices>.

13. SCOPE: This document provides updates to IEEE Std 802.16's MIB for the MAC, PHY and associated management procedures in order to accommodate recent extensions to the standard. The project will use protocol-neutral methodologies for network management to develop resource models and related solution sets for the management of devices in a multi-vendor 802.16 network.

14. PURPOSE: The purpose of this project is to provide a definition of managed objects to enable the standards-based management of 802.16 devices.

15. REASON: The reason for this project is to facilitate cross-vendor interoperability at the network level for the management of 802.16 devices and networks. This will provide network operators with the ability to manage multivendor networks including 802.16 devices. This project extends upon the work of IEEE 802.16f in adding MIB support for new features and functions added in IEEE 802.16e and other projects.

Amendment to IEEE Standard for Local and Metropolitan Area Networks - Part 16 - Management Information Base Extensions

IEEE-SA STANDARDS BOARD

PROJECT AUTHORIZATION REQUEST (PAR) FORM - 2005

The submittal deadlines are available at http://standards.ieee.org/board/nes/index.html.
(See NesCom Convention - Item #14)

Prior to submitting your PAR, please review the NesCom Conventions.

1. ASSIGNED PROJECT NUMBER P 802.16i (Please leave blank if not available.)
(See NesCom Convention - Item #19)

2. SPONSOR DATE OF REQUEST Day: 17 Month: Sep Year: 2005

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"}

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4. TITLE OF DOCUMENT
(See NesCom Conventions - Item #5, Item #7)

Draft Amendment to IEEE Standard for Local and Metropolitan Area Networks - Part 16 - Management Information Base Extensions

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5. LIFE CYCLE
- (●) **Full-Use**
- ( ) **Trial-Use**

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6. TYPE OF PROJECT
- ( ) New document
- ( ) Revision of an existing document (indicate number and year existing document was approved in box to the right):
- (●) Amendment to an existing document (indicate number and year existing document was approved in box to the right): 802.16-2004 (####-YYYY)
- ( ) Corrigendum to an existing document (indicate number and year existing document was approved in box to the right):
- [ ] Modified PAR (indicate PAR Number and Approval Date here: P Day: Month: Year:)

Is this project in ballot now? ( ) Yes ( ) No
State reason for modifying the PAR in Item #21.

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7. WORKING GROUP INFORMATION:
Name of Working Group (WG) : IEEE 802.16 Working Group on Broadband Wireless Access
Approximate Number of Expected Working Group Members: 300

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8. CONTACT INFORMATION FOR WORKING GROUP CHAIR (must be an IEEE-SA member as well as an IEEE and/or Affiliate Member)
(See NesCom Convention Item #3, Item #4)

Name of Working Group Chair: First Name: Last Name:
Telephone: FAX: E-mail:

9. CONTACT INFORMATION FOR CO-CHAIR/OFFICIAL REPORTER, Project Editor or Document Custodian if different from the Working Group Chair (must be an IEEE-SA member as well as an IEEE and/or Affiliate Member)
(See NesCom Convention Item #3)

Name of Co-Chair/Official Reporter (if different than Working Group Chair): First Name: Last Name:
Telephone: FAX: E-mail:

10. CONTACT INFORMATION FOR SPONSORING SOCIETY OR STANDARDS COORDINATING COMMITTEE
(See NesCom Convention Item #1, Item #3)

Sponsoring Society and Committee: (Please choose the correct acronym for your Sponsor Society/Technical Committee or SCC. For an acronym list, please click here.)
Sponsor Committee Chair: First Name: Last Name:
Telephone: FAX: E-mail:

Standards Coordinator (Power Engineering Society Only):
Standards Coordinator: First Name: Last Name:
Telephone: FAX: E-mail:

IF THIS PROJECT IS BEING SPONSORED BY TWO SPONSORS, PLEASE COMPLETE THE INFORMATION BELOW

Sponsoring Society and Committee: (Please choose the correct acronym for your Sponsor Society/Technical Committee or SCC. For an acronym list, please click here.)
Sponsor Committee Chair: First Name: Last Name:
Telephone: FAX: E-mail:

Standards Coordinator (Power Engineering Society Only):
Standards Coordinator: First Name: Last Name:
Telephone: FAX: E-mail:

11. SPONSOR BALLOTING INFORMATION (Please choose one of the following):
- (•) Individual Balloting
- ( ) Entity Balloting
- ( ) Mixed Balloting (combination of Individual and Entity Balloting)

Expected Date of Submission for Initial Sponsor Ballot: Month: Aug Year: 2006

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 of the draft. If they do not match, you will probably need to submit a modified PAR.

