



**ITS – European and UK initiatives
20 July 2006
Conference Report**

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1 Introduction

The HA EU Watch Project is providing intelligence for the Highways Agency on ITS developments in Europe and is carried out by TRL on behalf of the HA. The project is identifying opportunities for the HA to become more involved in Europe and summarises key information for decision makers and practitioners on activities related to Intelligent Transport Systems (ITS) in Europe.

ITS – European and UK initiatives, was an Information Day organised by the Department of Trade and Industry's (DTI) FP6UK team (promoting involvement in the European Commission's Sixth Framework Programme in the UK). It took place in the DTI conference centre in London. The day was intended to help members of the UK ITS community to become more familiar with the plans for the European Commission's 7th Framework Programme, other EC funding opportunities, and to understand how this relates to UK policies and initiatives. The event was attended by over 100 delegates and included representatives of national and local government, transport operators, industry, consultants and universities.

This report summarises the content of the most relevant presentations. These were:

- Introduction: Jon Maytom - DTI Automotive Unit
- The Department for Transport's need for innovation - Chris Ward, DfT, ITS policy
- Strategy for the UK ITSS Innovation Platform - Phil Pettit, InnovITS
- ITS within the ERTRAC framework - Mike McDonald, ERTRAC European Technology Platform
- Progress on the development of FP7 – Peter Walters, National contact point for EC IST programme
- DG INFISO's ITS research and priorities for FP7 - Andre Vits, DG INFISO, ICT for Transport
- DG TREN ITS policy and research priorities for FP7 – Bipin Radia, DGTREN satellite navigation and intelligent transport

The presentations from the day are available from the FP6UK web site at <http://fp6uk.ost.gov.uk/page.aspx?sp=1120> .

2 Introduction: Jon Maytom - DTI Automotive Unit

Jon Maytom outlined his responsibilities in DTI, which include developments in technology and skills, ITS and the low carbon agenda.

He highlighted the relative importance of the motor manufacturing industry to the UK economy with some facts and figures:

- More cars are now being made in the UK than ever before.
- UK car manufacturing represents 9% of the EU turnover.
- The UK is home to 7 volume vehicle manufacturers and 19 of the top 20 tier 1 suppliers have a UK base.
- Around 40% of the value of a new car is embedded in electrical and electronic systems.

To support policies aimed at improving UK competitiveness, providing an integrated transport system, improving road safety, reducing congestion and making vehicles cleaner, DTI is supporting the ITS innovation platform "InnovITS." The audience was referred to a

DTI policy document: 'Driving Force' which summarises the status of the industry and the role of key stakeholders in its future.

Reference was also made to the DTI-funded Foresight Programme, which included work on Intelligent Infrastructure Systems, including 'visioning' work: a fifty year view on the future of intelligent transport infrastructure.

3 The Department for Transport's need for innovation - Chris Ward, DfT, ITS policy

Chris Ward outlined DfT's policies and strategies and listed 10 specific objectives. All work carried out under the DfT 'umbrella' must inform at least one of these objectives:

- Develop a strategy for future road safety improvement
- Improve the day to day management and utilisation of the existing strategic (national) road network
- Improve the sustainability of the logistics sector
- Develop a strategy for improvements to tackle climate change
- Develop a plan to deliver the Government's 30 year strategy for addressing the growing demand for transport
- Deliver improved driver and vehicle services
- Maintain and improve transport security and resilience
- Improve accessibility and inclusion
- Improve rail industry performance
- Ensure DfT supports and influences plans for productivity, regeneration and easing pressures on transport networks.

Chris Ward summarised the seven themes of the ITS policy framework for the roads sector which DfT published in November 2005, and explained that when considering possible activities under these themes, DfT considers the scope for international collaboration as well as the role of DfT vs other stakeholders.

He then outlined DfT's various roles in sponsoring innovation and talked about technology needs for smart vehicles and smart infrastructure and the drivers for innovation. He listed some of the ITS tools available to support products and processes which can be used to meet policy goals, and pointed out that DfT has to remain independent of specific technologies in the initial stages of innovation, until services reach the point of writing specifications.

The top 10 innovation challenges for DfT are:

- Balancing road safety technology and personal freedom
- Balancing network throughput and personal freedom
- Balancing freedom to travel and global warming
- Balancing social information benefit and personal privacy
- Handling very large or/ and real time data sets
- Delivering road pricing and complying with the EC Directive but without buying 38 million items of equipment

- Integrating commercial and public information services
- Reducing the cost of new infrastructure
- Planning for the hydrogen economy
- Proving to the public that DfT is not “Big Brothering”.

