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11 August 2005

Yvonne Lord  
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P.O. Box 178  
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Re: P1413 - Standard Methodology for Reliability Prediction and Assessment for Electronic Systems and Equipment

Dear Yvonne:

I am pleased to inform you that on 11 August 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/1413.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 09 November 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  
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# PAR FORM

**PAR Status:** Revision PAR

**PAR Approval Date:** 2005-08-11

**PAR Signature Page on File:** Yes

**1. Assigned Project Number:** P1413

**2. Sponsor Date of Request:** 2005-05-05

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

**4. Title of Document:**

**Draft:** Standard Methodology for Reliability Prediction and Assessment for Electronic Systems and Equipment

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

**6. Type of Project:**

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

**6b. The Project is a:** Revision of Std 1413-1998

**7. Working Group Information:**

**Name of Working Group:** Reliability Assessment Working Group

**Approximate Number of Expected Working Group Members:**20

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

**Name of Working Group Chair:** Michael Pecht

**Telephone:** 301-405-5323 **FAX:** 301-314-9269

**Email:** pecht@calce.umd.edu

**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:** Diganta Das

**Telephone:** 301-405-7770 **FAX:** 301-314-9269

**Email:** diganta@umd.edu

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

**Name of Sponsoring Society and Committee:** IEEE Reliability Society

**Name of Sponsoring Committee Chair:** Jeffrey Voas

**Telephone:** 703-404-9293 **FAX:** 703-404-9295

**Email:** voas@cigital.com

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

**Telephone:** 410-765-2741 **FAX:**

**Email:** yvonne.lord@ngc.com

**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:** October 2006**12. Projected Completion Date for Submittal to RevCom:** October 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:**

[original] This standard covers the framework for the reliability prediction process for electronic systems and equipment, including hardware and software predictions at all levels.

[Revised] This standard covers the framework for the reliability prediction process for electronic systems and equipment at all levels.

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

No

**14. Purpose of Proposed Project:**

[Original] To provide an approach for developing reliability predictions for electronic systems and equipment which will emphasize the physical-of-failure approach which (1) has models based on science / engineering first principles (2) has information on materials, architectures and operating stresses (3) considers all stresses, including steady state temperature, temperature rate of change and spatial temperature gradients as applicable to each root cause of failure mechanism.

There are underlying assumptions associated with all reliability predictions. These assumptions and level and depth of information used in the prediction process determine the level of risk in using a reliability prediction. This standard identifies required attributes for an understandable, credible reliability prediction. A prediction made according to IEEE Standard 1413 includes sufficient information including inputs, assumptions, uncertainties and outputs, that the risks associated with using the prediction are understood.

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

The reason for the revision is to update the standard based on the lessons learned during the development of the associated guidebook 1413.1. Also, some of the implied methods of assessing a reliability prediction will be made clarified. There will also be forward references to 1413.1 as applicable. The stakeholders for the project are Consumer, Industrial, Computer, Medical, Telecommunication, Defense, Automotive, Aerospace.

**16. Intellectual Property:**

- a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR? Yes 2005-01-25
- 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)**