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

(See NesCom Conventions - Item #20)

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12. PROJECTED COMPLETION DATE FOR SUBMITTAL TO REVCOM: Month: Dec Year: 2006

If this is a MODIFIED 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 modified PAR, please go to Question #13.

(See NesCom Conventions - Item #18)

a. Statement of why the extension is required:	
b. How many working group members are working on the project?	
c. How many times a year does the working group meet:	
1. In person?	
2. Via teleconference?	
d. How many times a year is a draft version circulated to the working group via electronic means?	
e. What percentage of the Draft is stable?	%
f. How many significant working revisions has the Draft been through?	
g. Balloting History - If the draft has gone to ballot, please provide a history of all IEEE Sponsor ballots under this project in the box to the right. Please include the: • Ballot Close Date (or scheduled Close Date) • Ballot Draft Number • Ballot Results (% affirmative, % negative, % abstain)	
h. Is this the first request for an extension?	○ Yes ○ No
If no, when was the previous extension approved?	(DD-MMM-YYYY)

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13. SCOPE OF PROPOSED PROJECT

(See NesCom Conventions - Item #6, Item #16, Item #17)

Briefly detail the projected output including technical boundaries.
FOR MODIFIED PROJECTS/REVISION DOCUMENTS - Only detail the projected output including the scope of the project or last published document to be modified and any amendments and/or additions.

This document provides updates to IEEE Std 802.16's MIB for the MAC, PHY and associated management procedures in order to accommodate recent extensions to the standard. The project will use protocol-neutral methodologies for network management to develop resource models and related solution sets for the management of devices in a multi-vendor 802.16 network.

Is the completion of this document contingent upon the completion of another document?
(•) Yes (with detailed explanation below) ( ) No

IEEE 802.16f, IEEE 802.16Cor1 and IEEE 802.16e, all of which have been submitted for final approval by Revcom

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14. PURPOSE OF PROPOSED PROJECT

Briefly, clearly and concisely explain "why" the document is being created.
(See NesCom Conventions - Item #16)

FOR MODIFIED PROJECTS/REVISION DOCUMENTS - Only include the purpose of the project or last published document and any amendments and/or additions.

The purpose of this project is to provide a definition of managed objects to enable the standards-based management of 802.16 devices.

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15. REASON FOR THE PROPOSED PROJECT:

Give the specific reason for the standardization project. Focus on explaining the problem being addressed, the benefit to be provided and the stakeholders for the project.

The reason for this project is to facilitate cross-vendor interoperability at the network level for the management of 802.16 devices and networks. This will provide network operators with the ability to manage multivendor networks including 802.16 devices. This project extends upon the work of IEEE 802.16f in adding MIB support for new features and functions added in IEEE 802.16e and other projects.

16. INTELLECTUAL PROPERTY (Please answer each of the questions below)

a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board?
(•) Yes ( ) No

If yes, state date: Day: 12 Month: Sep Year: 2005

If no, please explain:

b. Is the Sponsor aware of copyright permissions needed for this project? ( ) Yes (•) No

If yes, please explain:

c. Is the Sponsor aware of trademarks that apply to this project? ( ) Yes (•) No

If yes, please explain:

d. Is the Sponsor aware of possible registration activity related to this project? ○ Yes ◉ No

If yes, please explain:

17. ARE THERE OTHER DOCUMENTS OR PROJECTS WITH A SIMILAR SCOPE?

○ Yes (with detailed explanation below) ◉ No

If Yes, please answer the following:

Sponsor Organization:

Project/Document Number:

Project/Document Date: (DD-MMM-YYYY)

Project/Document Title:

18. FUTURE ADOPTIONS

Is there potential for this document (in part or in whole) to be adopted by another national, regional or international organization? Yes

If Yes, the following questions must be answered:

Technical Committee Name and Number: ITU TC SC WG

Other Organization Contact Information:

