X-FAB Uses Silicon Frontline's Post-Layout Extraction Software to Enhance its Advanced Mixed-Signal Process Design Kit (PDK)

Use of SFT's R3D software for XH018 process design kit improves high-voltage and driver characteristics of mixed-signal SOC designs

Campbell, Calif.– February 2, 2012 – Silicon Frontline Technology, Inc. (SFT), an Electronic Design Automation (EDA) company in the post-layout verification market, announced today that X-FAB Silicon Foundries has used SFT's **R3D** (Resistive 3D) software for X-FAB's 0.18 micrometer high-voltage process (XH018), providing improvements in reliability and efficiency. X-FAB is the world's leading foundry group for More-than-Moore semiconductor applications.

X-FAB's XH018 modular mixed-signal CMOS technology can be integrated with high-voltage (HV) and non-volatile memory (NVM) modules, making it ideal for SOC applications in the automotive market and embedded NVM applications in the communications, consumer and industrial markets. R3D is used for extraction and analysis of power devices. The combination of SFT's R3D software and X-FAB's 0.18 micrometer process supports advanced electronic designs targeting mixed-signal applications with HV and NVM modules.

"Our customers are seeking ways to design more reliable and efficient SOCs for their automotive, power management and NVM embedded applications," stated Thomas Ramsch, Director Design Support at X-FAB. "After extensive evaluations, we decided to start using Silicon Frontline's R3D software for our XH018 process. R3D enhances our customers' SOC design quality and time to market with its powerful analysis and visualization of current density, potential distribution and IR drop. Therefore, we will offer XH018 Pcells for driver integration as part of our PDK by early March, giving customers a way to check their layout, optimize Rdson and do reliability checks."

X-FAB manufactures wafers for automotive, industrial, consumer, medical, and other applications on modular CMOS and BiCMOS processes in geometries ranging from 1.0 to 0.13 micrometers, and offers special BCD, SOI and MEMS long-lifetime processes. It is recognized for solid, specialized expertise in advanced analog and mixed-signal process technologies, and maintains a high level of responsiveness, service and technical support for its customers.

"We are proud to add X-FAB to the list of the leading foundries that have qualified our 3D post-layout software for their advanced mixed-signal processes," said Yuri Feinberg, SFT CEO. "We believe that our R3D's analysis software is ideal for improving X-FAB's customers' design efficiency and reliability."

About R3D

Silicon Frontline's R3D combines 3D extraction with a new analysis engine to handle the accuracy and capacity requirements with a fast turnaround. To date, R3D has been adopted by more than 20 customers and applied to MOS, DMOS, LDMOS, vertical DMOS, waffle-style and GaN HEMT designs.

About Silicon Frontline's Products and Customers

F3D (Fast 3D) is used for fast 3D extraction and R3D (Resistive 3D) is used for 3D extraction and analysis of large resistive structures. F3D is chosen for its nanometer and Analog Mixed Signal (A/MS) design verification accuracy, and R3D for analysis that leads to improvements in the reliability and efficiency of semiconductor power devices. H3D is the industry's first commercial hierarchical 3D extractor, for post-layout verification. H3D offers hierarchical parasitic extraction, hierarchical netlisting, unlimited capacity, and field-solver accuracy.

SFT's products work with design flows from the leading EDA suppliers. The company's customers are in North America, Japan, Asia and Europe. Target markets include memory, Analog Mixed Signal (A/MS), image sensors, power devices and high-speed nanometer designs.

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. For more information please visit www.siliconfrontline.com. For sales or general assistance, please email info@SiliconFrontline.com.

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Notes to editors:
Acronyms and Definitions

A/MS:	Analog Mixed Signal
BCD:	BiCMOS CMOS DMOS
DMOS:	Double-diffused Metal Oxide Semiconductor
EDA:	Electronic Design Automation
GaN:	Gallium Nitride
HEMT:	High Electron Mobility Transistor
HV:	High Voltage
LDMOS:	Laterally Diffused Metal Oxide Semiconductor
MEMS:	Microelectromechanical Systems
MOS:	Metal Oxide Semiconductor
NVM:	Non-Volatile Memory
PDK:	Process Design Kit
R3D:	Resistive 3D
Rdson:	Resistance from drain to source
SOC:	Systems on Chip
SOI:	Silicon on Insulator