GSI Technology Switches to Synopsys' Custom Compiler for FinFET Design

In-Design Assistants Reduce Design Iterations

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Highlights:

- Custom Compiler replaces full flow of existing custom design tools at GSI Technology
- In-Design Assistants reduce design iterations
- Ease of adoption was critical for enabling quick deployment

Synopsys, Inc. (Nasdaq: SNPS) today announced that GSI Technology has switched to Custom Compiler™. Custom Compiler is Synopsys' newly unveiled solution (see today's news release). GSI designs, develops and markets a broad range of high-performance memory products for networking, military, medical and automotive applications. In preparation for their move to a FinFET design, GSI decided to re-evaluate their custom design flow. After evaluating several solutions in the market, they selected Custom Compiler because of its innovative visually-assisted automation technologies and ability to improve FinFET productivity. Of particular importance to GSI was Custom Compiler's In-Design Assistants' ability to help prevent electromigration and IR drop issues, which are a significant concern in FinFET designs. GSI also adopted Synopsys HSPICE®, FineSim®, StarRC™ and IC Validator tools, which, combined with Custom Compiler, gave GSI a complete FinFET-ready custom design flow.

"To get the best out of the FinFET process technology, we needed a design flow that was tailored for FinFET," said Randy You, CAD manager at GSI. "Custom Compiler provides such a flow. For example, the In-Design Assistants in Custom Compiler enable us to deal with the design complexity of the FinFET process by reducing unnecessary design iterations and improving productivity."

"An important criteria in our decision to replace our previous solution with Custom Compiler was the collaboration between Synopsys and our foundry of choice, especially for FinFET technologies," said Patrick Chuang, senior vice president of GSI. "The companies' collaboration gives us confidence that Custom Compiler can provide a FinFET-ready flow."

In-Design Assistants reduce costly design iterations by catching physical and electrical errors before signoff verification. Custom Compiler includes a built-in design rule checking (DRC) engine, which is extremely fast and can be active all the time. In addition to the DRC engine, electromigration checking, and resistance and capacitance extraction are all natively implemented in Custom Compiler. Unlike other "electrically-aware" tools, Custom Compiler's extraction is based on the Synopsys gold-standard StarRC engine.

"GSI's decision to adopt the full portfolio of Synopsys' custom solution, including Custom Compiler, underscores the effectiveness of the tool suite for FinFET design," said Antun Domic, executive vice president and general manager of the Design Group at Synopsys. "Visually-assisted automation like the In-Design Assistants is key to closing the FinFET productivity gap."

About Custom Compiler

Custom Compiler shortens the time it takes to complete FinFET design tasks from days to hours. Its visually-assisted automation leverages the graphical use model familiar to layout designers while eliminating the need to write complicated code and constraints. With Custom Compiler, routine and repetitive tasks are dealt with automatically without extra setup. Custom Compiler's visually-assisted automation provides four types of assistants: Layout, In-Design, Template and Co-Design. Layout Assistants speed layout with user-guided automation of placement and routing. In-Design Assistants reduce design iterations by catching physical and electrical errors before signoff verification. Template Assistants help designers reuse existing know-how by making it easy to apply previous layout decisions to new designs. Co-Design Assistants combine the IC Compiler™ place and route system and Custom Compiler into a unified solution for custom and digital implementation. Custom Compiler is based on the industry standard Open Access database. It provides an open environment spanning schematics, simulation analysis and layout. Unified with Synopsys' circuit simulation, physical verification and digital implementation tools, Custom Compiler provides a comprehensive custom design solution. For more information about Custom Compiler, visit https://www.synopsys.com/implementation-and-signoff/custom-implementation/custom-compiler.html .

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic

products and software applications we rely on every day. As the world's 16th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and is also growing its leadership in software quality and security solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest quality and security, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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