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The Commission's Intelligent Car Flagship under the i2010 initiative: Questions and Answers

What are "intelligent cars" and i2010 flagship initiatives?

Promoting the development of cars that are smarter, safer and cleaner is part of the EU's "European Information Society 2010" (i2010) strategy to boost growth and jobs in the digital economy (see IP/05/643). The "intelligent car" is one of three i2010 "flagship initiatives" that aim to show how information and communication technology (ICT) can improve our public services and quality of life (the other two are "technologies for an ageing society", and "digital libraries").

The key aims of the "intelligent car" flagship initiative are to:

- coordinate the efforts of stakeholders, citizens, Member States and industry to accelerate the development and take-up of these technologies,
- support R&D on smarter, cleaner and safer vehicles, with funding from the EU's seventh research framework programme (FP7) and facilitate the take-up and use of research results (see IP/06/1590). This should include field operational tests to assess the impact of eSafety systems on driver behaviour and driving dynamics in real-world environments (EU intelligent car research priorities are fully supported by the European Road Transport Research Advisory Council - ERTRAC), and
- build awareness of the benefits of e-safety technologies, so as to stimulate demand among drivers. This work will include regular technology demonstration events and targeted TV programmes.

Why a Commission flagship initiative on the intelligent car?

Modern society depends heavily on mobility. Yet most transport problems, such as congestion of trunk routes and in urban areas, harmful effects on the environment and public health, waste of energy and above all, accidents which cause fatalities, injuries and material damage, have yet to be overcome. The "intelligent car" flagship will be a powerful tool for reaping the benefits of ICT in the transport sector.

In the EU, traffic congestion costs amount to €50 billion per year or 0.5% of Community GDP, and by 2010 this figure could go up to 1% of EU GDP. The number of cars per thousand persons rose from 232 in 1975 to 460 in 2002. The overall distance travelled by road vehicles has tripled in the past 30 years, and in the past decade, the volume of road freight traffic has grown by 35%, contributing to 7,500 kl or 10% of the network being affected daily by traffic jams.

Systems that use advanced ICT provide targeted solutions to today's transport problems. For example, if all vehicles in the EU were equipped with automatic emergency call (eCall) technology by 2010, road accident fatalities could be reduced by 5-15%. Moreover, eCall could reduce time lost to traffic congestion by between 10% and 20%, with cost savings of €2 to 4 billion.

Autonomous Cruise Control (ACC), which helps to avoid rear-end collisions, could save up to 4,000 accidents per annum if 3% of vehicles were equipped with it by 2010.

Lateral Support (lane departure warning and lane change assistant) could save 1,500 accidents per annum if only 0.6% of vehicles were equipped with it by 2010, or 14,000 accidents per annum if 7% of vehicles were equipped with it by 2020.

The AWAKE project, which developed a Driver hypovigilance system that wakes up drowsy drivers, estimated that technology like this could prevent up to 30% of fatal crashes on motorways and 9% of all fatal crashes.

Who are the key players in this flagship initiative?

First we have the citizen, who cannot be expected to invest in technology unless its benefits are clear. Then we have the EU automotive industry, which makes about 17 million vehicles per year and employs, (including its suppliers), close to 2 million people in Europe, with a worldwide turnover of more than €450 billion. ICT suppliers will also help the automotive industry to boost its competitiveness. Finally, we have EU Member States, which play a vital role in providing political support for technology take-up.

What was the 1st Commission communication on intelligent cars about?

The Commission communication on intelligent cars called upon citizens, the industry and EU Member States to work together to solve transport-related societal problems and to improve the take-up of information and communication technologies to this end (see IP/06/191). The communication presented the intelligent car initiative as a policy framework for actions in this area. The intelligent car initiative has three pillars: the eSafety Forum, the ICT research programme and awareness-raising actions.

Achievements from the 1st communication

In its 18 months of existence, the Intelligent Car Initiative achieved important results in all three pillars. The eSafety Forum Plenary adopted a 'Strategic Research Agenda' that will guide research into intelligent car systems throughout FP7. The Forum Plenary also established the terms of reference and gave green light for a new working group named 'ICT for Clean and Efficient Mobility'. It will work on ICTs for less fuel consumption and lower CO_2 output. What is more, the Forum helped set up eSafetyAware!, a platform of currently 38 road-safety stakeholders aiming at coordinated communication to consumers on the benefits intelligent car systems. In May this year, eSafetyAware! launched its first campaign called ChooseESC! (www.chooseesc.eu) (see IP/07/621). In its turn, the Commission adopted in December 2006 a Recommendation to the Member States on Human-Machine Interfaces, dealing with the safe fixing and use of mobile devices brought into the car (e.g. mobile navigation systems). Last but not least, the number of signatures under the eCall Memorandum of Understanding (eCall MoU) rose considerably. To date, 9 EU Member States, plus Switzerland, Norway and Iceland and over 50 stakeholders already committed to eCall (see IP/07/760).

Why a 2nd Commission communication on intelligent cars now?

The new communication takes up beneficial developments related to eCall (the pan-European in-vehicle emergency call) and ESC (Electronic Stability Control) that have taken place since the adoption of the 1st communication. As regards eCall, the commitment of Member States and other stakeholders has now reached a level that allows starting negotiations with the automotive industry with the aim to have eCall as a standard option for all new cars from 2010 on. These negotiations will begin later this year. As to ESC, the new communication envisages full availability of ESC for all types of cars, including middle-class and small cars, as of 2012. Of course, the communication looks at a range of other issues as well. For instance, it brings crash-avoiding technologies more into the focus of the discussion, and also of the work of the Commission.

Example of intelligent car projects

PReVENT

PReVENT is a European automotive industry project, co-funded by the European Commission, to improve road safety by developing and preventive safety applications and technologies. The total cost is about €55 million, of which the Commission is contributing €29.8 million.

Preventive safety applications help drivers to avoid or mitigate accidents by using in-vehicle systems that sense the nature and significance of the danger, while taking the driver's state into account. PReVENT has over 50 partners, including industry (12 car manufacturers and 16 parts suppliers), public authorities, research institutes, universities and other public and private bodies.
http://www.prevent-ip.org/

More intelligent car projects
http://ec.europa.eu/information_society/activities/esafety/research_activities/