Rohde & Schwarz and Synopsys Form Strategic Collaboration for LTE/LTE-Advanced Design Acceleration

Integrated Design and Measurement Technology Bridges LTE/LTE-Advanced Algorithm Design and System Integration

- Rohde & Schwarz and Synopsys are collaborating to accelerate LTE and LTE-Advanced wireless system design and verification while reducing risk for standards compliance.
- Synopsys contributes its strength in algorithm design and verification solutions, including standard-compliant reference libraries.
- Rohde & Schwarz contributes proven test and measurement solutions.
- Synopsys' LTE and LTE-Advanced libraries are verified against Rohde & Schwarz's test and measurement solutions, increasing designer confidence in achieving standards compliance.
- The collaboration reduces time-to-first-test and creates more efficient interaction between algorithm designers and hardware testers.

MUNICH and MOUNTAIN VIEW, Calif., May 23, 2011 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, and Rohde & Schwarz, a premium supplier of test and measurement solutions to the wireless and cellular industry, today announced the formation of a strategic collaboration to accelerate the design and verification of chipsets, handsets and base stations that serve the next-generation LTE and LTE-Advanced standards. Synopsys is contributing to the collaboration its strength in algorithm design and verification solutions, including standard-compliant reference libraries. Rohde & Schwarz is contributing its signal generation expertise and proven test and measurement solutions that are used worldwide in research and development, verification, production and service.

Synopsys' LTE Library for its System Studio and SPW algorithm design products includes models of the transmitter and the physical channel as defined in the standard, as well as functional models of ideal receivers that can serve as references. The library provides an end-to-end simulation chain for both uplink and downlink transmission and reception. Through the collaboration, Synopsys' LTE library, including the upcoming LTE-Advanced enhancements, will be verified against Rohde & Schwarz's test and measurement solutions, greatly increasing design confidence for algorithm designers needing to achieve standards compliance. Starting with signal generators, Rohde & Schwarz test equipment will be able to automatically derive its configuration from the Synopsys simulation setup. Since typical configurations consist of more than 100 parameters, this integration significantly reduces the time it takes to achieve a correct setup. It also reduces the risk of configuration inconsistencies that often result in losing days of system integration time in the lab.

"As long-time users of both Synopsys' SPW algorithm design and analysis products and the Rohde & Schwarz signal generator solutions, a combined compliance approach significantly reduces the time to the first test and enables the most efficient interaction between our algorithm designers and system integration engineers," said Robert Peloso, Director of Engineering Management at InterDigital. "In making robust contributions to the standards bodies and other partners, we rely on standard-compliant signal generation in simulation and hardware testing. Ensuring full compliance between both simulation and hardware testing gives us an additional level of confidence in this verified approach. Just as important, bringing our advanced solutions in to the market more rapidly helps to proliferate the advances in wireless technologies more rapidly."

LTE and LTE-Advanced, standardized by the 3rd Generation Partnership Project (3GPP), are evolutionary advancements of today's mobile communication technologies such as GSM and WCDMA/HSPA. The primary goal for LTE/LTE-Advanced is to serve the surging demand for mobile broadband data by increasing peak and average data throughput, as well as to significantly reduce latency. These improvements, combined with a simpler network architecture, lower operation and maintenance costs for the service provider.

"Synopsys has been a supplier to leading wireless algorithm design teams since the early days of GSM. The collaboration with Rohde & Schwarz enables us to deliver additional customer value by providing the fastest simulation technology and validated reference models," said John Koeter, vice president of marketing for IP and systems at Synopsys. "With this joint design-to-lab technology, we expect our customers to realize a significant reduction in time-to-volume."

"With this strategic collaboration, we are able to provide a complete solution that seamlessly bridges the gap between system design and hardware prototype verification," said Wolfgang Kernchen, director of test & measurement subdivision for signal generators, power meters, audio analyzers at Rohde & Schwarz. "System simulation customers will benefit from Rohde & Schwarz's strength in test and measurement, and test equipment users will be able to minimize efforts to verify real silicon against the simulation results. We are happy that we have found a strategic partner that stands for the same values as Rohde & Schwarz and are looking forward to a great business relationship that will add unique value in the market."

Availability

The validated Synopsys LTE library will become available with the 2011.06 release. This will also include the initial version of LTE-Advanced. Access is free to all Synopsys LTE library customers under maintenance. The LTE library works for both SPW and System Studio.

The automatic configuration of Rohde & Schwarz signal generators from Synopsys' algorithm simulation tools, SPW and System Studio, will become available to select customers in June 2011, with general availability expected in October 2011.

For more information, see:
http://www.synopsys.com/Prototyping/VirtualPrototyping/DigitalSignalProcessing/Pages/lte-collaboration.aspx

About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation as well as secure communications. Established more than 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. It has approx. 7400 employees and achieved a net revenue of euro 1.3 billion in fiscal year 2009/2010 (July 2009 to June 2010). Company headquarters are in Munich, Germany. Visit Rohde & Schwarz online at http://www.rohde-schwarz.com/.

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/.

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