Carmakers want to keep up with consumer chip design processes

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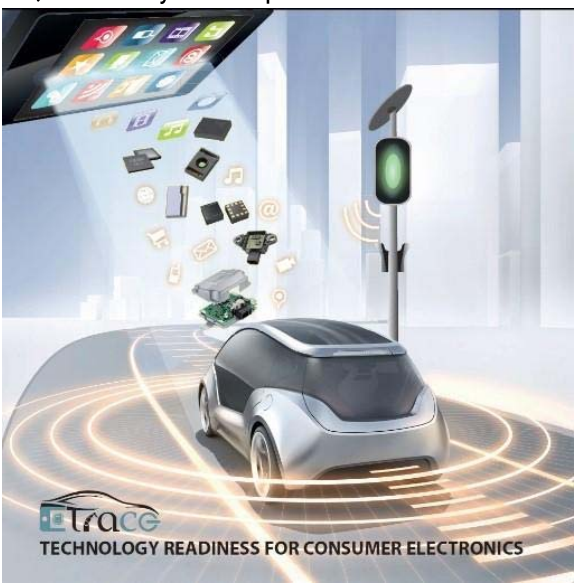

Car designers increasingly love to integrate consumer electronics functions into their vehicles, but in the world of consumer electronics, design cycles are much too fast for automotive developers to keep up. Within the project TRACE, European carmakers, suppliers and semiconductor vendors are now investigating design methods and processes to make consumer devices safe enough for in-car deployment.

New smartphones and other coveted electronic gadgets hit the market in a rhythm of about six months. Cars, in contrast, still have design cycles of typically six years, including tests. In an environment where carmakers increasingly find their USPs in the electronic equipment of the vehicle, from ADAS to connectivity, carmakers and their suppliers are striving to keep up with the consumer design cycles, at least to a certain extend.

The problem: high-performance semiconductor components designed

for consumer markets typically do not meet the stringent requirements for safety, reliability and ruggedness that vehicles have to meet. Adapting electronic components to the higher safety standards of the automotive industry, again, is a very time-consuming process, it is expensive and in many cases it would require a complete redesign.

The goal of the project TRACE therefore is developing new methods and processes that make it possible to use semiconductor technologies and components originally developed for consumer market also in automotive environments. The project partners will develop a directive to qualify and approve the components in question in the automotive industry. Also interested in such a directive are market participants active in the area of manufacturing automation. The intention is to demonstrate the directive by means of prototypes in the area of automated driving and autonomous infrastructure interaction. Reducing price level and form factors of electronic components for use in highly automated mobility to the desired cost level will only be possible through synergies with consumer electronics, the project partners state in a press release.

To enable such synergies, some 35 project partners participate in the TRACE project. Among them are automotive OEMs BMW, Daimler, Volvo and Volkswagen, suppliers like Bosch, Continental and Siemens as well as semiconductor manufacturers ams, Bosch, NXP and STMicroelectronics. The project consortium is aiming at establishing a new industry standard that would strengthen the position of the European industry in the Asia-dominated market for consumer electronics.

Launched already

in April, the TRACE project is designed to last two years. Coordinating partner is Bosch. The project is funded in part within the European Eureka-Catrene Initiative. Also the governments of five countries – Austria, France, Germany, Netherlands, and Sweden – are supporting the project.
More information: https://www.edacentrum.de/trace/en/imprint