Chris Ward also mentioned the role of DfT in supporting the ITS World Congress to be held in London on 8 – 12 October 2006.

In response to questions, Chris explained that the DfT’s response to the 7th Framework Programme would be to look at proposals that are being developed and see how they align with the DfT objectives. He quoted the example of DfT involvement in the 6th Framework CVIS project, which has links to some of DfT’s 10 specific objectives. The DTI response was that there is a wish to encourage UK industry and a desire to see the UK winning work in the Programme; DTI will support any organisation in the UK which is willing to participate.

4 Strategy for the UK ITSS Innovation Platform - Phil Pettit, InnovITS

Phil Pettit explained that the ITSS Innovation Platform InnovITS is one of two UK pilot innovation platforms which are establishing ways of joining up work in industry and government.

The innovation platforms bring together stakeholders focused on societal challenges, help to integrate technologies and improve coordination of policy and procurement, with the aim of improving UK performance, quality of public services and the ability of businesses in the UK to provide solutions.

The platforms engage with businesses and the research community, bring together government stakeholders and funders, identify appropriate levers to use, seek to align funding streams from separate sources and link research to market through procurement opportunities. One of the roles is to help position the UK community in relation to the EU.

The societal challenge which forms the focus of the ITSS Innovation Platform is modern surface transport. The challenge is to reduce casualties, improve accessibility, tackle congestion, protect the environment, promote economic growth for the UK and improve productivity while traffic growth is increasing. The platform is looking at what the government needs to be doing to make things happen – what wouldn’t happen without government? One of the key issues for accessibility is the ageing population, particularly those who are now becoming elderly yet are used to driving and the freedom which this offers – how will they manage when they are less able to cope with driving?

The Innovation Platform will look at what government needs to do in terms of policy, procurement and supporting integration of technologies, within the constraints of government rules on procurement. It is bringing together industry, stakeholders in innovative business such as those concerned with mobile communications, ITS (UK), the Location and Timing Knowledge Transfer Network, with the various government departments and agencies involved in addressing this societal challenge.

Future ‘innovation challenges’ are being tackled by bringing together fundamental research, DTI technology programmes, development work in regional development agencies and industry, trials, procurement and DfT policy in a timely manner, with target dates set to complete the various activities.

One of the issues which is being considered is what infrastructure can be supported by government and what will industry provide on top of that, with an open architecture that takes account of legacy systems and provides a means of gradual progression.

Two workshops have been held: a broad consultation and a more focused discussion. At the second, DfT posed challenges on four topics: the DfT ITS framework, road pricing, a national ITS framework, and cooperative vehicle highway systems. The outcome of the workshop was a mixture of near, medium and long term challenges. From the DTI's point of view, it is important for the UK to make real progress in the next 3 – 5 years, or other countries will provide solutions for us. The themes for the near to medium term were focused on pervasive road user services:

- Transport user equipment (such as mobile phones, PDAs, in-vehicle units, kiosks) – coordinate specifications for architecture, systems and standards for consistent delivery of travel information and find a way of allowing these competing devices to co-exist so that users can benefit from their various benefits and strengths
- Concierge agents, bringing together static and dynamic travel information for a broad range of users to inform and facilitate travel decisions – what architecture is needed to make services more personalised? The aim is to provide user-facing services (based on needs) rather than services which providers are prepared to offer
- Driver assistance for safety and sustainability – develop systems and architectures for informing travellers and vehicles about road and traffic conditions to enhance safety and reduce emissions and ensure that this is done consistently so that the products available can evolve.

The ideas have been taken to DfT, along with suggestions on research issues that need to be addressed to help to make progress in these areas.

5 ITS within the ERTRAC framework - Mike McDonald, ERTRAC European Technology Platform

Mike McDonald explained that the European Road Transport Research Advisory Council is one of 40 European Research Advisory Councils aimed at promoting research and growth in research. They have grown out of EU 'Barcelona', 'Lisbon' and 'Gothenburg' declarations and have the backing of industry, research organisations, the European Commission and Member States.

ERTRAC's objectives are to jointly develop the Vision 2020 of the Road Transport System, to develop a strategic research agenda as a path to the Vision, promote links between EU and national research programmes, develop a communication strategy to promote awareness of the vision and the strategic research agenda, and to support partnerships for R & D between the private and public sectors.

