

# EO smart connecting car

## New Mobility in Rural Areas – Sub-Project ITEM



EO smart connecting car prototype



Energy sharing in a road train



Design aspects of new concept car

### Sub-Project ITEM – Innovative Technologies for Electromobility

ITEM (Innovative Technologies for Electromobility) is a sub-project of the BMVBS-funded project “New Mobility in Rural Areas”. In ITEM, DFKI conceptualizes, designs and implements a new type of electric vehicle as a technology demonstrator for the (electro)mobility of the future.

Based on the existing EO smart connecting car, the new concept-car will demonstrate features that have the potential to make driving in the future much more comfortable, stress-free and relaxed:

#### Flexible Morphology

The vehicle will be able to change its morphology dependent on the current traffic situation. For fast rides it will stretch, for easy parking it will minimize its length.

#### Improved Maneuverability and Easy Parking

Equipped with four wheel-hub engines, the vehicle will be able to turn its wheels by 90 degrees and so turn on the spot, drive diagonally or sideways. These abilities are very useful for driving and parking in congested areas.

#### Energy-Efficient Roadtrains

Multiple vehicles will be able to form a road train. Through a new docking interface they will be connected mechanically and electrically. Sharing electric pow-

er between vehicles as well as a reduced wind resistance will increase the range of each individual vehicle.

#### Flexibility through Modularity

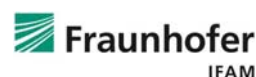
A number of modules such as passenger-, transport- or range-extension modules, will make the use of the vehicle very flexible. The new docking interface will ensure an easy and comfortable interaction of the modules.

#### Autonomy & Intelligent Vehicle Control

The vehicle will be equipped with advanced vehicle autonomy, allowing it to perform autonomous parking and docking.

Duration: 01/11/2011-31/03/2014

Partners:



Sponsor:

Gefördert durch:



Koordiniert durch:



„New Mobility in Rural Areas“ is an ongoing project within the *Pilot-Region for Electromobility Bremen/Oldenburg*. Coordinator of this cooperative project is the Fraunhofer-Institute for Manufacturing Technology and Advanced Materials IFAM in Bremen. Grant Number: 03ME0400G.

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