



Sherry  
Hampton/STDS/STAFF/  
US/IEEE

10/02/2007 09:16 PM

To adg@ieee.org

cc jhoffmeyer@ieee.org, Norma Davis/STDS/STAFF/US/IEEE,

bcc

Subject Approval of Project - P1900.1

02 October 2007

Alexander D Gelman  
Panasonic Technologies  
2 Research Way  
Princeton, NJ 08540  
adg@ieee.org

Re: P1900.1 - Standard Definitions and Concepts for Dynamic Spectrum Access: Terminology Relating to Emerging Networks, System Functionality, and Spectrum Management

Dear Alexander:

I am pleased to inform you that on 27 September 2007 the IEEE-SA Standards Board approved the above referenced project until 31 December 2009. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/1900-1.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

Rosters can be submitted in any format to the NesCom Administrator ([nescom-admin@ieee.org](mailto:nescom-admin@ieee.org)). Please forward this list to the NesCom Administrator via e-mail at [nescom-admin@ieee.org](mailto:nescom-admin@ieee.org) no later than 26 December 2007.

Or, for your convenience, you can manage your standards development roster in myProject. Instructions are as follows:

- Go to myProject - <https://development.standards.ieee.org/my-site>
- Login using your IEEE Web Account username and password.
- Once logged into myProject, go to "Manage Committees"
- Drill down to the project by clicking the (+) on the left to expand each level. The actual project will be highlighted in yellow
- Click "Manage Committees" for that project. A list of individuals enrolled in the Committee/Project will appear. On this screen you can assign whether a person is a Participant, a

Non-Voting Member or a Voting Member of the project group. You may also view contact information for that individual.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any questions, please contact the NesCom Administrator via e-mail at [nescom-admin@ieee.org](mailto:nescom-admin@ieee.org) or via telephone at +1 732 562 3806.

Sincerely,

NesCom Admin  
Standards Activities  
Email: [nescom-admin@ieee.org](mailto:nescom-admin@ieee.org)

**PAR Request Date:** 21 July 2007**PAR Approval Date:** 27 September 2007**PAR Signature Page on File:** Yes**Type of PAR:** Modification to Approved PAR**Status:** Modification to a Previously Approved PAR P1900.1, 04 March 2005**Root Project:** New Project**1.1 Project No.:** **1900.1****1.2 Type of Document:** Standard**1.3 Life Cycle:** Full-Use**1.4 Is this document in ballot now?** No**2.1 Title**

Standard Definitions and Concepts for Dynamic Spectrum Access: Terminology Relating to Emerging Networks, System Functionality, and Spectrum Management

**3.1 Working Group Name** [Terms, Definitions and Concepts for Spectrum Management Working Group](#)**Working Group Chair**[Hoffmeyer, James](#)  
Phone: 303-828-5240  
Email: jhoffmeyer@ieee.org**Working Group Vice Chair****3.2 Sponsor** [IEEE Communications Society Standards Committee \(COM/SC\)](#)**Sponsor Chair**[Gelman, Alexander D](#)  
Phone: 1-609-937-2124  
Email: adg@ieee.org**Name of Standards Liaison Representative (if applicable)**[Gelman, Alexander D](#)  
Phone: 1-609-937-2124  
Email: adg@ieee.org**3.3 Joint Sponsor****4.1 Type of Ballot:** Individual**4.2 Expected Date of Submission for Initial Sponsor Ballot:** September 2007**4.3 Projected Completion Date for Submittal to RevCom:** October 2007**5.1 Approximate number of people expected to work on this project:** 15**5.2 Scope:** This standard provides technically precise definitions and explanations of key concepts in the fields of spectrum management, cognitive radio, policy defined radio, adaptive radio, software defined radio, and related technologies. The document goes beyond simple, short definitions by providing amplifying text that explains these technologies. The document also describe how these technologies interrelate and create new capabilities while at the same time providing mechanisms supportive of new spectrum management paradigms such as dynamic spectrum access.**Old Scope:** This standard will provide technically precise definitions and explanations of key concepts in the fields of spectrum management, policy defined radio, adaptive radio, software defined radio, and related technologies. The document will go beyond simple, short definitions by providing amplifying text that explains these technologies from different perspectives. The document will also describe how these technologies interrelate and can be use in a wide variety of communication service environments to achieve new capabilities while at the same time providing mechanisms supportive of new spectrum management paradigms and spectrum access.**5.3 Is the completion of this document contingent upon the completion of another document?** No

**5.4 Purpose:** New concepts and technologies are rapidly emerging in the fields of spectrum management, policy defined radio, adaptive radio, software defined radio, reconfigurable radio and networks and related technologies. Many of the terms used do not have precise definitions or have multiple definitions. This document facilitates the development of these technologies by clarifying the terminology and how these technologies relate to each other.