Membership of ERTRAC is led by the motor industry and includes representatives of users, research providers, road infrastructure, ITS providers, service providers, cities, regions, the European Commission and national bodies. There has been a difficulty reconciling the long term perspective of governments with the relatively short term view taken by the motor industry, so progress has been slow.

ERTRAC published a Vision 2020 document in June 2004 and a Strategic Research Agenda in December 2004. In April 2006, the ERTRAC Research Framework 2007 – 2015 was published. A quarterly newsletter is also published. These documents are all available from www.ertrac.org.

The main points of the Vision 2020 are:

- Enhanced mobility, optimised and efficient seamless system
- Cleaner, quieter and more energy sustainable road transport system
- Safe and secure road transport system
- Highly competitive and sustainable systems for products and services.

Mike McDonald outlined the structure of the Strategic Research Agenda under four themes:

- Mobility for people, transport of goods, infrastructure
- Safety and security
- Environment, energy and resources
- Design and production systems.

These are underpinned by an objective to promote the competitiveness and sustainability of road transport industry and services. Mike noted that if Europe does not carry out enough R & D to get the best products and services in place, these will be provided by companies in Asia instead.

The ERTRAC research programme is not directed solely at European funding. It also aims to act as a catalyst for research at European, European region and Member State level. One of the key activities is likely to be putting together groups from across the membership to carry out projects which contribute to the ERTRAC framework.

6 Progress on the development of FP7 – Peter Walters, National contact point for EC IST programme

Peter Walters outlined the support and guidance which is provided by the DTI to those in the UK who wish to become involved in European Framework funding programmes; this includes help with finding potential partners as well as help with understanding the processes involved. He outlined the 6th Framework Programme, which is currently in progress, and the key features of projects in the programme, with their focus on innovation.

He noted that the 7th Framework Programme has an annual budget of 54 billion Euros and will run for seven years. The proposed structure is that 65% of funding will be for cooperation on predefined themes, 15% will be for ideas, 9% for people and 8% for capacities (e.g. infrastructure, SMEs, science and society).

One of the themes for 'Cooperation' will be Information and Communication Technologies, with an allocation of around 9 billion Euros. Another theme will be transport, with about 4 billion Euros.

A public consultation on the content of the programme was announced on 19 July 2006 and will run until 31 August 2006 – see the link in the references at the end of this report. There will be an Information Day in Brussels on 26 September 2006, where the results of the consultation will be presented. For details see:

<http://cordis.europa.eu/ist/transport/index.html>

More details about the programme will also be available at the Information Society Technologies conference in Helsinki in November 2006 – see:

http://europa.eu.int/information_society/istevent/2006/index_en.htm

During questions it was emphasised that the best way for potential participants to think of the programme is as some additional funding for work that they would in any case like to do. The

proportion of the project costs which may be eligible for EC support has not yet been finalised, but was 50% in FP6.

Peter Walters suggested that anyone thinking of writing a proposal should consider writing a one-page summary and asking the relevant Project Officer in the European Commission if it fits into the programme.

7 DG INFSO ITS research and priorities for FP7 - André Vits, DG INFSO, ICT for Transport

André Vits is responsible for the work on ICT for transport funded by DG INFSO. He described the Intelligent Car Initiative which involves the work of the eSafety Forum and Working Groups as well as Research and Technological Development projects in the EC Framework Programmes. Awareness raising actions are seen to be key to the success of this initiative to bring the information to Europe's citizens and facilitate deployment of systems and technologies when they are first ready for the market. André Vits summarised the work in the eSafety programme, research programmes and awareness raising activities.

Future events in this area include:

- a high level briefing for Member States in Helsinki on 27 – 28 September 2006
- the next meeting of the eSafety Forum Plenary Meeting on 8 November 2006 in Brussels
- a status report on eCall which is due to be published in November 2006.

André Vits showed how funding allocation for the 'Cooperation' theme is expected to be divided between the various themes and outlined the timetable for preparing for the 7th Framework Programme. The last date possible date for adopting the budget is 15 December 2006; the first call for proposals will be issued immediately afterwards.

The structure and terminology for defining the 7th Framework Programme was introduced. The ICT Programme for 2007 - 2008 is structured around a limited set of challenges, with each challenge being addressed through a limited set of objectives, which form the basis for Calls for Proposals. In this context, a challenge is focused on specific goals that require effort at a European level and where collaboration is needed. It is ambitious and strategic, with a 10 – 15 year European vision and is described in terms of achievements rather than ways of realising those achievements.

