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16 March 2006

Rohit Kapur
Synopsys Inc.
700 East Middlefield Road
Mountain View, CA 94043
rkapur@synopsys.com

Re: P1687 - Standard for Access and Control of Instrumentation Embedded within a Semiconductor Device

Dear Rohit:

I am pleased to inform you that on 16 March 2006 the IEEE-SA Standards Board approved the above referenced project until 31 December 2010. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/1687.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 14 June 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
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International Stds Programs and Governance
Standards Activities
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PAR FORM

PAR Status: New PAR

PAR Approval Date: 16 March 2006

PAR Signature Page on File: Yes

1. Assigned Project Number: P1687

2. Sponsor Date of Request: 2005-10-21

3. Type of Document: Standard for

4. Title of Document:

Draft: Standard for Access and Control of Instrumentation Embedded within a Semiconductor Device

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: Internal Joint Test Action Group

Approximate Number of Expected Working Group Members:25

8. Contact information for Working Group Chair:

Name of Working Group Chair: Kenneth Posse

Telephone: +1 970 223 2103 **FAX:**

Email: kepos@comcast.net

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: Al Crouch

Telephone: +1 512 632 1898 **FAX:**

Email: al.crouch@inovys.com

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

Name of Sponsoring Society and Committee: IEEE Computer Society Test Technology

Name of Sponsoring Committee Chair: Rohit Kapur

Telephone: 650-584-1487 **FAX:** 650-584-4128

Email: rkapur@synopsys.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: October 2007

12. Projected Completion Date for Submittal to RevCom: August 2008

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 develops a methodology for access to embedded instrumentation without defining the instruments or their features themselves, via the IEEE 1149.1 Test Access Port (TAP) and additional signals that may be required. The elements of the methodology include a description language for the characteristics of the features and for communication with the features, and requirements for interfacing to the features.

Is the completion of this document contingent upon the completion of another document? No

14. Purpose of Proposed Project:

The IEEE 1149.1 standard specifies circuits to be embedded within a semiconductor device to support board test; namely, the Test Access Port (TAP), TAP Controller, and a number of internal registers. In practice the TAP and TAP Controller are being used for other functions well beyond boundary-scan in an ad-hoc manner across the industry to access a wide variety of embedded instruments. The purpose of the IJTAG initiative is to provide an extension to the IEEE 1149.1 standard specifically aimed at using the TAP to manage the configuration, operation, and collection of data from this embedded instrumentation circuitry.

15. Reason for the Proposed Project:

There exists the widespread use of embedded instrumentation (such as BIST Engines, Complex I/O Characterization and Calibration, Embedded Timing Instrumentation, etc.) each of which is accessed and managed by a variety of external instruments using a variety of mechanisms and protocols. Therefore, a need exists for standardization of these protocols in order to ensure an efficient and orderly methodology for the preparation of tests and the access and control of these embedded instruments. The stakeholders for this project are those who utilize this proposal either as designers or users.

16. Intellectual Property:

- a. **Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR?** Yes 2005-05-01
- 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

The "Open Core Protocol - International Partnership" (OCP-IP) consortium has proposed some similar capabilities. Though these proposals are of a similar nature, they do not currently overlap the IJTAG domain. However, the IJTAG vice-chair (Al Crouch) is a member of OCP-IP and is acting as a coordinator should any conflicts arise.

Similar Scope Project Information:

SimSP: OCP-IP SimProjNo: www.ocpip.org SimProjD: 19-Oct-2005 SimTitle: Open Core Protocol - International Partnership

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)

Item #13 - The title for IEEE Std 1149.1-2001 is IEEE Standard Test Access Port and Boundary Scan Architecture.