**Old Purpose:** New concepts and technologies are rapidly emerging in the fields of spectrum management, policy defined radio, adaptive radio, software defined radio, reconfigurable radio and networks and related technologies. Many of the terms used do not have precise definitions or have multiple definitions. This document will facilitate the development of these technologies by clarifying the terminology and how these technologies relate to each other.

**5.5 Need for the Project:** Lack of clear definitions and general agreement on key terms is an impediment to the deliberation and debate necessary to the refinement of new concepts and technologies. This document will assist this process by clarifying the terminology and how these technologies relate to each other. Further, it will provide a valuable resource for new entrants to the arena.

**5.6 Stakeholders for the Standard:** The stakeholders for this project will be manufacturers of licensed/unlicensed wireless communications equipment, chip manufacturers, wireless communication service providers and regulators.

**6.1.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 Presented Date:** 2005-01-06

If no, please explain:

**6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No**

If yes, please explain:

**6.1.c. Is the Sponsor aware of possible registration activity related to this project? No**

If yes, please explain:

**7.1 Are there other standards or projects with a similar scope? No**

If yes, please explain:

**Sponsor Organization:**

**Project/Standard Number:**

**Project/Standard Date:** 0000-00-00

**Project/Standard Title:**

**7.2 Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? ? Do not know at this time**

**Technical Committee Name and Number:**

**Contact person:**

**Contact person Phone Number:**

**Contact person Email Address:**

**7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No**

**7.4 Additional Explanatory Notes:**

The Title was revised to 1) better reflect the focus and content of the Draft Standard and 2) to clearly align the Draft Standard with the newly formed Standards Coordinating Committee 41 (DySPAN - Dynamic Spectrum Access Networks). The Scope was changed to more accurately reflect the content of the Draft Standard. The Scope was not broadened. The Scope was actually narrowed. The words "cognitive radio" were inserted in the first sentence. Although this might at first be viewed as broadening the scope of the Draft Standard, it does not broaden the scope because the cognitive radio technology is covered by the words "related technologies" at the end of the sentence. Nevertheless, because of the widespread usage of the term "cognitive radio" the WG decided to specifically include those words in this sentence. The words "from different perspectives" were deleted from the second sentence because this is open to interpretation. The Draft Standard does have some text that could be construed as satisfying the "different perspectives" portion of the scope, however the Draft Standard is not organized in that fashion. Nevertheless the Draft Standard was created by a balanced WG (academia, small industry, large industry, and government). The phrase "and can be use (sic) in a wide variety of communications environments" was deleted because the WG did not feel the necessity to describe the multitude of scenarios in which these advanced radio technologies and spectrum management techniques can be used. The WG did not believe that this was necessary for a "definitions and basic concepts" type of Draft Standard. Other 1900.x WGs are investigating the use of these technologies in different communications environments. The other changes in the last sentence are changes that help the understanding of the sentence. There was strong support within the WG for the changes to both the title and the scope. The vote for the change was: 10 in favor, 1 negative, and 1 absent (there are currently 12 voting members of the WG). The single negative vote was because of concern that the specific radio technologies (i.e., cognitive radio, policy defined radio,

software defined radio, etc.) should not be listed; no other voting member supported that view. The scope, as it was revised, accurately describes the content of the document – definitions of the specific radio technologies are contained within the document.

**8.1 Sponsor Information:**

Is the Scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

[Email This Letter](#)

04 March 2005

Raymond Hapeman  
ERH Consulting  
10 Heather Lane  
Middletown, NJ 07748-2211  
r.hapeman@ieee.org

Re: P1900.1 - Standard Terms, Definitions and Concepts for Spectrum Management, Policy Defined Radio, Adaptive Radio and Software Defined Radio

Dear Raymond:

I am pleased to inform you that on 04 March 2005 the IEEE-SA Standards Board approved the above referenced project until 31 December 2009. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/1900-1.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

For your convenience, an Excel spreadsheet for your use has been posted on our website at <http://standards.ieee.org/guides/par/roster.xls>. Please forward this list to me via e-mail at [j.haasz@ieee.org](mailto:j.haasz@ieee.org) no later than 02 June 2005.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any further questions, please contact me at 732-562-6367 or by email at [j.haasz@ieee.org](mailto:j.haasz@ieee.org).