The text defining the challenges is still being refined. Under the societal challenge ICT for mobility, environmental sustainability and energy efficiency, there are four objectives, two of which are focused on transport:

1. ICT for the 'Intelligent Car' aims at new ICT-based innovative, integrated and interoperable vehicle and cooperative systems based on vehicle-to-vehicle and vehicle-to-infrastructure communications with large scale field tests producing sound results.
 - Call 1: Intelligent Vehicle Systems, Field Operational Tests (preparatory work)
 - Call 2: Cooperative Systems, Field Operational Tests
2. ICT for mobility of people and goods aims at integrating advanced technologies into innovative mobility solutions for new levels of safety, efficiency and comfort in transporting people and goods, addressing various specific technologies and exploiting the potential of tracking and tracing technologies.
 - Call 1: Mobility Services for Goods
 - Call 2: Mobility Services for People

The second calls are likely to be issued within about 4 – 5 months of the first.

The consultation process on the programme has involved a series of workshops and a consolidated report prepared by the eSafety working group on research (published on 14th July 2006); the public consultation mentioned by Peter Walters is the final phase of this process; the deadline for comments is 31st August 2006. The results will be presented at the Information and Networking Day on 26 September 2006 in Brussels. The consultation document is available from the eSafety web site (see the link in the references at the end of this report).

The themes will only be briefly described in the work programme – it is anticipated that the ICT for transport theme will be described in two pages. André Vits stressed that the content of the programme is defined in a ‘bottom up’ process by the proposals that are approved for funding.

The presentation then provided a brief summary of the 6th Framework Programme, with overview diagrams of the PReVENT and GST Integrated Projects, the HUMANIST Network of Excellence, Im@gine IT, CVIS, SAFESPOT Integrated Project, COOPERS Integrated Project, COMeSafety, eSafetySupport and EU-India.

In response to questions, it was explained that there is not yet any firm information about the shape of the 7th Framework Programme, and that the proportion of funding available from the EC for different types of project have not yet been decided (likely to be a maximum of 50% for Universities and 75% for SMEs for example; the proportion for public authorities is not known).

The rules for participation, legal structures and model contracts are still being developed. In response to a question about protection of Intellectual Property Rights, it was explained that the CORDIS web site has information about this, and the advice is to write the IPR arrangements into the project’s Consortium Agreement.

For finding potential partners there is a service on the CORDIS web site, and another offered by the FP6UK contact point; participants in current FP6 projects are also likely to be potential partners in FP7.

Hints on proposal writing were offered: the calls for proposals will include specific key words and the proposals need to be aimed at the appropriate call. There will be calls from other parts of the European Commission as well as DG INFSO.

8 DG TREN ITS policy and research priorities for FP7 – Bipin Radia, DGTREN satellite navigation and intelligent transport

Bipin Radia talked on the theme of ITS in support of transport policy: taking stock. The current ITS initiatives involving DG TREN include the Euro-Regional Projects, Galileo, in-vehicle safety, electronic fee collection and the Directive 2004/52, Digital Tachograph (including the next generation), e-MOTION which is concerned with real time information for seamless cross border journeys, enLINK and the Universal On Board Unit. Bipin pointed out that the ITS activities covered by DG TREN are rather fragmented, and it may be time to consolidate.

Bipin Radia quoted from the draft text of DG TREN’s contribution to text on traffic and information management in the 7th Framework Programme. The text is being written in such a way that it “provides all of the hooks for the right kinds of projects” – DG TREN is now deciding on priorities. He noted that significant resources are being spent on Galileo and Open Skies, so the funding for ITS will be relatively small.

DG TREN is in the process of carrying out the mid term review of the 2001 White Paper. ITS is seen as “among the most promising priority areas” for removing congestion from European corridors. The review is looking at quality of service, innovation, and intelligent mobility. Towns and cities will be a prominent feature in future programmes because of congestion. A major programme is being launched for ‘Intelligent Road Transport Systems’.

Bipin summarised what is needed to ensure seamless levels of service for travellers:

- dissemination of good practice
- continuity of action
- steering implementation by providing a policy framework that will avoid fragmentation, as well as standards and regulations
- identifying the key EC activities that form the core for pan-European ITS deployment
- facing the challenges to exploit wider take-up of ITS including institutional, legal, jurisdictional, liability concerns, and gaining consensus on minimum service levels.

A common view is needed for working towards a harmonised vision in cooperation with stakeholders.

