

TeleFOT

Field Operational Tests of Aftermarket and Nomadic Devices in Vehicles



As a EUR 14.5 million European traffic ICT project, TeleFOT assesses the impacts of functions provided by aftermarket and nomadic devices in vehicles by large scale field operational tests and raises wide awareness of these impacts. The project will research future interactive traffic services that will become part of driving environment systems within the next five years.

At a Glance

Projects:

Large-scale collaborative project

Projects coordinator:

Mr. Petri Mononen, VTT Technical Research Centre of Finland.

Partners from:

The project includes representatives from Universities, research institutes and the European automotive industry, as well as equipment manufacturers (phones, navigators) and road maintenance and service operators.

Duration: 48 months. Start: June, 1 2008

Total cost: EUR 14.5 million
(Community funding EUR 9.7 million)

Programme: FP7-ICT-2007-2

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Objectives

GENERAL OBJECTIVES

TeleFOT aims to assess the impacts of functions provided by aftermarket and nomadic devices in vehicles and raise wide awareness of their traffic safety potential. These devices can provide different types of driver support functions and almost nothing is known, yet, about their safety and other impacts when used in vehicles by drivers. The market penetration of portable navigators and smart phones is exploding today, making the time for the project ideal.

SCIENTIFIC AND OTHER OBJECTIVES

The functions to be tested cover two broad areas, promoting (i) safe driving and (ii) economic and fuel efficient driving. The impacts are assessed on levels ranging from usability; behaviour & incidents; safety; green Driving and efficiency; to the impacts on the transport system. Attention will be also paid to possible negative impacts, since especially smart phones are not originally designed for in-vehicle use and navigators may have problems in fixing and positioning in the cockpit. The project also aims at speeding up the penetration of systems able to "see" beyond drivers' field of vision in conditions where good situation awareness is needed. TeleFOT provides opportunities to test the impacts of similar functions that future cooperative systems will provide once their

development challenges will be solved in the next years. In fact, aftermarket and nomadic devices have been providing an alternative to some important cooperative driving and ADAS functions for many years.

The TeleFOT project will research how traffic information affects e.g. the driver's speed behaviour and reactions in different driving situations. The project will examine how retrofitted equipment, such as navigators and smart phones (3G phones), can support the driver and the detailed effects of the information produced for this purpose on the driving task. This type of information can include, for instance, simple navigation guidance offered by the navigator or information/warnings to the driver on the driving speed or driving conditions and abnormal situations ahead on the route such as accidents and traffic jams.

ADDITIONAL GOALS

The project will also look at the functionality of the eCall emergency phone system, i.e. an automatic distress call made from the car with eCall equipment to the rescue coordination centre after an accident. In addition, the project will research how the locating of a large group of cars can be used in traffic control.

The aim of the project is also to identify further applications for mobile equipment. The project will test the functionality and safe use of retrofitted equipment in cars as well as their safe placement and positioning on the dashboard.

Field Operational Tests

CARRYING OUT THE TESTS

As part of the project, extensive field tests will be carried out throughout Europe. The field tests will have two phases: first, short and long time testing will be done with a large number of vehicles. In the second phase, detailed testing with a

limited number of subjects with instrumented cars will be carried out. In the tests, the drivers will have access to smart phones and navigators and the effects of the services they provide to support driving will be tested. Prior to any field operational tests, the usability and safety of the devices and services will be studied carefully in laboratory conditions.

A stakeholder forum will be created in connection with the project, to involve actors in the sector and invite them to monitor the tests and make use of the experience gained.

Benefits and significance

BENEFITS

The benefits from this international project will be visible in the safety and smoothness of traffic, as well as a greater driving comfort when the driver is offered the possibility of anticipatory driving and planning the trip. The project will also gain relevant information about the correct use of equipment and their effects on safe and economical driving. Likewise, the type of traffic services wanted when driving and what people are prepared to pay for them will also be ascertained. The project will also assess how mobile terminals can be developed in terms of traffic use and what new features could be embedded in e.g. navigators and 3G phones.

SIGNIFICANCE

TeleFOT has been classified as significant in Europe and the EU and it has generated interest among actors in traffic ICT as well as among the automotive industry and equipment manufacturers even before it began, attracting interest even outside Europe.

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