

# Synopsys' Open-Source Liberty Format to Incorporate On-Chip Variation Extensions

Collaborating with Standards Board Industry Leaders to Ensure Broad Ecosystem Enablement

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## Highlights:

- OCV extensions help standardize usage of the popular stage-based Advanced OCV (AOCV) modeling approach for 40- and 28-nm
- Liberty Technical Advisory Board expected to finalize and ratify new extensions in November 2012

Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP used in the design, verification and manufacture of electronic components and systems, today announced it intends to incorporate on-chip variation (OCV) extensions in its open-source Liberty™ library format, the de-facto modeling standard for integrated circuit (IC) implementation and signoff. The new extensions will help standardize usage of the popular stage-based Advanced OCV (AOCV) modeling approach for 40- and 28-nm processes nodes. The final format extensions and ratification as part of the Liberty standard will be completed with the guidance and assistance of the Liberty Technical Advisory Board.

The Liberty library format is the semiconductor industry's most widely adopted library standard used by virtually all EDA implementation, analysis and library characterization tools as the library model exchange for timing, noise, power and test behavior. In May 2006, an industry-wide Liberty Technical Advisory Board was formed to facilitate the evolution of the Liberty library modeling standard. The Liberty Technical Advisory Board functions under the auspices of the IEEE Industry Standards and Technology Organization (IEEE-ISTO). Its 14 member companies represent the broad semiconductor industry including the design community, EDA companies, silicon foundries, and semiconductor intellectual property (IP) companies. A complete list of members can be found at [http://opensourceliberty.org/liberty\\_techadvisory.html](http://opensourceliberty.org/liberty_techadvisory.html). Liberty is available for download to the entire semiconductor design community under standard open-source terms. [The latest Liberty syntax specifications and tools can be found at http://www.opensourceliberty.org](http://www.opensourceliberty.org).

"Standardizing the Liberty format extensions through the Liberty Technical Advisory Board allows the design community and EDA tool suppliers an opportunity to contribute and participate in the standardization process," said Rich Goldman, vice president of corporate marketing and strategic alliances, Synopsys. "In the past 2 years, the Liberty Technical Advisory Board has helped guide the ratification of over 10 new additions to Liberty to improve design for low-power flows."

The standardization of on-chip variation extensions via the Liberty Technical Advisory Board will benefit the semiconductor industry by:

- Allowing broad participation from the design community and EDA tool suppliers on final format
- Ensuring a fast path to a standard that meets the growing needs of EDA tool and IP Library providers
- Providing a foundation and structure for future collaboration and evolution of on-chip variation extensions

## Availability

The Liberty Technical Advisory Board is expected to finalize and ratify the OCV extensions to Liberty in November 2012, making it available to open-source licensees shortly thereafter.

- Learn more about Open Source Liberty at: <http://www.opensourceliberty.org>

## About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, system-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has approximately 70 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <http://www.synopsys.com/>.

**Forward Looking Statements**

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including statements regarding the expected incorporation of the OCV extensions into the Liberty library format and the expected finalization and ratification of the OCV extensions by the Liberty Technical Advisory Board. These statements are based on current expectations and beliefs. Actual results could differ materially from those described by these statements due to risks and uncertainties including, but not limited to, unforeseen production delays, failure to perform as expected, errors or defects and other risks detailed in Synopsys' filings with the U.S. Securities and Exchange Commission, including those described in the "Risk Factors" section of Synopsys' Quarterly Report on Form 10-Q for the fiscal quarter ended July 31, 2012.

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