Synopsys and Xilinx Collaborate on the Industry's First Methodology Manual for FPGA-Based Prototyping of SoC Designs

Manual Documents Best Practices in Design-for-Prototyping

MOUNTAIN VIEW, Calif. and SAN JOSE, Calif., March 2, 2011 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, and Xilinx, Inc. (Nasdaq: XLNX), the industry leader in programmable logic, today announced the availability of the *FPGA-Based Prototyping Methodology Manual* (FPMM), a practical guide to using FPGAs as a platform for system-on-chip (SoC) development. The FPMM captures valuable design and verification expertise contributed by engineering teams from BBC Research & Development; Design of System on Silicon, S.A. (DS2); Freescale Semiconductor; LSI, Inc.; NVIDIA Corp.; STMicroelectronics; and Texas Instruments (TI), which have successfully employed FPGA-based prototyping to accelerate complex ASIC and SoC development projects.

The manual covers all aspects of FPGA-based prototyping, including understanding the challenges and benefits of prototyping, the implementation of a SoC design in FPGA, and finally, its use for software and system validation. Synopsys and Xilinx expect the FPMM to be the catalyst for an online, interactive FPGA-based prototyping community, hosted at https://www.synopsys.com/fpmm, where prototypers can raise challenges and exchange best practices.

FPMM authors Doug Amos and René Richter of Synopsys and Austin Lesea of Xilinx are experts in FPGA technology and prototyping of designs using FPGAs. Recognizing that SoC designs are usually created for ASIC technology implementation, and therefore present specific challenges for implementation in one or more FPGA devices, the authors created a unique reference guide that will help not only first-time prototypers, but also experienced teams and project leaders. In addition to surveying the range of prototyping options, from virtual prototyping through building custom boards to purchasing complete prototyping systems, the FPMM outlines a methodology called Design-for-Prototyping. Design-for-Prototyping integrates FPGA-based prototyping seamlessly into the ASIC/SoC project so that the design can be more readily implemented and made available at the earliest opportunity to the end-users. This approach delivers productivity benefits by connecting to system-level tools like virtual prototyping for earlier software development and during the crucial later stages of a project when hardware and software are integrated for the first time.

"The FPMM will be an invaluable resource to ASIC designers and prototypers because it is the industry's first attempt to collect in one volume information to outline the challenges and solutions for successfully prototyping ASIC designs in FPGA hardware," said Vincent Ratford, senior vice president of worldwide marketing and business development at Xilinx. "Xilinx® Virtex® FPGA devices have been extensively used for ASIC prototyping because of their high logic capacity, and we expect that trend will continue with the delivery of 2 million logic element devices in our 28nm Virtex-7 family."

"Synopsys has a long history of publishing methodology manuals that have been widely used by designers to help them be more productive. The collaboration between Synopsys and Xilinx, with contributions by noted industry leaders in prototyping, has made it possible to capture best practices in the FPMM. This has paved the way for other users to learn from this experience and help speed system validation," said John Chilton, senior vice president of marketing and strategic development, Synopsys.

About the Manual and Availability

The FPMM contains 15 comprehensive chapters and two appendices that cover real-world examples. The manual is organized into chapters that parallel the tasks and decisions faced during an FPGA-based prototyping project. The chapters are also designed to stand alone, allowing the manual to be used as a reference.

For more information on the FPMM, including how to purchase a copy through Amazon.com or to download a free eBook version, please go to the FPMM website at https://www.synopsys.com/fpmm. Additionally, to learn more about the other methodology manuals and educational publications produced by Synopsys Press, visit https://www.synopsys.com/synopsyspress.

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 https://www.synopsys.com.

About Xilinx

Xilinx is the worldwide leader in complete programmable logic solutions. For more information, visit http://www.xilinx.com

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