



## **Trixell Adopts Silvaco TCAD-based Parasitic Extraction Solution for Development of New Display Technology**

April 2, 2020

**Santa Clara, California – April 2, 2020** – Silvaco, Inc. today announced that Trixell has adopted its TCAD-based parasitic extraction flow for the development of their next-generation displays to ensure that manufacturing specifications are met.

Imaging display technology uses an array of thin-film transistors (TFTs) that require the application of ultrathin layers of semiconductor and insulator material when manufactured. These ultrathin layers should conform to the contour of the underlying material during wafer fabrication. The resulting specific shape of those layers impact the parasitic resistance and capacitance (RC) of the circuit and its performance. The ability to model this conformal deposition is an essential requirement in modern TFT technology to capture and simulate, with high precision, the parasitic effects to ensure that manufacturing specifications are met.

Silvaco's software suite adopted by Trixell includes Expert for layout visualization, Hipex for RC parasitic extraction, Guardian NET for device parameter netlist extraction, and Gateway for schematic capture. Hipex uses a 3D representation of the device layout including conformal deposition, and it employs a 3D field solver technology for very accurate RC parasitic extraction required by modern TFT technology. Guardian NET extracts a complete circuit netlist annotated with parasitics ready to be simulated with Silvaco SmartSpice.

"Trixell builds displays for X-ray imaging, and we have demanding performance-driven feature and manufacturing requirements," said Simon Marecaux, Design Leader, at Trixell. "We chose Silvaco for their complete extraction solution for TFT sensors, which is reliable, consistent, and well-supported. Our prior toolset was a collection of point tools that did not meet our requirements for consistent analysis and product support. The technical team at Silvaco has been excellent and quickly brought up our new analysis flow."

"Trixell's requirements for simulating accurate parasitic extraction to optimize the performance of their technology is an ideal match for Silvaco's field solver-based extraction technology," said Eric Guichard, GM, TCAD division at Silvaco. "Our TCAD for display solutions not only cover extraction but include process and device simulation down to the atomic level. We look forward to providing additional capabilities to Trixell beyond their current circuit extraction and simulation requirements."

### **About Silvaco, Inc.**

Silvaco is a leading EDA tools and semiconductor IP provider used for process and device development for advanced semiconductors, power IC, display, and memory design. For over 30 years, Silvaco has enabled its customers to develop next generation semiconductor products in the shortest time with reduced cost. Silvaco is a technology company outpacing the EDA industry by delivering innovative smart silicon solutions to meet the world's ever-growing demand for mobile intelligent computing. The company is headquartered in Santa Clara, California and has a global presence with offices located in North America, Europe, Japan, and Asia

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