

Siemens to Equip StreetScooter Electric Vehicle with Innovative Electronics and Software

- **Computer architecture to control all of the functions within the car, similar to aviation technology**
- **Functions such as driver assistance systems will be easily, quickly, and inexpensively updated with “plug-and-play” uploads**

Siemens' central research department and the electric vehicle manufacturer StreetScooter agreed today to equip an electric car with an innovative electronic and software architecture. The associated technology was developed during the RACE project. Siemens is the consortium leader of the research project, which receives funding from the German Ministry of Economic Affairs and Energy. For the first time ever, the architecture will make it possible to retrofit functions such as electrical brakes and systems such as lane-keeping assistants using a plug-and-play process like on home PCs. The two companies plan to incorporate the RACE architecture into an electric delivery vehicle by December 2014. The work will be conducted at Siemens' research center in Munich, Germany. The partnership's aim is to test the new technology in practice for the first time.

“We think that RACE has huge potential and that it could revolutionize car design in the future,” says Prof. Armin Schnettler, who manages the project at Siemens central research department Corporate Technology. “We expect standardized

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hardware and flexible apps to be used in the future. This will greatly reduce development times while at the same time increasing customization — not only in the automotive industry but also elsewhere.” StreetScooter hopes RACE will help it to develop and adapt new functions for its cars quickly, flexibly, and inexpensively. “We want to be able to integrate updates and individualize pioneering developments for our customers,” says Prof. Achim Kampker, Managing Director of StreetScooter. “Our modular and adaptable concept makes us the ideal platform for the RACE technology.”

The RACE (Robust and Reliant Automotive Computing Environment for Future eCars) project aims to substantially simplify cars’ increasingly complex electronics architecture. Today a mid-range vehicle may contain over 70 different control systems that are all networked with one another. Added to this are thousands of sub-functions that run on these control systems and exchange data. In the RACE project, by contrast, cars are controlled by a centralized computing architecture. The approach is similar to the fly-by-wire systems and other technologies used in today’s airplanes. Such a uniform software architecture would enable developers to create new functions quickly and easily. In addition, software functions could be pushed out to vehicles in the same way that they are to smart phones. The functions would range from infotainment software all the way to critical safety functions such as driver assistance systems. RACE also makes autonomous driving much simpler. In addition, it enables manufacturers of especially small-batch vehicles to fulfill customer wishes quickly and flexibly.

The partners of the RACE project are Siemens AG, AVL Software and Functions GmbH, fortiss GmbH, the Fraunhofer Society, TRW Automotive, RWTH Aachen, TU Munich, and the University of Stuttgart. The approximately €20 million project was launched in 2012 and will run until the end of 2014.

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Joint press release
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This press release and a **press picture** are available at

www.siemens.com/press/race

For further information, please see: <http://www.projekt-race.de/en/>

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Aachen (Germany) based **StreetScooter GmbH** designs, develops and produces e-vehicles for short distance travelling within urban environments. The range of models covers e-bikes, small passenger cars as well as commercial vehicles. Currently, StreetScooter focuses on e-vehicles for last mile logistic operations. Municipal providers, logistic services as well as other companies rely on StreetScooter products within their respective e-vehicle strategies. StreetScooter GmbH was established in 2010 as a spin-off from RWTH Aachen University and combines leading university know-how with industrial experience. Based on its unique development and production approach, StreetScooter was able to present within less of 18 months a new generation of e-vehicles, the Compact model, at the IAA 2011 fair in Frankfurt/Main, Germany. This model formed the basis for a customized e-vehicle solution meeting specific requirements set by Deutsche Post AG. StreetScooter has achieved various national as well as international awards and is therefore one of the leading companies within the growing e-mobility market. www.streetscooter.eu

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