Getting in gear for next generation cars

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23 partners from across the European car industry worked together to develop a new software interface that will make the next generation of cars quicker to design and cheaper to bring to market while maintaining high quality standards.
As cars become increasingly complex, introducing new electronics becomes increasingly expensive and has an ever-lengthening development cycle. The problem is that when a new component is introduced not only must it be tested thoroughly, but so must all of the existing components to ensure none has been adversely affected.

Now 23 partners drawn from all areas of the European car industry have combined within the ITEA cluster project ITEA 00009 EAST EEA (Electronics Architecture and Software Technology - Embedded Electronic Architecture) to create a solution to this growing problem and give Europe a competitive edge in new car development.

"We set out to create a standard 'middleware' for cars that integrates all of the different electronic systems, sub-systems, modules and components delivered by different suppliers into the complete network of a vehicle system," explains Joseph Beretta of PSA Peugeot Citroen.

"The challenge is to efficiently manage the constantly increasing complexity of electronically controlled functions in today's and tomorrow's vehicles. The EAST-EEA architecture, its software engineering methods and their validation are essential for this advanced technology."

The project had three set aims - to create the standard "middleware", to define a high level language to make it accessible, and to develop specialist tools including test tools and demonstrators. In fact they have created a new software architecture that allows easier integration of new electronics in cars through "plug-and-play" technology, dramatically reducing development time and costs to market.

Guarantees quality

"It not only means that new systems such as new electronic steering systems are quicker to design and to market, it also guarantees a level of quality which is very important if European cars are to be competitive," says Beretta.

EAST EEA was a massive undertaking, occupying 250 person-years, a budget of 40 million Euros, and partners from four countries including car manufacturers, equipment suppliers and academic and research institutions. It was awarded the ITEA Achievement Award in 2004.

ITEA was established to create crucial middleware and prepare standards, laying the foundations for the next generation of products, systems and services. In the case of EAST EEA, the blueprint for a new generation of quality European cars has created

Although the project has now ended, the work continues. The results of EAST EEA are being used as the basis for the EU Framework 6 project EASIS and the car industry's AUTOSAR (AUTomotive Open System ARchitecture) initiative which is expected to produce its first results by 2010.

Source: EUREKA

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