ACTION PLAN FOR THE DEPLOYMENT OF INTELLIGENT ROAD
TRANSPORT SYSTEMS IN EUROPE

"ITS ACTION PLAN"

Discussion document

Meeting with Member States

26.05.2008

1. INTRODUCTION

The European Commission stressed in the 2006 mid-term review[1] of the White Paper on Transport Policy "*Keep Europe Moving – Sustainable mobility for our continent*", the key role of innovation in ensuring sustainable, efficient and competitive mobility in Europe.

Several major challenges for transport have to be overcome to achieve these goals while satisfying the mobility needs of the European society, in particular:

- to lower the impact of mobility on the environment, make transport "cleaner" and "greener", reduce energy consumption, improve energy efficiency, and enhance security of energy supply by decreasing dependency on fossil fuels,

- to optimise the use of existing infrastructure, make transport more efficient, improve mobility in urban and inter-urban transport, increase infrastructure throughput and reduce congestion,

- to improve traffic and transport safety and security.

2. WHY A EUROPEAN ITS ACTION PLAN FOR ROAD TRANSPORT?

ITS can create clear benefits and added value for transport sustainability, efficiency, safety and security, and contribute to the Lisbon objectives with respect to the Internal Market and EU competitiveness. ITS applications for road transport are already deployed in specific environments but this deployment has so far been fragmented and not Europe-wide. Therefore, at this point, the Commission intends to concentrate on ITS for road transport and its links with other modes in a co-modal environment.

Greening of transport

ITS applications have an essential part to play in the greening of transport. "Green transport corridors" is a major EU initiative to promote the concept of integrated transport, where transport modes complement each other to enable choices that are more environmentally friendly over long distances between major hubs. Along these corridors industry is encouraged to rely on advanced ITS technology.

Charging vehicles for the use of certain routes or for entering a given area is another way to steer road traffic demand and/or reduce pollution on congested routes. Demand management in cities is growing in importance.

Other ITS applications focus on journey planning and in-vehicle guidance or eco-driving.

Improving transport efficiency

Production and distribution networks depend on high-quality, efficient logistics chains to organise the transport of goods across the EU and beyond, as well as between

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[1]   COM(2006) 314

transport modes. ITS tools (e.g. traffic management) constitute a necessary component especially for just-in-time logistics.

ITS can also play a substantial role in a paper-free, electronic flow of information where the physical flow of goods is accompanied by a paperless trail (e-freight).

Real-time Travel and Traffic Information (RTTI), in some cases linked to satellite navigation, is now being offered from both public and private sources.

In many parts of Europe ITS are already delivering more effective inter-urban and urban traffic management operations that can also encourage modal interchange at major hubs and transfer points.

All these are welcome developments but are not without remaining issues which need to be addressed from a European perspective. Geographical continuity of service is one, securing accurate and reliable real-time data is another, and adequate coverage of all available travel modes is a third. In particular, cross-border arrangements are often missing.

Improving road safety and security

Research and initial deployment actions have shown that there is great potential for improving road safety through deployment of Driver Assistance Systems such as Electronic Stability Control (ESC), e-Call, Adaptive Cruise Control (ACC), Lateral Support (lane departure warning and lane change assistant), Driver hypo-vigilance systems, "speed alert" and "alcohol-lock".

The objective will be to make better use of the newest active safety systems where there are proven benefits in terms of in-vehicle safety and for all other road users. A European approach on the Human Machine Interface (HMI) might be needed. The potential of co-operative systems needs to be revealed.

ITS solutions (e.g. satellite-based) can provide better use of load tracking to provide remote monitoring of the transport of dangerous goods or live animals. They can guide the drivers to secure daytime and overnight truck parks for truck drivers. They can help comply with drivers' hours regulations and provide a platform for a new generation of the digital tachograph. Active safety systems for trucks and coaches can also benefit from ITS.

The EU added value dimension of the Action Plan

Further to having an important policy dimension in Europe, ITS can help maintaining Europe at the top of world technology, and create growth and jobs. However, barriers to the Europe-wide effective large-scale deployment of ITS remain in place and further measures are needed to have a harmonious and accelerated uptake and deployment. The European Union has a clear role to play in creating the appropriate framework conditions for this, including the policy priorities, common components and clear timeline.

To create a Europe-wide ITS framework, the European Union has four main instruments at its disposal: financial support, standardisation, soft measures and

legislative measures. These instruments will need to be used jointly in a way that creates most added value.