Sincerely,

Jodi Haasz  
Program Manager  
International Stds Programs and Governance  
Standards Activities  
Phone +1 732 562 6367  
FAX +1 732 875 0695  
Email: [j.haasz@ieee.org](mailto:j.haasz@ieee.org)

CC: [rboutaba@bcr.uwaterloo.ca](mailto:rboutaba@bcr.uwaterloo.ca), [jhoffmeyer@ieee.org](mailto:jhoffmeyer@ieee.org), [stephen.berger@ieee.org](mailto:stephen.berger@ieee.org)

# PAR FORM

**PAR Status:** New PAR

**PAR Approval Date:** 2005-03-04

**PAR Signature Page on File:** Yes

**1. Assigned Project Number:** P1900.1

**2. Sponsor Date of Request:** 2004-01-04

**3. Type of Document:** Standard for

**4. Title of Document:**

**Draft:** Standard Terms, Definitions and Concepts for Spectrum Management, Policy Defined Radio, Adaptive Radio and Software Defined Radio

**5. Life Cycle:** Full-Use

**6. Type of Project:**

**6a. Is this an update to an existing PAR?** No

**6b. The Project is a:** New Standard

**7. Working Group Information:**

**Name of Working Group:** Working Group for 1900.1

**Approximate Number of Expected Working Group Members:**30

**8. Contact information for Working Group Chair:**

**Name of Working Group Chair:** James Hoffmeyer

**Telephone:** 303-828-5240 **FAX:** 303-828-5244

**Email:** jhoffmeyer@ieee.org

**9. Contact information for Co-Chair/Official Reporter, Project Editor or Document Custodian if different from the Working Group Chair:**

**Name of Co-Chair/Official Reporter, Project Editor or Document Custodian:**

**Telephone:** **FAX:**

**Email:**

**10. Contact information for Sponsoring Society or Standards Coordinating Committee:**

**Name of Sponsoring Society and Committee:** Communications Society Standards Committee

**Name of Sponsoring Committee Chair:** Raouf Boutaba

**Telephone:** 519-888-4820 **FAX:** 519-885-1208

**Email:** rboutaba@bbcr.uwaterloo.ca

**Name of Liaison Rep. (if different from the Sponsor Chair):** Raymond Hapeman

**Telephone:** 732-671-3661 **FAX:**

**Email:** r.hapeman@ieee.org

**Name of Co-Sponsoring Society and Committee:** Electromagnetic Compatibility Society  
Standards Development Committee

**Name of Co-Sponsoring Committee Chair:** Stephen Berger

**Telephone:** 512-864-3365 **FAX:** 512-869-8709

**Email:** stephen.berger@ieee.org

**Name of Liaison Rep. (if different from the Sponsor Chair):**

**Telephone:** **FAX:**

**Email:**

**11. The Type of ballot is:** Individual Sponsor Ballot

**Expected Date of Submission for Initial Sponsor Ballot:** February 2007

**12. Projected Completion Date for Submittal to RevCom:** August 2007

**Target Extension Request Information for a Modified PAR whose completion date is being extended past the original four-year life of the PAR:**

**13. Scope of Proposed Project:**

This standard will provide technically precise definitions and explanations of key concepts in the fields of spectrum management, policy defined radio, adaptive radio, software defined radio, and related technologies. The document will go beyond simple, short definitions by providing amplifying text that explains these technologies from different perspectives. The document will also describe how these technologies interrelate and can be use in a wide variety of communication service environments to achieve new capabilities while at the same time providing mechanisms supportive of new spectrum management paradigms and spectrum access.

**Is the completion of this document contingent upon the completion of another document?**

No

**14. Purpose of Proposed Project:**

New concepts and technologies are rapidly emerging in the fields of spectrum management, policy defined radio, adaptive radio, software defined radio, reconfigurable radio and networks and related technologies. Many of the terms used do not have precise definitions or have multiple definitions. This document will facilitate the development of these technologies by clarifying the terminology and how these technologies relate to each other.

**15. Reason for the Proposed Project:**

Lack of clear definitions and general agreement on key terms is an impediment to the deliberation and debate necessary to the refinement of new concepts and technologies. This document will assist this process by clarifying the terminology and how these technologies relate to each other. Further, it will provide a valuable resource for new entrants to the arena. The stakeholders for this project will be manufacturers of licensed/unlicensed wireless communications equipment, chip manufacturers, wireless communication service providers and regulators.

**16. Intellectual Property:**

**a. Has the IEEE-SA policy on intellectual property been presented to those responsible for**

preparing/submitting this PAR? Yes 2005-01-06

- b. Is the sponsor aware of copyright permissions needed for this project? No
- c. Is the sponsor aware of trademarks that apply to this project? No
- d. Is the sponsor aware of possible registration activity related to this project? No

17. Are there other documents or projects with a similar scope? No

**Similar Scope Project Information:**

18. Is there potential for this document (in part or in whole) to be adopted by another national , regional or international organization? Do not know at this time

If yes, the following questions must be answered:

Organization Name?

Technical

Committee

International

Contact

Information?

19. Will this project result in any health, safety, or environmental guidance that affects or applies to human health or safety? 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

If no, please explain:

b. The Sponsor's procedures have been accepted by the IEEE-SA Standards Board Audit Committee? Yes

**21. Additional Explanatory Notes: (Item Number and Explanation)**