The European Commission is ‘lending a helping hand’ by encouraging take-up of good practice, standardisation and interoperability, with legislation where necessary.

The three ‘pillars’ to support ITS deployment are seen as infrastructure (with increased instrumentation), in-vehicle systems (providing enhanced functionality) and communication requirements (vehicle to vehicle and vehicle to infrastructure). The proposed European themes for research are associated with these three pillars:

- e-Warehouse – a robust framework for information capture, storage and access in the information chains for transport of both people and goods, covering information needs of end users, logistics, security, traffic operators, and for enhanced in-vehicle functionality
- connected vehicle – there is an increased range of electronic capabilities to enhance functionalities, greater reliance on robust data, and increased capability to capture and generate data, with scope for harmonisation of in-vehicle instrumentation
- e-Comms – requirements to facilitate data and information exchange for informing travellers, identify information needs, disseminate good practice and consider the need for standards and regulations.

Planning for the 2007 – 2013 programme is under way. Some examples of the types of ITS deployment project which may be included were given:

- Cross Europe studies – traffic management plans, travel and traffic information, e-warehouse, links between intelligent infrastructure, in-vehicle system functionality and communications
- Cross-Europe deployment of tools of a European scale such as DATEX, data gathering tools, highway status monitoring
- Local and regional ITS deployment – filling gaps in the network of traffic centres, deploying VMS, lane and speed control, hard shoulder running, electronic fee collection

In addition there will be a series of supportive actions on aspects of traffic and travel information, traffic management, fleet management, security, interoperable systems for infrastructure charging across Europe, digital tachograph, management of dangerous goods, incident and emergency handling, pay as you go services and applications for Galileo. A workshop is planned for September to consider the areas to be covered by Galileo applications. Contributions and comments on the direction of the programme would be welcomed.

9 Recommendations for the Highways Agency

The 7th Framework Programme is clearly not yet in its final version. This conference provided a platform for announcing opportunities both for influencing the programme and for finding out more about it. An opportunity for involvement in European research and collaboration which could extend beyond the framework of EC funding is also available, through ERTRAC. There are five specific recommendations for the Highways Agency:

- Review the consultation document and provide comments on the content of the EC's 7th Framework Programme. Comments should be sent to info-soc-intelligent-car@ec.europa.eu before 31st August 2006.
- Consider attending the Information Day about the 7th Framework Programme, to be held in Brussels on 26th September; the outcome of the consultation will be presented at this event.
- Comment on DG TREN's funding programme for 2007 – 2013; this will include the successor to the MIP co-funding the Euro-Regional Projects such as CENTRICO and STREETWISE which the HA has been involved in: contact Bipin.radia@ec.europa.eu
- Review the ERTRAC Research Framework, its implications for the HA research programme, and the opportunities it offers for collaborative research - see www.ertrac.org. Contact the ERTRAC Secretariat office@ertrac.org for a paper copy of the document.
- Consider joining ERTRAC – see www.ertrac.org.

References

DTI policy document on the UK car industry: 'Driving Force' – see:

<http://www.dti.gov.uk/files/file29165.pdf?pubpdfload=06%2F1067>

ERTAC strategic research agenda, ERTRAC research framework and Vision 2020 are available from <http://www.ertrac.org/publications.htm>

Foresight reports on Intelligent Infrastructure Systems area available from www.foresight.gov.uk

For more information about InnovITS see: <http://www.innovits.com/index.htm>

Public consultation on 7th Framework Programme- ICT for mobility theme is available at:

http://europa.eu.int/information_society/activities/esafety/doc/esafety_2006/fp7_ict_stakeholders_input_pub.pdf

Glossary

DATEX	Data exchange network – agreement between traffic centres to exchange traffic and travel data across Europe
DfT	Department for Transport (UK)
DG INFSO	Directorate General for the Information Society and Media in the European Commission
DG TREN	Directorate General for Energy and Transport in the European Commission
DTI	Department of Trade and Industry (UK)
EC	European Commission
ERTRAC	European Road Transport Research Advisory Council
EU	European Union
FP6	6 th Framework Programme – RTD programme funded by the EC
FP7	7 th Framework Programme – RTD programme funded by the EC
Galileo	European contribution to Global Navigation Satellite System, due 2010
ICT	Information and Communications Technologies
InnovITS	UK Centre of Excellence for Transport Telematics and Sustainable Mobility
ITS	Intelligent Transport Systems
SME	Small and Medium sized Enterprise