Elektrobit and Synopsys Collaborate to Accelerate Automotive Electronic System Virtual Development

Companies Shortening Automotive Development Cycle by Enabling Transition from Physical to Virtual System Testing

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Highlights:

- Collaboration enables faster deployment of virtual environments at tier 1 and OEM companies
- Using Synopsys VDKs enabled Elektrobit to port its AUTOSAR operating system up to 12 months ahead of silicon
- Development of a concept virtual ECU based on the NXP S32 Automotive Processing Platform enables demonstration of faster interactive development and regression testing
- Solution is already in process of being deployed at leading automotive companies

Synopsys, Inc. (Nasdaq: SNPS) and Elektrobit (EB) today announced a collaboration to accelerate automotive electronic systems development using virtual environments. The two companies are collaborating to bring together Synopsys Virtualizer Development Kits (VDKs), EB operating systems, development and test tools, and complementary expertise to enable pre-silicon and pre-Electronic Control Unit (ECU) hardware availability and software development. The combined solution accelerates system testing cycles and enables automotive tier 1 and OEM companies to transition from physical to virtual system testing.

"Automakers engaged at the forefront of automotive development are faced with increased electronic hardware complexity and software content that needs to be delivered within very challenging development timelines," said Martin Schleicher, executive vice president, Business Management at EB. "Together, Synopsys and Elektrobit are providing technologies and expertise enabling automotive engineers to start software development earlier and dramatically accelerate system testing using virtual ECUs."

Synopsys VDKs deliver fast simulation of ECU hardware from individual processors to full automotive electronic systems (virtual ECU). EB is using Synopsys VDKs to port its AUTOSAR operating systems, featuring EB corbos and EB tresos product lines, to new automotive processors from leading semiconductor vendors up to 12 months before silicon availability. The integrated solution has been used to establish a virtual development environment demonstrator, bringing together a virtual ECU based on NXP's high-performance S32 Automotive Processing Platform with tools from EB and Synopsys. This solution enables system analysis and visualization, configuration and update management, test drivers, and system management. The solution enables automotive developers to increase interactive software debugging productivity and accelerate testing cycles by deploying the solution in regression. Leading tier 1 and OEM companies have deployed the joint solution for applications ranging from automotive control to autonomous driving and gateway.

"Automotive companies desire to deliver their customers new and more advanced functions based on the NXP S32 Automotive Processing Platform and require development tools that enable them to start early and accelerate system testing," says Dev Pradhan, senior director, Automotive Engineering at NXP Semiconductors. "Ecosystem collaborations amongst industry leaders such as Synopsys and Elektrobit are a key enabler for our customers to increase their development productivity and address current and future system and software development challenges."

"Reducing automotive development cycles from 5 years to 2 years requires a disruption in the current hardware-dependent and linear development approach," says Burkhard Huhnke, vice president Automotive Strategy at Synopsys. "The collaboration between Synopsys and Elektrobit brings virtual prototyping, software technologies, and expertise to automotive tier 1 and OEM companies looking to transition from physical to virtual development environments and accelerate their time to market."

Availability and Resources

VDKs for the NXP S32 Automotive Processing Platform are available now from Synopsys.

EB corbos and EB tresos are available from Elektrobit.

Learn more about Synopsys and EB collaborations at Automotive Computing Conference (ACC), 23-24,October 2019, Frankfurt Germany.

About Elektrobit (EB)

Elektrobit (EB) is an award-winning and visionary global supplier of embedded and connected software products and services

for the automotive industry. A leader in automotive software with over 30 years serving the industry, EB's software powers over one billion devices in more than 100 million vehicles and offers flexible, innovative solutions for connected car infrastructure, human machine interface (HMI) technologies, navigation, driver assistance, electronic control units (ECUs), and software engineering services. EB is a wholly owned subsidiary of Continental. For more information, visit us at elektrobit.com.

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 15th 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 security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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