

Combining Forces: Optimized Hypervisor Technology

INCHRON and OpenSynergy announce cooperation

Berlin, October 17, 2016. OpenSynergy GmbH, headquartered in Berlin, and Potsdam-based INCHRON GmbH announce their cooperation today. INCHRON is an expert at creating models to simulate the dynamic behavior of embedded systems for real-time and performance optimization. OpenSynergy specializes in embedded automotive software and will use these new models to optimize their hypervisor technology.

INCHRON is a leading global provider of cutting-edge tools, services, and consulting for the design, simulation, optimization, and testing of embedded systems and networks. Their focus is on performance and real-time behavior with a modeling technique that enables system and software architects to make sound design decisions in the very early stages of development.

OpenSynergy develops and distributes embedded software for in-car cockpit solutions. One of its core products is the virtualization platform COQOS SDK, which uses hypervisor technology to create isolated virtual machines. The platform integrates various functions, each with different requirements for safety and security, within a single device.

The cooperation between INCHRON and OpenSynergy focuses on microCOQOS, a small and flexible virtualization platform. MicroCOQOS enables the integration of multiple real-time operating systems, as well as AUTOSAR software at different ASIL levels, onto a single SoC/ μ C using MPU only (i.e., without MMU). It employs a unique software architecture that brings hypervisor technology to very small MCUs. The most important use case for microCOQOS is the Body Module Computer (BCM), although other ECUs with constrained resources may also profit from this technology. It strongly supports AUTOSAR software and heavily utilizes its concepts.

MicroCOQOS is easy to configure and optimize based on customer requirements. For this purpose, INCHRON is supporting OpenSynergy at the earliest stages of system design to model the timing behavior of relevant components. The company helps design and optimize the overall system with respect to the constraints given by each use case, hardware component, or application software. INCHRON and OpenSynergy collect expert estimations, along with real-life information from previous projects, and combine them with time budgets as input for the simulation. INCHRON translates this information into a timing model in order to analyze and optimize the system architecture using the real-time simulator chronSIM.

Customers can replace these estimations and preliminary configuration parameters in the model with actual figures. Once the model is instrumented with actual figures, OpenSynergy finalizes the architecture design for each customized product.

PRESS RELEASE

“INCHRON’s tools make it possible to use our hypervisor technology in the best possible way,” says OpenSynergy CEO Stefaan Sonck Thiebaut in the press release. INCHRON CEO Dr. Ralf Münzenberger adds: “Virtualization is a key factor for the successful integration of mixed ASIL levels, and OpenSynergy is a key technology driver for efficient, high-performance hypervisors. Our cooperation supports customers to get a highly efficient and robust architecture at all times.”

About OpenSynergy

OpenSynergy is a high-tech company specializing in embedded automotive software for in-car cockpit solutions. The core products are the modular software development kit COQOS SDK and the leading Bluetooth™ stack Blue SDK.

Our products enable the convergence of instrument cluster, head unit, driver assistance and connectivity systems. Essential technologies are virtualization and Open Source software. Our solutions comply with requirements of standards like AUTOSAR and Bluetooth™. By doing, so we pave the way for autonomous driving.

OpenSynergy is an independently managed company headquartered in Berlin with further locations in Munich and the U.S. We continue to grow through the strong demand for our products. Our company’s team consists primarily of highly qualified engineers. Our corporate culture is inspired by the international character that defines our employees, partners and customers.

Read more on www.opensynergy.com

About INCHRON

INCHRON GmbH is the world-wide leading provider of solutions for architecture, design, and automated optimization of real-time systems. Our solutions cover the whole range from single-core to multi-core to multi-CPU to distributed systems. Well-known OEMs and component suppliers world-wide rely on INCHRON’s methods and tools throughout the whole product life-cycle. Our solutions are being applied successfully across industries like automotive, automation, avionics, defense, healthcare, mobile and M2M/IoT, and cover all phases of the development life cycle. Since INCHRON was founded in 2003, our consulting team delivered key contributions to more than 150 successful customer projects.

PRESS RELEASE

The INCHRON Tool-Suite provides an environment with a unique selection of powerful tools, covering simulation, worst-case analysis, automated optimization, and comprehensive visualization and analysis of traces. Our aspiration is to provide the latest, world-wide leading technologies and services to our customers. Therefore, we participate in international research projects, cooperate with renowned universities, and contribute with our expertise to the AUTOSAR consortium.

Read more on www.inchron.com

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