Contact Name - First Name: Jose M Contact Name - Last Name: Costa

Contact Telephone Number: 613-763-7574

Contact FAX Number: 613-765-1225

Contact Email address: costa@nortelnetworks.c

19. WILL THIS PROJECT RESULT IN ANY HEALTH, SAFETY, OR ENVIRONMENTAL GUIDANCE THAT AFFECTS OR APPLIES TO HUMAN HEALTH OR SAFETY? ○ Yes ◉ No

If yes, please explain:

20. SPONSOR INFORMATION

a. Is the scope of this project within the approved scope/definition of the Sponsor's Charter? ◉ Yes ○ No

If no, please explain:

b. Have the Sponsor's procedures been accepted by the IEEE-SA Standards Board Audit Committee? (•) Yes ( ) No

(See NesCom Convention Item #2)

21. ADDITIONAL EXPLANATORY NOTES (Item Number and Explanation)

☑ I acknowledge having read and understood the IEEE Code of Ethics. I agree to conduct myself in a manner which adheres to the IEEE Code of Ethics when engaged in official IEEE business.

Save This Form | Review and Submit | Reset Form

The **PAR Copyright Release and Signature Page** must be submitted by FAX to +1 732-875-0695 to the NesCom Administrator before this PAR will be forwarded to NesCom and the Standards Board for approval.

(See NesCom Conventions - Item #8, Item #9, Item #10)

802.16i Five Criteria, Revision 0

CRITERIA FOR STANDARDS DEVELOPMENT (FIVE CRITERIA)

Broad Market Potential
A standards project authorized by IEEE 802 shall have a broad market potential. Specifically, it shall have the potential for:

a) Broad sets of applicability.
b) Multiple vendors and numerous users.
c) Balanced costs (LAN versus attached stations).

a) IEEE 802 systems require consistent management features. The MIB related mechanisms are applicable to all IEEE 802 systems including 802.16.

b) Multiple vendors, from all around the world have participated in the study group process that developed this PAR and 5 Criteria

c) A MIB mechanism is a common feature of 802 systems and has been shown not to adversely affect the cost of such systems.

Compatibility
IEEE 802 defines a family of standards. All standards shall be in conformance with the IEEE 802.1 Architecture, Management and Interworking documents as follows: 802. Overview and Architecture, 802.1D, 802.1Q and parts of 802.1f. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with 802.
Each standard in the IEEE 802 family of standards shall include a definition of managed objects which are compatible with systems management standards.

1. **The proposed project will be developed in conformance with the 802 Overview and Architecture.**
2. **The proposed project will be developed in conformance with 802.1D, 802.1Q, 802.1f.**
3. **Managed objects will be defined consistent with existing policies and practices for 802.1 standards.**

Consideration will be made to ensure compatibility with the 802 architectural model including at least 802, 802.2, 802.1D, 802.1f and 802.1Q.

This amendment is specifically intended to address the requirement for managed object consistent with existing policies and practices for 802.1 standards.

Distinct Identity
Each IEEE 802 standard shall have a distinct identity. To achieve this, each authorized

project shall be:
a) Substantially different from other IEEE 802 standards.
b) One unique solution per problem (not two solutions to a problem).
c) Easy for the document reader to select the relevant specification.

a) This standard will add mobility support to the previous 802.16f fixed MIB standard.
b) The proposal for the standard is to develop a single MIB.
c) It will be obvious from the title and content of the standard that it is a standard defining mobility additions to the MIB for 802.16.

Technical Feasibility
For a project to be authorized, it shall be able to show its technical feasibility. At a minimum, the proposed project shall show:

a) Demonstrated system feasibility.
b) Proven technology, reasonable testing.
c) Confidence in reliability

a) MIBs are integral parts of most 802 systems. Thus they are demonstrably feasible.
b) MIBs are already a proven and testable management mechanism, as shown through widespread deployment in millions of systems.
c) There is no reason to consider MIBs to be unreliable.

Economic Feasibility
For a project to be authorized, it shall be able to show economic feasibility (so far as can reasonably be estimated), for its intended applications. At a minimum, the proposed project shall show:
a) Known cost factors, reliable data.
b) Reasonable cost for performance.
c) Consideration of installation costs.

a) MIB implementations are widely and cost effectively deployed today.
b) The performance of MIBs are related to the performance of the underlying network technology. 802.16 is capable in this respect.
c) MIBs will generally be included directly in products and will not demand costly installation methods. In addition, MIBs may serve to reduce installation costs of 802.16 systems.