Mirabilis Design and E-Elements Technology team up to provide concept-to-implementation design flow for AI applications.

Mirabilis Design, leader in system simulation, joins forces with E-Elements, a leading service provider in system design, to create a breakthrough design solution that drastically reduces the turnaround time of AI software development for the medical, robotics, and autonomous driving industries.

The joint solution utilizes ARM-based embedded systems as the AI software acceleration engine. VisualSim AI design kit, jointly delivered by Mirabilis Design and E-Elements, introduces a design optimization and test platform for software developers to create highly efficient AI applications to be shipped on commercial Processors, and Xilinx Zynq and Versal FPGAs. VisualSim AI design kit contains a software trace generator for the Python AI code, virtual multi-core ARM platform, and interfaces for Ethernet, PCIe and cameras. This platform allows the software engineer to measure the response times and throughput of the AI application by making code changes and testing the performance on this virtual platform. The exploration platform is fully automated and allows for any engineers to run iterations of software performance optimization before committing to the final SoC/FPGA implementation by system hardware engineers. The kit extends the support to PYNQ framework, enabling Python productivity for Xilinx FPGA users.

“SoC-based FPGAs are well-suited for inference in AI applications like digital imaging, industrial robotics and autonomous cars. It was extremely hard to predict performance bottlenecks of a specific AI software deck before it actually ran on a specific FPGA device. I am proud that VisualSim PYNQ design kit jointly created by E-Elements and Mirabilis Design solves the prediction problem and expedites the product’s time to market. ”
- said Young Wang, CEO of E-Elements Technology.

“VisualSim has been widely used in the electronic design industry to predict system performance. Software developers have a hard time predicting the performance and efficiency of the Python code on the ARM device. AI speed-up can be evaluated instantly during software development, thus demonstrating another great example of Mirabilis Design’ commitment to driving technology leadership. ”
- said Deepak Shankar, Founder, Mirabilis Design.

Availability
VisualSim AI Design Kit will be available in Q2’2021 for early access customers.

About E-Elements

Founded in 2004, the company aims at establishing long-term strategic partnership with world-leading FPGA/SOC manufacturers to offer leading SOC/FPGA/ASIC design services to customers with high-tech and competitive solutions and cooperate with universities, research institutes and enterprises on new technology popularization.

About Mirabilis Design

Mirabilis Design, a Silicon Valley company, provider of system architecture solutions and service; designs cutting edge software solutions that identify and eliminate risks in product performance. Its flagship product, VisualSim is a system-level modeling, simulation, and analysis environment that relies on libraries and application templates to vastly improve model construction and time required for analysis.

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