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

1. Sponsor Date of Request 8 July 1999	2. Assigned Project Number 802.16.2	3. PAR Approval Date 16 September 1999

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

Document type and title:

- [ ] **Standard for**{document stressing the verb "shall"}
- [x] **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 - Coexistence of Broadband Wireless Access Systems

Name of Working Group:	IEEE P802.16: Broadband Wireless Access
Name of Official Reporter (usually the W.G. Chair) who must be IEEE/Affiliate AND Standards Association (SA) members.	Roger B. Marks

Title in WG:	Chair	IEEE/Affiliate Member #	
Company:	National Institute of Standards and Technology	Telephone:	303-497-3037
Address:	325 Broadway, MC 813.00	FAX:	303-497-7828
City/State/Zip:	Boulder, CO 80303	Email:	r.b.marks @ieee.org

Name of Sponsoring Society and Committee:	Computer Society, LAN/MAN Standards Committee; Microwave Theory and Techniques Society
Name of Committee Sponsor Chair:	Jim Carlo, LAN/MAN Standards Committee

		IEEE/Affiliate Member #	
Company:	Texas Instruments	Telephone:	
Address:	9208 Heatherdale Drive	FAX:	[1-214-853-5274]
City/State/Zip:	Dallas, TX 75243-6332	Email:	jcarlo@ti.com

5. Describe This Project; *Answer each of four questions below:*

a. Update an existing PAR No

b. Choose one from the following:

- [x] New Standard
- [ ] Revision of existing standard[ ]
- [ ] Supplement to existing standard[ ]

c. Choose one from the following:

- [x] Full Use (5-year life cycle)
- [ ] Trial Use (2-year life cycle)

d. Choose one from the following:

- [x] Individual Sponsor Balloting
- [ ] Entity Sponsor Balloting

a. Fill in Target Completion Date to IEEE RevCom : 30 June 2000

6. Scope of Proposed Project:

This project covers development of a Recommended Practice for the design and coordinated deployment of broadband wireless access (BWA) systems to minimize interference so as to maximize system performance and/or service quality. This practice will provide for coexistence using frequency and spatial separation and will cover three areas. First, it will recommend limits of in-band and out-of-band emissions from BWA transmitters through parameters including radiated power, spectral masks and antenna patterns. Second, it will recommend receiver tolerance parameters, including noise floor degradation and blocking performance, for interference received from other BWA systems as well as from other terrestrial and satellite

systems. Third, it will provide coordination parameters, including band plans, separation distances, and power flux density limits, to enable successful deployment of BWA systems with tolerable interference. The scope includes interference between systems deployed across geographic boundaries in the same frequency band and systems deployed in the same geographic area in different frequency bands (including different systems deployed by a single license-holder in sub-bands of the licensees authorized bandwidth). The scope does not cover coexistence issues due to intra-system frequency re-use within the operator's licensed band, and it does not consider the impact of interference created by BWA systems on non-BWA terrestrial and satellite systems.

7. Purpose of Proposed Project:

The purpose of this recommended practice is to provide coexistence guidelines to license holders, service providers, deployment groups, and system integrators. The equipment parameters contained within this practice will benefit equipment and component vendors and industry associations by providing design targets. The benefits of this practice will include:

- Coexistence of different systems with higher assurance that system performance objectives will be met.
- Minimal need for case-by-case interference studies and coordination between operators to resolve interference issues.
- Preservation of a favorable electromagnetic environment for deployment and operation of BWA systems, including future systems compliant to the 802.16 interoperability standard.
- Optimization of coverage and spectrum utilization.
- Cost-effective system deployment.

8. Intellectual Property

a. Are you aware of any patents relevant to this project?
[Yes] {Yes, with detailed explanation below / No}

{Some companies within the group have indicated that they may have IP interest and letters will be
submitted to IEEE as required.}

b. Are you aware of any copyrights relevant to this project?
[No]

c. Are you aware of any trademarks relevant to this project?
[No]

d. Are you aware of any registratiobn of objects or numbers relevant to this project?
[No]

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

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

Administrations are developing general coordination criteria and procedures to allow BWA operators to deploy systems. Detailed co-existence guidance, such as described in this PAR, is in its early stages of development in other regional and international standards bodies. Studies addressing certain aspects of the coexistence issues are being developed by or have been completed by organizations such as:

- International Telecommunications Union (ITU): ITU-R JRG 8A/9B and ITU-R 9B
- European Telecommunications Standards Institute (ETSI): Technical Committee TM (Transmission and Multiplexing), Working Group TM4 (Fixed Radio Systems)
- Inter-American Telecommunication Commission (CITEL): Permanent Consultative Committee III: Radiocommunications (PCC-III)
- Association of Radio Industries and Businesses (ARIB): R&D Group for the Fixed Wireless Access System
- National Spectrum Managers Association (NSMA)
- Radio Advisory Board of Canada (RABC)

We will coordinate with these groups as appropriate.

10. International Harmonization

Is this standard planned for adoption by another international organization?
[Yes]

If Yes: Which Interntational Organzation [ITU-R]

If Yes: Include coordination in question 13 below

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

[No]

12. Proposed Coordination/Recommended Method of Coordination

Mandatory Coordination

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

Coordination requested by Sponsor:

{PRIVATE**}**[ITU-R, esp. Joint Working Group 8A/9B]	by [LI]	{Circulation of DRafts/LIaison memb/COmmon memb}
[ETSI TM4]	by [LI]	{Circulation of DRafts/LIaison memb/COmmon memb}
[COMSOC]	by [DR]	{Circulation of Drafts/Liason memb/Common memb}
[Others TBD]	by [DR]	{Circulation of DRafts/LIaison memb/COmmon memb}