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09 May 2007

Victor Berman  
Improv Systems, Inc.  
victorb@improvsys.com

Re: P1076.1 - Standard VHDL Analog and Mixed-Signal Extensions

Dear Victor:

I am pleased to inform you that on 07 May 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/1076-1.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 [s.hampton@ieee.org](mailto:s.hampton@ieee.org) no later than 05 August 2007.

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 +1 732 562 6003 or by email at [s.hampton@ieee.org](mailto:s.hampton@ieee.org).

Sincerely,

Sherry Hampton

Administrator, Governance  
Standards Activities  
Phone +1 732 562 6003  
FAX +1 732 875 0695  
Email: s.hampton@ieee.org

CC: alain.vachoux@epfl.ch BCC: s.hampton@ieee.org, t.t.lee@ieee.org

<b>PAR Request Date:</b> 28 March 2007	
<b>PAR Approval Date:</b> 07 May 2007	
<b>PAR Signature Page on File:</b> Yes	
<b>Type of PAR:</b> Modification to Approved PAR	
<b>Status:</b> Modification to a Previously Approved PAR for the Revision of a Standard - P1076.1, 10 May 2005	
<b>Root Project:</b> IEEE Std 1076.1-1999	
<b>1.1 Project No.:</b> <b>1076.1</b>	
<b>1.2 Type of Document:</b> Standard	
<b>1.3 Life Cycle:</b> Full-Use	
<b>1.4 Is this document in ballot now?</b> Yes	
<b>2.1 Title</b> Standard VHDL Analog and Mixed-Signal Extensions	
<b>3.1 Working Group Name</b>	<a href="#">VHDL Analog and Mixed-Signal Extensions Working Group</a>
<b>Working Group Chair</b>	<a href="#">Vachoux, Alain</a> Phone: +41-21-693-6953 Email: alain.vachoux@epfl.ch
<b>Working Group Vice Chair</b>	
<b>3.2 Sponsor</b>	<a href="#">IEEE Computer Society Design Automation (C/DA)</a>
<b>Sponsor Chair</b>	<a href="#">Berman, Victor</a> Phone: 978 927 0555 x 27 Email: victorb@improvsys.com
<b>Name of Standards Liaison Representative (if applicable)</b>	
<b>3.3 Joint Sponsor</b>	
<b>4.1 Type of Ballot:</b> Individual	
<b>4.2 Expected Date of Submission for Initial Sponsor Ballot:</b> September 2005	
<b>4.3 Projected Completion Date for Submittal to RevCom:</b> April 2007	
<b>5.1 Approximate number of people expected to work on this project:</b> 10	
<b>5.2 Scope:</b> This standard defines the 1076.1 language, a hardware description language for the description and simulation of analog, digital, and mixed-signal systems. The language, also informally known as VHDL-AMS, is built on the IEEE Std 1076-2002 (VHDL) language, and extends it to provide capabilities of writing and simulating analog and mixed-signal modes.	<b>Old Scope:</b> Original scope: The IEEE 1076 language has been primarily designed for the description and the simulation of digital hardware systems. As such, it provides only limited capabilities when used in analog modeling. VHDL 1076.1 aims to enhance VHDL 1076 such that it can support the description and simulation of circuits and systems that exhibit continuous behavior over time and over amplitude. The revision will correct editorial errors and clarify aspects of the language definition in the original document, and will update the document to reflect changes in the VHDL 1076 specification.
<b>5.3 Is the completion of this document contingent upon the completion of another document?</b> No	

**5.4 Purpose:** To provide a comprehensive mixed-signal description and simulation capabilities as an extension to the IEEE VHDL 1076 language. The revision corrects editorial errors and clarifies aspects of the language definition in the 1076.1-1999 standard, and updates the 1076.1-1999 standard to reflect changes in the VHDL 1076-2002 specification.

**Old Purpose:** Original purpose: To provide a comprehensive mixed-signal description and simulation capabilities as an extension to the IEEE VHDL 1076 language. The document is to be revised to track changes in the language that it extends.

**5.5 Need for the Project:** Complex electronic systems comprise a mixture of digital and analog elements. This project defines a modeling language that allows engineers to use design automation tools to analyze and verify operation of designs prior to manufacture, thus improving productivity and avoiding the cost of erroneous designs. The language is of benefit to engineers and organizations developing mixed analog and digital systems for applications including consumer devices, telecommunications, control systems and automotive systems. Design automation tools based on the current standard are provided by a number of suppliers and are in use in industry.

**5.6 Stakeholders for the Standard:** The stakeholders are telecom, automotive, aerospace, EDA vendors.

**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:** 2006-09-19

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?** ? Yes

**Technical Committee Name and Number:** IEC TC93 WG2

**Contact person:** [Alex N Zamfirescu](#)

**Contact person Phone Number:** 650-323-4643

**Contact person Email Address:** a.zamfirescu@ieee.org

**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:**

Item 4.3: Changed the expected completion date Item 5.3: Contingency upon completion of revision of IEEE Std. 1076 has been removed since the the P1076.1-2007 revision is actually based on the existing P1076-2002 standard.

**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: