IEEE STANDARDS ASSOCIATION

Corporate Program Case Study

IEEE-SA Electronic Design Automation (EDA) Standards

A robust portfolio of critical standards evolves with the support of IEEE Corporate Standards Program

IEEE 1800™-2009, "SystemVerilog," is an internationally adopted standard that enables interoperability of tools, improves productivity and reduces costs, and overcomes limitations of traditional verification processes. This expands design automation tools and methodologies to meet the increasing complexity of verification. As a result, an entirely new set of verification methodologies were born in a short period of time, exemplifying the rapid adoption of an IEEE standard by industry. System Verilog support increased from 6 companies with 9 products to 137 companies with over 350 products in 24 months. IEEE 1800 was first published in 2005, and work is under way on another update.

IEEE 1801™-2009, "IEEE Standard for Design and Verification of Low Power Integrated Circuits," provides interoperability via a consistent format to specify power design information and portability to low power design flows and data. It also defines consistent semantics between verification and implementation, which means that what is implemented is the same as what has been verified. IEEE 1801™-2009 is receiving broad vendor and user support worldwide, resulting in a rapid growth of solutions providers (from 5 to 33 solutions providers in the 24 months the standard was under development in IEEE). A revision project for IEEE 1801 is ongoing.

With IEEE standardization, industries attain a technological methodology with worldwide influence and a longer life cycle, so they are more willing to invest in that technology for product development. IEEE standards increase user confidence in the longevity they lend to products, avoiding conversion to a different format every year, making design and verification IP reuse possible.

IEEE 1685™-2009, "Standard for IP-XACT, Standard Structure for Packaging, Integrating and Re-Using IP Within Tool-Flows," is the first standard description of Intellectual Property blocks in highly automated design environments and provides the electronics industry with a way to make the use of IP blocks both easier and more affordable. IEEE 1685 describes an XML Schema for meta-data documenting Intellectual Property (IP) used in the development, implementation and verification of electronic systems and an Application Programming Interface (API) to provide tool access to the meta-data. This first IEEE IP-focused standard is available for download at no cost to the worlwide design community via the GET IEEE 1685™ program, sponsored by Accellera, at: standards.ieee.org/about/get/

The IEEE-SA and the IEEE Corporate Standards Program

The IEEE-SA, a globally recognized standards-setting body, develops standards through a consensus process that brings diverse parts of an industry together. It has a portfolio of nearly 900 completed standards and more than 500 in development. The IEEE Corporate Standards Program is an industry-oriented program that supports IEEE-SA corporate membership, performs IEEE-SA outreach, and assists corporations and other organizations in creating consensus standards.

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