

P1076.1.1

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Type of Project: Revision to IEEE Standard 1076.1.1-2004

PAR Request Date: 21-Jul-2009

PAR Approval Date:

PAR Expiration Date:

Status: Unapproved PAR, PAR for a Revision to an existing IEEE Standard 1076.1.1-2004

1.1 Project Number: P1076.1.1

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for VHDL Analog and Mixed-Signal Extensions---Packages for Multiple Energy Domain Support

Old Title: IEEE Standard VHDL Analog and Mixed-Signal Extensions---Packages for Multiple Energy Domain Support

3.1 Working Group: VHDL Analog and Mixed-Signal Extensions Working Group (C/DA/VHDL_AMS)

Contact Information for Working Group Chair

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3.2 Sponsoring Society and Committee: IEEE Computer Society/Design Automation (C/DA)

Contact Information for Sponsor Chair

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Contact Information for Standards Representative

None

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2009

4.3 Projected Completion Date for Submittal to RevCom: 02/2010

5.1 Approximate number of people expected to be actively involved in the development of this project: 10

5.2 Scope: This standard defines a collection of VHDL 1076.1 packages, compatible with IEEE Std 1076.1™, along with recommendations for conforming use, in order to facilitate the interchange of simulation models of physical components and subsystems. The packages include the definition of standard types, subtypes, natures, and constants for modeling in multiple energy domains (electrical, fluidic, mechanical, etc.) The packages are intended for use primarily in the modeling of multiple energy domain systems. The range of operation of the packages is not defined in this standard, but is intended to be valid across a wide range of disciplines and applications.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The definitions of IEEE Std 1076.1 allow users to build simulation models of physical components and subsystems that may belong to multiple energy domains (electrical, fluidic, mechanical, etc.). Such models are built upon sets of properties that are specific to each energy domain and encapsulated in so-called natures. IEEE Std 1076.1 provides a mechanism to define natures, but intentionally does not predefine any standard set of natures as it is expected that this would be done in a subsequent IEEE standard project. The definition of a standard set of natures is crucial to make possible the reuse and exchange of models written in VHDL 1076.1 within and among vendors.

5.5 Need for the Project: The standard enables the reuse and exchange of models written in VHDL 1076.1 among users and vendors of tools supporting IEEE Std 1076.1. Without this standard model exchange would be severely restricted.

5.6 Stakeholders for the Standard: The stakeholders are vendors of VHDL 1076.1 tools and organizations who have adopted VHDL 1076.1 as their hardware description

Old Scope: This standard defines a collection of VHDL 1076.1 packages, compatible with IEEE Std 1076.1™-1999, along with recommendations for conforming use, in order to facilitate the interchange of simulation models of physical components and subsystems. The packages include the definition of standard types, subtypes, natures, and constants for modeling in multiple energy domains (electrical, fluidic, mechanical, etc.) The packages are intended for use primarily in the modeling of multiple energy domain systems. The range of operation of the packages is not defined in this standard, but is intended to be valid across a wide range of disciplines and applications.

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language of choice. Such organizations are mainly in the IC design, telecom, automotive and aerospace industry and at research institutions

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:

No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?:

No

7.1 Are there other standards or projects with a similar scope?: No

7.2 International Activities

a. Adoption

Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization?: Yes

Organization: IEC

Technical Committee Name: Design Automation

Technical Committee Number: TC93

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b. Joint Development

Is it the intent to develop this document jointly with another organization?: No

c. Harmonization

Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: No

8.1 Additional Explanatory Notes (Item Number and Explanation):