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Approaches to conformance and certification testing for design automation standards

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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APPROACHES TO CONFORMANCE AND CERTIFICATION TESTING FOR DESIGN AUTOMATION STANDARDS

FOREWORD

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IEC 62248, which is a technical report, has been prepared by IEC technical committee 93: Design automation.

This technical report focuses primarily on the work undertaken by IEC TC 93.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
93/152/DTR	93/156/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

- transformed into an International standard;
- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

The attention of the reader is drawn to the fact that this Technical Report provides an approach to conformance and certification methodology for TC 93 that takes into account the diversity of organizations contributing to the work of this committee.

APPROACHES TO CONFORMANCE AND CERTIFICATION TESTING FOR DESIGN AUTOMATION STANDARDS

1 Scope

This Technical Report provides guidelines for test suite specifications and benefits of conformance and certification testing.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10303, *Industrial automation systems and integration – Product data representation and exchange*

IEEE 1003, *IEEE standard for information technology*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 Application Program Interface (API)

program intended to provide a high level of interoperability between different supplier EDA platforms

3.2 Backus-Naur Format (BNF)

format used to describe computer actions through the use of keywords and attributes

3.3 certification

procedure by which a third party gives written assurance that a product, process, or service conforms to specific requirements

3.4 conformance

to be in accordance with some specified standard or specification

3.5 Core Model of the Electronics Domain (CMED)

includes the semantics definitions for various categories of information related to electronic circuit designs

3.6 Electronic Design Automation (EDA)

general term for automation standards related to electronic design

3.7 Electronic Design Interchange Format (EDIF)

format used to exchange design data between different CAD systems, and between CAD systems and printed circuit fabrication and assembly manufacturing facilities

3.8 I/O Buffer Information Specification (IBIS)

modeling data silicon template intended to specify a consistent format that can be parsed by software, allowing each simulation vendor to derive models compatible with their own product