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Press Release

With LABCAR in the Passing Lane

Improvements to HEV testing and automation

PC-based Hardware-in-the-Loop (HiL) testing systems continue to gain acceptance. In this regard, LABCAR is one of the forerunners in many fields of application. Particularly in the areas of battery management and electric motor simulation, LABCAR users can exploit its inherent advantages.

LABCAR-OPERATOR makes it possible to compute a variety of models or model segments concurrently and independently of each other on up to eight processor cores. This is especially useful in the parallel simulation of many battery cells of varying statuses.

The accurate reproduction of all battery- and environment-specific properties requires only a few mouse clicks. In this way, the setup time for the test instrumentation is reduced to a minimum. The new FPGA-based Inverter/PMSM Model from ETAS simulates a 6-gate inverter and a permanent-magnet synchronous motor (PMSM) including mechanics. The model provides a very realistic representation of all essential physical effects indispensable for reliable testing, such as saturation and thermal effects of motor parameters.

The use of floating point arithmetic in the FPGA logic ensures high calculation accuracy across the entire value range. With a step size of 850 ns, the model offers a well-balanced ratio of model runtime and precision.



Figure: With LABCAR in the Passing Lane.

ETAS

ETAS GmbH was founded in 1994 as a subsidiary of Robert Bosch GmbH. Following the acquisition of Vetronix Corporation in Santa Barbara, USA, as well as the establishment of foreign subsidiaries, we today employ 680 personnel in Germany, United States, Japan, Korea, P.R. China, India, France, UK, Sweden, Italy, Brazil, and the Russian Federation.

As a dependable and responsible partner, we offer a comprehensive product portfolio of integrated tools and tool solutions designed to increase quality and efficiency in the development and maintenance of embedded systems. Our tools are widely deployed in automotive and adjacent segments of the embedded industry.

The product portfolio is complemented by engineering services, consulting, training, and first-class customer service. We are an active contributor to standardization committees such as ASAM, OSEK, Nexus, AUTOSAR, AESAS, FlexRay, LIN, and JasPar.

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