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23 September 2005

Ronald C Petersen
R C Petersen Associates, LLC
170 Fairview Drive
PO Box 386
Bedminster, NJ 07921
r.c.petersen@ieee.org

Re: P1528b - Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques. Amendment 2: Additional Procedures for SAR Measurement at 3 – 6 GHz

Dear Ronald:

I am pleased to inform you that on 22 September 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/1528b.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 no later than 21 December 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.

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

CC: mark.douglas@motorola.com

PAR FORM

PAR Status: Amendment of Standard

PAR Approval Date: 2005-09-22

PAR Signature Page on File: Yes

1. Assigned Project Number: P1528b

2. Sponsor Date of Request: 2005-08-03

3. Type of Document:

4. Title of Document:

Draft: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques. Amendment 2: Additional Procedures for SAR Measurement at 3 – 6 GHz

5. Life Cycle: Full-Use

6. Type of Project:

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

6b. The Project is a: Amendment to Std 1528-2003

7. Working Group Information:

Name of Working Group: Measurement Techniques Working Group

Approximate Number of Expected Working Group Members:50

8. Contact information for Working Group Chair:

Name of Working Group Chair: Mark Douglas

Telephone: 919-472-6334 **FAX:** 919-472-7451

Email: mark.douglas@motorola.com

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: SCC39-International Committee on Electromagnetic Safety International Committee on Electromagnetic Safety

Name of Sponsoring Committee Chair: Ronald C Petersen

Telephone: 908-234-0373 **FAX:** 908-470-9230

Email: r.c.petersen@ieee.org

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

Telephone: FAX:

Email:

Name of Co-Sponsoring Society and Committee:

Name of Co-Sponsoring Committee Chair:

Telephone: FAX:

Email:

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: July 2007

12. Projected Completion Date for Submittal to RevCom: December 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:

The scope of this project is to specify protocols for the measurement of the peak spatial average SAR in a simplified model of the head of users of handheld radio transceivers used for personal wireless communications services and intended to be operated while held next to the ear. It applies to contemporary and future devices with the same operational characteristics as contemporary devices that operate in the 300 MHz–6 GHz frequency range and provides a conservative estimate of the peak spatial average SAR representative of that which would be expected to occur in the heads of a significant majority of persons during normal use of these devices, but which may not be the absolute maximum value that could possibly occur under every conceivable combination of head size, head shape, handset orientation, and spacing relative to the head.

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

No

14. Purpose of Proposed Project:

The purpose of this project is to extend the frequency range of IEEE 1528 to include the frequency range 3 – 6 GHz. This extension would bring the total applicable frequency range of IEEE 1528 to be 300 MHz – 6 GHz. Recommendations are needed for the measurement resolution, the probe geometry, the phantom specifications, the dielectric parameters of tissue equivalent liquids, and other measurement parameters.

15. Reason for the Proposed Project:

Recently, there has been a rapid increase in the development of personal communication devices that transmit in the 3-6 GHz frequency range. These devices are operated close to the user's body and therefore recommended practices are needed to evaluate compliance with exposure limits, as defined in international standards. IEEE Std C95.1-1999 states that for frequencies in the range 100 kHz to 6 GHz the evaluation of SAR may be used to demonstrate compliance with its specifications. The newly revised draft C95.1 standard (Times per year a draft is circulated via

electronic means 2.4-July 20, 2005) reduces the upper frequency to 3 GHz because of the increased averaging mass to 10 g. However, a transition frequency range 3 GHz to 6 GHz allows compliance with the standard by evaluation of either incident power density or local SAR. Therefore, 6 GHz is the upper end of the frequency spectrum for which SAR evaluation is needed. The stakeholders of this amendment include manufacturers of wireless communication devices, SAR testing laboratories and various national regulatory agencies such as the US Federal Communications Commission and the US Food and Drug Administration.

16. Intellectual Property:

- a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR?** Yes 2005-08-02
- 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? Yes

An existing IEC standard (IEC 62209-1, published in 2005) has a scope that covers SAR measurements of devices held to the head in the 300-3000 MHz frequency range. However, IEC PT 62209 is currently busy working on IEC 62209-2, which will likely be published at the end of 2007. Therefore, IEC PT 62209 will not be able to consider a frequency extension up to 6 GHz for IEC 62209-1 for some time.

Similar Scope Project Information:

SimSP: IEC SimProjNo: P62209 SimProjD: Feb-2005 SimTitle: HUMAN EXPOSURE TO RADIO FREQUENCY FIELDS FROM HANDHELD AND BODY-MOUNTED WIRELESS COMMUNICATION DEVICES – HUMAN MODELS, INSTRUMENTATION, AND PROCEDURES – Part 1: Procedure to determine the Specific Absorption Rate (SAR) in the human head from hand-held mobile wireless communication devices held against the ear

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? Yes

If yes, please explain:

This recommended practice does not focus directly on safety and health but can be used for assessing compliance of certain communications devices with established safety criteria of contemporary standards and guidelines, e.g., IEEE Std C95.1, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines, and the requirements adopted by various government agencies. It does not recommend or endorse any specific safety limits for

human exposure.

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)

17. Other standards are either published or in draft form that are similar in scope to the proposed amendment. IEC Project Team 62209 is currently drafting a standard (IEC 62209-2) for SAR measurement of body-worn devices for frequencies up to 6 GHz. ICES TC-34 has a Category D Liaison with IEC PT 62209 for the development of this standard. However, it is not within the scope of IEC 62209-2 to include devices held next to the head. Therefore, the proposed amendment would allow IEEE 1528 to complement this IEC standard. While research for SAR measurement in the 3-6 GHz range has been conducted for some time now, including work done for IEC 62209-2, ICES TC-34 SC2 will evaluate the existing body of work and also propose new areas of research as needed to complete the amendment.