Imec and Synopsys Collaborate on 3D Stacked IC Development

Synopsys TCAD Tools Accelerate Development of Through-Silicon Via Technology

MOUNTAIN VIEW, Calif., March 9 /PRNewswire-FirstCall/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, and the Belgian nanoelectronics research center, imec, today announced they have entered into a collaboration to use Synopsys TCAD (Technology Computer-Aided Design) finite-element method tools for characterizing and optimizing the reliability and electrical performance of through-silicon vias (TSVs). The collaboration will accelerate the development of 3D stacked IC technologies.

While considered an emerging technology, 3D stacked IC complements conventional transistor scaling and allows multiple chips to be stacked and integrated into a single package. This technology reduces form factor and power consumption, and increases bandwidth of inter-chip communication by minimizing connections through the circuit board with high parasitic capacitance. As with other innovative technologies, 3D stacked IC introduces a number of new issues that can potentially affect its reliability and performance. The collaborative research to address these issues will take place at imec, where silicon wafers with test structures will be manufactured and tested, and Synopsys' TCAD tools will be used to model the TSVs in the chip stacks to optimize 3D stacked IC performance and reliability.

"We consider the availability of Synopsys' silicon-proven finite-element method tools to be an integral part of deploying 3D stacked IC technology. This collaboration will speed up the development of through-silicon via technologies and will in turn facilitate the adoption of 3D stacked ICs in the semiconductor industry," said Luc Van den hove, president and chief executive officer of imec.

"This collaboration with imec affords us the opportunity to validate Synopsys' industry-leading TCAD simulation tools for addressing the emerging 3D stacked IC technology. Imec is an ideal collaboration partner for this effort given its excellent research facilities, industry focus and expertise," said Howard Ko, general manager and senior vice president of the Silicon Engineering Group at Synopsys.

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 more than 65 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at http://www.synopsys.com/.

About imec

Imec performs world-leading research in nanoelectronics. Imec leverages its scientific knowledge with the innovative power of its global partnerships in ICT, healthcare and energy. Imec delivers industry-relevant technology solutions. In a unique high-tech environment, its international top talent is committed to providing the building blocks for a better life in a sustainable society.

Imec is headquartered in Leuven, Belgium, and has offices in Belgium, the Netherlands, Taiwan, US, China and Japan. Its staff of more than 1,750 people includes over 650 industrial residents and guest researchers. In 2008, imec's revenue (P&L) was 270 million euro. Further information on imec can be found at www.imec.be.

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 benefits of the collaboration between imec and Synopsys. 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, engineering difficulties and other risks as identified in the section of Synopsys' Annual Report on Form 10-K for the fiscal year ended October 31, 2009, and subsequent forms 10-Q, entitled "Risk Factors."

Synopsys is a registered trademark of Synopsys, Inc. Any other trademarks or registered trademarks mentioned in this release are the intellectual property of their respective owners.

Imec is a registered trademark for the activities of IMEC International (a legal entity set up under Belgian law as a "stichting van openbaar nut"), imec Belgium (imec vzw supported by the Flemish Government), imec the Netherlands (Stichting imec Nederland, part of Holst Centre which is supported by the Dutch Government) and imec Taiwan (imec Taiwan Co.).

Editorial Contacts:

Sheryl Gulizia
Synopsys, Inc.
650-584-8635
sgulizia@synopsys.com

Lisa Gillette-Martin
MCA, Inc.
650-968-8900 x115
lgmartin@mcapr.com

Katrien Marent
Imec
+ 32 1628 18 80
Katrien.marent@imec.be

SOURCE Synopsys, Inc.