3. PRIORITY ACTIONS AND MEASURES

Reflecting on the input made by public and private stakeholders, and notably the fact that the referred or considered ITS systems and applications should be mature, sufficiently interoperable, and able to create a catalytic effect on other ITS deployment, the ITS Action Plan for road concentrates on six priority action areas (enablers), simultaneously covering different policies and/or constituting fundamental blocks for the deployment of Europe-wide ITS for road transport. These action areas will help to create harmonious and interoperable ITS to reach the objectives of "cleaner", "more efficient", "safer" and "more secure" road transport in Europe.

Vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I) and infrastructure-to-infrastructure (I2I) exchanges of information and communications should be covered with a GNSS space component for location and timing.

3.1.1. Action Area 1:   *Optimised use of road data and traffic data (including circulation plans)*

Many ITS applications rely on accurate and state of the art knowledge of the network, the road characteristics and traffic policy / regulations that apply (such as one-way streets and speed limits). A framework is needed to define the co-operation between the public and the private sectors in all aspects of the process and to arrange for access to these data. Public authorities should have necessary access to safety-related information collected by private companies and private companies should have access to public data.

The reliability and the management of travel and traffic information should be addressed, in particular:

- **rules and procedures for Europe wide real-time on trip traffic and travel information services**

- **collection and provision of road data and traffic circulation plans, traffic regulations and recommended routes for heavy goods vehicles**

- **accurate availability of public data for digital maps and their timely updates**

- **provision of traffic information services to all road users.**

3.1.2. Action Area 2:   *European Road Traffic Management*

Deployment of seamless and cross-border dynamic traffic management, as well as other quality services (e.g. travel information services related a.o. to transfers to other transport modes) is needed on all the main European road transport corridors.

> **Continuity of ITS related information flows and interfaces between interurban and urban transport in relation to passengers and freight should be advanced.**
>
> **ITS can help manage urban transport flows much better. However, without co-ordination, this might lead to a patchwork of different technological approaches across Europe.**

3.1.3. Action Area 3: <u>*Road safety and security*</u>

ITS based road safety and security applications have proved to be effective when deployed. Further promotion and a coordinated effort are required to foster their wide-scale deployment.

> **Further development of safety and security-related systems will be needed, their installation in new vehicles (type approval) will have to be promoted and the added value of "retrofitting" will need to be considered.**
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> **Large-scale implementation of eCall will need to be carried out.**
>
> **Aspects of Human Machine Interface (HMI) will need to be addressed.**
>
> **The impact of ITS applications and services on the comfort and safety of vulnerable road users will need to be taken into consideration.**

3.1.3 Action Area 4: <u>*Integration of vehicle into the ITS system*</u>

Several legal acts or voluntary agreements, existing or under preparation, apply to commercial or private vehicles and require the use of basic ITS components or systems. This applies to the transport of dangerous goods, live animals, the next generation tachograph, electronic fee collection, eCall and GNSS applications.

> **In principle, synergies can be obtained by bringing the functional specifications from all the corresponding applications together, by developing a modular approach with an open in-vehicle platform (that uses the common functionalities offered by Galileo and includes the possibility to plug-in nomadic devices). This work could start with commercial transport and be later widened to all road transport.**
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> **Co-operative vehicle systems and possible alternative deployment strategies for such systems will also need to be considered.**

3.1.4 Action Area 5:   <u>*Data security, protection of individual's data and*</u>
<u>*liability*</u>

The security of data, as well as legal aspects of ITS applications such as protection of personal data and liability requirements needs to be properly addressed.

The security of ITS related data and the protection of individual's data are of highest importance and need to be addressed with full regard to Community legislation and the practices in different Member States.

Liability issues pertaining to road information and traffic data is another area that requires action to enable wider deployment of ITS solutions.

3.1.5. Action Area 6:   <u>*European ITS concertation and coordination*</u>

The development of a governance framework for Member States and public authorities is required to discuss and reach agreement on the ITS agenda and harmonisation measures with industry, service operators and other stakeholders.

Greater involvement of cities, regional and national authorities is needed in the development of ITS as a means of delivering transport policies. Guidance and technical support should be provided to facilitate and underpin consensus building and decision making processes.

A European co-ordination platform, with the Member States and industry, is needed to develop consensus on the environment for the introduction and deployment of Europe-wide ITS services.

Urban transport specificities might benefit from having a separate European forum for the Member States and regional/local government initiatives.

Currently there seems to be a lack of systematic assessment of ITS solutions to support decision makers in their evaluation (impact, cost-benefit, user acceptance and financial) of ITS tools and deployments. A European toolkit is missing.

Assessment of ITS infrastructure is also an area where harmonised criteria are missing. Such criteria could become applicable to building or operating infrastructure.