Email This Letter

12 December 2005

Leslie A Orlidge
AAI Corporation
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New Freedom, PA 17349
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Re: P1232 - Standard for Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE)

Dear Leslie:

I am pleased to inform you that on 07 December 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/1232.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 07 March 2006.

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
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Email: j.haasz@ieee.org

CC: timothy.j.wilmering@boeing.com, mark.kaufman@navy.mil

PAR FORM

PAR Status: Revision PAR
PAR Approval Date: 07 December 2005
PAR Signature Page on File: Yes

1. Assigned Project Number: P1232

2. Sponsor Date of Request: 2005-08-01

3. Type of Document: Standard for

4. Title of Document:
Draft: Standard for Artificial Intelligence Exchange and Service Tie to All Test Environments (AI-ESTATE)

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 1232-2002

7. Working Group Information:
Name of Working Group: Diagnostic and Maintenance Control Working Group
Approximate Number of Expected Working Group Members:25

8. Contact information for Working Group Chair:
Name of Working Group Chair: Timothy J Wilmering
Telephone: 314-234-6781 **FAX:** 314-232-8787
Email: timothy.j.wilmering@boeing.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: Mark Kaufman
Telephone: 909-273-5725 **FAX:** 909-273-4599
Email: mark.kaufman@navy.mil

10. Contact information for Sponsoring Society or Standards Coordinating Committee:
Name of Sponsoring Society and Committee: SCC20-Test and Diagnosis for Electric Systems Test and Diagnosis for Electric Systems
Name of Sponsoring Committee Chair: Leslie A Orlidge
Telephone: 410-628-6634 **FAX:** 410-628-3968
Email: orlidge@aaicorp.com
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: June 2006

12. Projected Completion Date for Submittal to RevCom: June 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 AI-ESTATE standard defines formal specifications for supporting system diagnosis. These specifications support the exchange and processing of diagnostic information and the control of diagnostic processes. Diagnostic processes include, but are not limited to, testability analysis, diagnosability assessment, diagnostic reasoning, maintenance support, and diagnostic maturation.
Is the completion of this document contingent upon the completion of another document?
No

14. Purpose of Proposed Project:
The AI-ESTATE standard provides formal models of diagnostic information to ensure unambiguous access to an understanding of the information supporting system test and diagnosis. The standard defines formal information models and software services specific to several different types of diagnostic reasoners. The purpose is to provide semantically sound definitions of diagnostic knowledge and to specify software exchange and service interfaces that are consistent with the state of the practice in modern test and diagnostic systems (e.g., the use of XML and web services).

15. Reason for the Proposed Project:
There are several reasons for this project. First, a significant error in the published standard must be corrected. Currently, correcting the error requires utilizing the extension mechanism built into the AI-ESTATE standard. It was never the intent for an extension to be required here, and this project will restore a portion of the model, inadvertently removed during ballot resolution, to its original form. In addition, a number of minor errors were identified. Second, diagnostic systems are undergoing advances in technology, and the standard needs to be revised to keep pace with these advances. The use of Bayesian Reasoning in diagnostic systems is one such advance. A Bayesian information model has been created to address this need. Finally, the target user community, [consisting of practitioners of system test and diagnosis in industries such as the military, automotive, semiconductor, and aerospace industries,] has been migrating towards

using XML as a practical information exchange mechanism. The information models within AI-ESTATE are defined using the EXPRESS language. At the time AI-ESTATE was published, the principal means for specifying an EXPRESS-based exchange mechanism within XML was the Document Type Definition. The committee decided that DTDs were not flexible enough to be specified by AI-ESTATE, so the STEP physical file format (ISO 10303 Part 21) was used. Since publication, a specification for XML Schema has been defined by the W3C that provides the required flexibility and accommodates representation of 1232 information models. Due to broad application of XML in information exchange, the committee decided that incorporating XML Schema into AI-ESTATE was appropriate to improve utilization by the target user community.

16. Intellectual Property:

a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR? Yes 2005-07-12

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)