



compact, smart and reliable drive unit for fully electric vehicles

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FP7 Green Car project COSIVU develops electric wheel motor system suitable for commercial vehicles

The central drive train will be substituted by compact and smart drives attached to the individual wheels coordinated and controlled by a central computer and wireless communication. One system package is designed for the wheel motor, its simple transmission, and the SiC inverter modules. Functional and health monitoring of the motor/transmission and the inverters is accomplished by a number of sensors.

Significant weight reduction will be accomplished by replacing one central motor and heavy transmission by individual wheel motors and by the mechatronic integration of wheel motor into one system package. Furthermore, the introduction of SiC components will significantly reduce the switching losses. These innovative solutions will significantly improve the energy efficiency and extend the driving range of commercial vehicles. By integration of a number of sensors the FEV's safety will also be significantly improved. The solution will also be adapted for high end passenger cars.

COSIVU, a project within the EU FP7 Green Car Initiative has nine partners from Sweden, Germany and Slovenia. The kick-off took place in October at Swerea IVF, Mölndal, Sweden. The project has a total budget of 5,2 M€ and will run from October 1 2012 until September 30 2015

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