Synopsys Galaxy Design Platform Enables First-Pass Silicon Success of Winbond's Latest MPEG-4 Multimedia Chips

Galaxy Delivers Fast, Accurate Signal Integrity Closure for Today's Largest, Most Complex Designs

Synopsys Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, announced that Winbond Corporation has achieved first-pass silicon success using Synopsys' Galaxy™ Design Platform for its latest 130-nanometer (nm), MPEG-4 multimedia chips. The Galaxy platform includes a highly correlated solution for prevention, repair and sign-off that, along with TSMC in-house libraries for noise analysis, helps customers such as Winbond to achieve fast, accurate signal integrity (SI) closure.

Winbond's MPEG-4 chip is representative of leading-edge 130-nm designs, where utilization of greater than 80 percent of the silicon area is fast becoming the norm. Congestion and increased risk of SI issues are more prevalent in chips of this density, and can contribute to significant increases in chip failure, declines in yield at target frequencies, and reduced performance.

"At Winbond, we recognize signal integrity can be a device-and-yield- killer at 130-nanometer design and below," said Shang-E Tai, assistant vice president, Winbond. "Using Synopsys Galaxy platform, we signed off our MPEG-4 designs. In full production, we are expecting it to help us attain maximum yield at our target device frequency."

Anchored by Synopsys' Design Compiler®, Physical Compiler®, Astro™, PrimeTime® and Star-RCXT™ products, the Galaxy platform delivers a highly correlated solution for prevention of the majority of SI issues caused by crosstalk, noise, voltage drop and electromigration. Addressing the remaining few noise violations post-route is aided by the Galaxy platform's automatic repair flow.

"Synopsys and TSMC have partnered to ensure that our mutual customers targeting TSMC's advanced technologies can take advantage of TSMC Reference Flow 5.0 and TSMC in-house library to achieve the best quality of results, accuracy and time to volume," said Edward Wan, TSMC's senior director of design services product marketing. "Winbond's silicon success demonstrates that our combined flow and TSMC in-house libraries are proving to be seamlessly integrated and highly effective for the most complex designs."

"Synopsys continues to work with leading providers and invest in technology innovations to ensure first-pass silicon success of our customers' latest designs," Bijan Kiani, vice president of marketing, Synopsys Implementation Group. "The success with TSMC and Winbond demonstrates our continued commitment to a design platform that delivers the highest quality of results and fastest time to results with maximum yield."

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 https://www.synopsys.com/ .

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