



Are you an EcoDriver?

The University of Leeds is leading a £13m (€14.5m) European project which aims to turn even the most committed of petrol heads into a green driver, which could save pounds at the pump and protect the planet.

Over a four-year period researchers will develop innovative new technologies for both in-vehicle and remote devices, such as downloadable smart-phone apps, that will help motorists to significantly reduce their fuel consumption by driving in a more energy-efficient way.

The researchers aim is to reduce fuel consumption by up to 20%, which could translate into savings of around £500 a year for the average motorist spending £50 a week on petrol.

Leeds researchers led by Professor Oliver Carsten will work with transport research centres across Europe, as well as several leading vehicle manufacturers, to design and test the devices, which could be on the market within 5 years.

Professor Carsten, from the University of Leeds' Institute for Transport Studies, said: "The way we drive can make a huge difference to the amount of fuel we use and in turn how much CO₂ is released into the atmosphere. As a general rule, the most important influence on fuel consumption is the driver's use of the accelerator. However, fuel consumption is also affected by lots of other factors like how much air you have in your tyres, how many passengers you're carrying, engine performance and even the weather conditions."

Some vehicles are already fitted with devices that give drivers feedback on their fuel efficiency. They work by using information about the engine size, gears and speed to calculate a rough estimate of consumption, often displayed as miles per gallon (MPG) or litres per 100 km.

But according to Professor Carsten, they lack the sophistication to have a real impact on driver behaviour, especially in the longer term.

“Real-world evaluations indicate that existing devices do not really have much of an effect on people’s driving,” he said. “At the most they are probably saving around 5% and the novelty tends to wear off with drivers after a while.

“With ecoDriver we are hoping to re-invent the wheel and create intuitive devices that are not only more accurate, but that give can respond intelligently to what kind of driver you are. That way, we are more likely to gain acceptance among motorists, which is the biggest obstacle to changing driver behaviour.”

The team hope to come up with new ways of feeding back information to the driver, for example by making the accelerator pedal stiffer to encourage them to ease off or change to a higher gear.

The four-year project will make use of the University’s state-of-the-art driving simulator, which will allow the researchers to test the effectiveness of their prototype devices on fuel efficiency and driver response. The best designs will then be engineered into demo vehicles before being made available to consumers.

The results of the project will also be used to make predictions for policy-makers on how much energy could be saved if the technologies were used across the UK vehicle fleet.

The research is a collaboration between the University of Leeds; ERTICO – ITS Europe in Belgium; TNO and NAVTEQ in the Netherlands; VTI in Sweden; CTAG in Spain; CarrierWeb in Ireland; BMW, Daimler AG and the Technical University of Aachen in Germany; IFSTTAR in France, and Fiat Research Centre in Italy. It has been funded under the European Commission’s FP7 Information and Communication Technologies Programme.

For more information

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