Synopsys Introduces Galaxy Custom Router

New Shape-Based Router Brings Automatic Custom Net Routing to IC Compiler Users

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Highlights:

- IC Compiler Custom Co-Design solution adds new mixed-signal routing technology
- Automates routing for custom nets, such as shielded buses, differential pairs and more
- Supports 20-nm and smaller process technology rules, including double-patterning

Synopsys, Inc. (Nasdaq: SNPS), a global leader providing software, IP and services used to accelerate innovation in chips and electronic systems, today announced advances in its Galaxy™ Implementation Platform with the introduction of Galaxy Custom Router technology. The new Galaxy Custom Router provides automatic routing for complex high-speed digital and mixed-signals nets that require carefully crafted, high-quality layouts, such as shielded buses or nets, differential pairs, twisted pairs and matched resistance and capacitance (RC) routing. This new shape-based router delivers 2 to 5X productivity improvements over manual efforts and is ready for use with advanced designs by offering support for 20-nanometer (nm) and smaller process technology design rules, including double-patterning.

Galaxy Custom Router enables the IC Compiler™ solution users to create high-quality routing patterns for difficult routing tasks, such as differential pair routing, shielded routing (including bus and differential pair shielding), matched RC routing, river routing and point-to-point coaxial routing. Users can pre-route sensitive nets using a rich set of custom routing options and continue with IC Compiler to complete the physical implementation.

Galaxy Custom Router supports advanced process technology nodes, including 20-nm. For example, it automatically creates colorable routing patterns. It also supports variable track grids—a requirement for some advanced-node processes. Galaxy Custom Router adheres to constraints specified in IC Compiler, including default and non-default design rules, routing grids, route keep-outs, route blockages and route guides.

"Increasingly, mixed-signal and digital designs require hand-crafted-quality routing for sensitive analog and high-speed digital signals," said Paul Lo, senior vice president and general manager of the Synopsys Analog/Mixed-Signal Group. "Galaxy Custom Router is a key technology for addressing this need, and a significant milestone toward realizing our vision of a unified solution for digital and custom system-on-chip design."

About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) accelerates innovation in the global electronics market. As a leader in electronic design automation (EDA) and semiconductor IP, its software, IP and services help engineers address their design, verification, system and manufacturing challenges. Since 1986, engineers around the world have been using Synopsys technology to design and create billions of chips and systems. Learn more at https://www.synopsys.com.

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