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## **Triune Systems Picks Silicon Frontline Technology to Optimize Power Device Design, Reduce Carbon Footprint**

*Collaboration optimizes electronic design efficiency and reliability*

**Los Gatos, CA** – March 1, 2010 – [Silicon Frontline Technology](#), Inc. (SFT), an Electronic Design Automation (EDA) company in the post-layout verification market, announced today that [Triune Systems](#), a company focused on green integrated solutions, selected Silicon Frontline’s 3D extraction products, **F3D (Fast 3D)** for fast 3D extraction and **R3D (Resistive 3D)** for 3D extraction and analysis of its large resistive power device design to reduce their carbon footprint (or energy consumption).

“We focus on offering integrated circuits and design services that reduce the carbon footprint of end equipment products and designs,” said Ross Tegatz, CEO at Triune Systems. “Silicon Frontline’s products enable us to cost effectively provide the highest level of energy transfer from both traditional and alternative power sources. F3D and R3D provide a fast and accurate power back-annotation of any design, which eliminates reliability issues within the design, as well as minimizes losses due to parasitic effects. For example, metal slotting is becoming more intensive in the advanced technologies and this creates more exposure to potential weak spots, but R3D allows the optimal location for slotting to be easily determined.”

“To address our customers’ post-layout verification needs, we focus on guaranteed accurate post-layout verification technology, so that our customers can meet the specifications of their low power designs,” remarked Dermott Lynch, VP Marketing at Silicon Frontline. “We are pleased to have our goal-- reducing the carbon footprint of silicon designs—match with Triune’s and have our products become instrumental in meeting their energy optimization goals.”

F3D was chosen for providing nanometer and Analog Mixed Signal (A/MS) design accuracy and R3D for its ability to improve the reliability and efficiency of semiconductor power devices.

The technology in Silicon Frontline’s products is a combination of a rigorous 3D extraction method with a highly efficient 3D geometric engine yielding significant performance improvement and handling additional issues such as thickness variation due to CMP, width variation due to optical and

other manufacturing effects. The software generates a fully annotated SPICE netlist with parasitics for use by downstream tools. It is used by CAD, TCAD and post-layout verification engineers.

F3D is ideally suited for sensitive analog and A/MS circuits where coupling is a challenge – ADCs, DACs, circuits with differential signals, MIM/MOMCaps and 3D devices, image sensors, RF and high speed designs and for circuits manufactured at advanced technology nodes, such as 65, 40 and 32nm. (Note: it has value in 90nm to 350nm nodes as well). R3D target applications include discrete or embedded power devices, where efficiency and reliability are important, as well as designs requiring analysis of large metal interconnects.

### **About Triune Systems**

[Triune Systems](#) LLC, founded in 2006, is a privately-held company that designs, tests, manufactures, and markets analog integrated circuits (ICs) specializing in mixed-signal power and signal conditioning and System-on-Chip (SoC) circuits. The Company's highly seasoned and experienced IC development team leverages fabless production and strong supply chain partnerships to provide customers with differentiated products and the best performance, price and value. Triune System's world-class team has over 200 years of semiconductor experience and over 70 patents in the areas of semiconductor devices, ESD, analog circuits, and high voltage system architecture that have been used in the consumer, industrial, automotive and medical market segments. For more information, please visit [www.triunesystems.com](http://www.triunesystems.com).

### **About Silicon Frontline**

[Silicon Frontline Technology](#), Inc. provides post-layout verification software that is *Guaranteed Accurate* and works with existing design flows from major EDA vendors. Using new 3D technology, the company's software products improve silicon quality for standard and advanced nanometer processes. To date, Silicon Frontline customers are among the top 20 semiconductor companies, and the company's technology has been endorsed by a number of the leading foundries.

For more information please visit [www.siliconfrontline.com](http://www.siliconfrontline.com).

For sales or general assistance, please email [info@SiliconFrontline.com](mailto:info@SiliconFrontline.com) or [sft@marubeni-sys.com](mailto:sft@marubeni-sys.com).

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Notes to editors:

Acronyms and Definitions

3D: 3 Dimensional

ADC: Analog to Digital Converter

A/MS: Analog Mixed Signal

CAD: Computer-Aided Design

CMP: Chemical Mechanical Polishing

DAC: Digital to Analog Converter

EDA: Electronic Design Automation

MOMCap: Metal-Oxide-Metal capacitor

MIMCap: Metal-Insulator-Metal capacitor

Power Device: Power devices are semiconductor devices used as switches or rectifiers in circuits for electronic circuits.

SOC: System on Chip

TCAD: Technology Computer-Aided Design

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