LSI Logic Adopts Synopsys' New Design Planning Capabilities for Industry-Leading ASICs

Automated Macro Placement and Power Network Synthesis Reduces Design Planning Time Up to 10x

PRNewswire-FirstCall
MOUNTAIN VIEW, Calif.

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, announced today that LSI Logic has integrated significant new capabilities of the Synopsys' JupiterXT™ Galaxy™ Design Planning solution into its FlexStream™ ASIC design flow. The key new features include automated macro placement and power network synthesis. The new patented placement algorithm in the JupiterXT solution automatically places both hard macros and standard cells, which also eliminates manual iterations. The new power network synthesis and analysis functions enable faster design of power networks that meet voltage drop and electro-migration requirements. These new features in the JupiterXT solution are highly correlated to the Synopsys' Astro™ place and route physical design system, thereby minimizing design iterations and time to results. Using these new capabilities, LSI Logic has produced routable floorplans that met timing in less than one tenth of the time previously required.

"LSI Logic offers a world-class FlexStream ASIC design flow that continues to address our customers' demand for best quality of results, smallest design size and reduced time to tapeout," said Ameesh Desai, senior director of Design Technology Group at LSI Logic. "The unique macro placement and power synthesis capabilities of the JupiterXT solution provide a significant productivity improvement to our design planning flow. On designs with hundreds of embedded macros, even scripted macro placement and power network creation were not producing design planning cycle times as short as desired. The new automation capabilities in the JupiterXT product greatly enhance our ability to deliver quality results quickly -- offering excellent correlation to Astro place-and-route and significant reduction in design iterations."

LSI Logic uses the JupiterXT product for both prototyping and detailed floorplanning. During prototyping, the fast auto cell and macro placer in the JupiterXT product helps designers identify physical partitions and initial macro placements. In less than two hours for a one-million-instance design, designers were able to detect and correct partitioning, route and timing issues, and optimize for the smallest routable floorplan. Once partitions are established, designers then use the automated placement refinement capabilities in the JupiterXT product to finalize placement of embedded macros. Using a combination of power network analysis and synthesis, designers refine the power network to account for the final floorplan. LSI Logic has seen excellent correlation between early estimates in the JupiterXT product and final routing results in the Astro™ product.

"For LSI Logic and its ASIC customers, the JupiterXT product has been proven to offer significantly improved automation capabilities that speed design planning," said Antun Domic, senior vice president and general manager of Synopsys' Implementation Group. "Synopsys' tightly integrated floorplanning, physical design and timing signoff engines ensures a more predictable flow, speeding convergence, and reducing customer risk of costly schedule slips. As a result of adopting the new JupiterXT product capabilities into its ASIC flow, LSI Logic is now able to take advantage of the Galaxy Design Platform's complete, convergent and concurrent design solution."

About Synopsys

Synopsys, Inc. is a world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading semiconductor design and verification platforms and IC manufacturing software products to the global electronics market, enabling the development and production of complex systems-on-chips (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time-to-market for its customers. Synopsys is headquartered in Mountain View, California, and has more than 60 offices located throughout North America, Europe, Japan and Asia. Visit Synopsys online at http://www.synopsys.com/.

NOTE: Synopsys is a registered trademark of Synopsys, Inc. and Astro, Galaxy and JupiterXT are trademarks of Synopsys. All other trademarks or registered trademarks mentioned in this release are the intellectual property of their respective owners.

SOURCE: Synopsys, Inc.

CONTACT: Nancy Renzullo of Synopsys, Inc., +1-650-584-1669, or
renzullo@synopsys.com; or Julie Crabill of Edelman Public Relations,
+1-650-968-4033, or Julie.Crabill@edelman.com

Web site: http://www.synopsys.com/