



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT

Directorate B - Trans-European transport networks & Smart transport
B.4 - Clean transport, Urban transport & Intelligent transport systems (ITS)

EXPERT GROUP

INTELLIGENT TRANSPORT SYSTEMS FOR URBAN AREAS

Second Meeting
“Smart Ticketing” session
9 March 2011
Brussels

- Minutes of the Meeting -

Date: 04/04/2011
Version: 2
Authors: Yann Briand, Guido Müller



1. INTRODUCTION

Gzim Ocakoglu – European Commission, DG Mobility and Transport

Gzim Ocakoglu underlines the key role of the ITS Urban Expert Group in the context of the ITS Directive. This second meetings comes after the introduction session held in December 2010. The framework has been set up and the Commission considers it is now time for work. Experts are by now expected to start collecting urban ITS Best Practices and elaborating guidance on forthcoming deployments.

This meeting initiates a round of thematic sessions and will be focused on the 'smart ticketing' field.

The members are joined by 2 external experts: Mr Sjef Janssen (VDV) and Mr Johan Van leperen (UITP).

2. ADOPTION OF MINUTES FROM 1ST MEETING

Gzim Ocakoglu – European Commission, DG Mobility and Transport

Minutes of the first meeting have been distributed to the experts for review. Comments were provided previous to this meeting on the website, the Expert Group Work Programme and the Urban Logistic field items.

These comments were reviewed and no further comments were provided.

The minutes of the first meeting were approved.

3. GUIDELINES

Guido Müller – European Commission, DG Mobility and Transport

Supporting document: "Scope of Guidelines (draft 0.1)"

Reminder: the guidelines' content and objectives were outlined during the previous Expert Group meeting. It was there agreed that they will aim to promote the use of ITS in urban areas and foster interoperability and continuity of services. The guidelines will target the organisations in charge of decision making and technical deployment of ITS on local level.

The guidelines will have an official status but will contain non-binding recommendations. They should be complimentary to other existing toolkits and suitable for urban areas within the 27 Members States of the EU.

The level of detail should reflect a compromise between a strategic level for decision-makers and more details for technical staff.

3.1. Scope and objectives

The structure and proposed content of the Guidelines are reviewed by the group.

Roundtable

A number of suggestions were made on the definition of the scope:

- The Commission should envisage a web-based format, maybe through a dedicated website, allowing for permanent upgrades and/or comments.
- The Guidelines are meant to evolve and maybe should be developed along the timeframe of the Expert Group. The content could be tested with a group of stakeholders through a web-based tool.
- Even if the scope of the activities is rather 'urban', the Guidelines should also address the interfaces with inter-urban networks, especially to foster cross-fertilisation and the dissemination of lessons learnt at urban level.
- For some themes the regional scope could be critical, as it is the case for smart ticketing. The 'inter-urban' perimeter may be integrated within a context chapter, but not further investigated.
- The programme of these Guidelines and the scope addressed should be strict to ensure comprehensive and quality deliverable into the limited timeframe.
- One should decide the target audience of the Guidelines: it could address the technical level or the political (and strategic) level. Taking that into account, the question about the appropriateness of the guideline framework to a political audience is raised.
- Major ITS applications are existing but political and technical managers have to be convinced. It seems difficult to mix both technical and political approaches, since the content should be radically different. Otherwise this would mean mixing different targets and levels of information.
- Guidelines, if largely spread, could constitute a support for cross-fertilisation even at university level.

3.2. Content

The Commission recalls some fundamental aspects of the Guidelines' content:

- ⇒ Content should be linked to key applications,
- ⇒ Content should focus on proven solutions.

Roundtable

A number of suggestions were made on possible enhancements of the content:

- Processes,
- Socio-economic costs and benefits,
- Implementation planning,
- Decision-makers awareness,

- Presence / absence of existing standards,
- Linkages with best practices,
- Risk analysis summarising best and worse experiences,
- Scalability (large scale implementations feasibility),

3.3. Inputs

Experts suggest that some external sources may be taken into account during the elaboration of the Guidelines. Among them are stated the sustainable urban mobility plans and the National ITS associations.

Both could help on content definition and information provision.

3.4. Conclusions

Gzim Ocakoglu – European Commission, DG Mobility and Transport

As a conclusion the debates on the scope and content of the Guidelines could be summarise as follows:

- Guidelines should be a tool for promoting the deployment of ITS in urban areas,
- They should be easy to use and up-to-date,
- They should include economic information, a driver for implementing authorities,
- They should be built with a rather short term perspective since they focus on proven technologies and solutions.

Next Actions:

1. Guidelines' template	Contractor	April 2011
2. Guidelines elaboration	Experts/contractor	2011
3. Draft Guidelines	Expert Group	December 2011

4. EXPERIENCES IN SMART TICKETING

4.1. "Smart Cards" study

Steve Tarry – AECOM, Project Manager

The Smart Cards study (2009-10) carried out for DG MOVE aimed to:

- **review the current situation** with regards to public transport ticketing, payment and verification systems across Europe and globally;
- **review trends** in ticketing and fare payment and technological development;
- **review current and emerging standards** for such ticketing and fare payment systems;
- **suggest the approach the EU should take** in encouraging interoperability of such ticketing systems.

The approach included outreach to scheme operators as well as a practitioner panel for feedback.

The emerging options for the European Commission were identified as such:

- EC to continue to provide Strategic Leadership and to reduce uncertainty by giving confidence and practical support:
 - restating the Commission’s vision and roadmap for integrated smart ticketing (within the forthcoming White Paper)
 - sharing of best practice
 - ‘model’ frameworks: architectures, business cases, designs, agreements
 - ensuring available ‘tools’ are publicised and promoted
- Consider if / how existing mechanisms and levers might be used to:
 - supplement funding for schemes conforming with best practice
 - ensure Smart ticketing requirements included within new franchises
- To further encourage integration and usage, EC to consider if/how existing mechanisms and levers might be used to:
 - shape institutional and operational arrangements required
 - encourage sharing of data / information
 - offer financial incentives for provision of traffic information across operators and services – if fed by data from smart ticketing?
- Monitor developments and see if additional policy, legal and financial measures are required
- Seal of Approval for schemes with appropriate measures for data security / personal privacy

The study concluded:

1. Proposed EU level actions are likely to be cost effective.
2. Providing strategic leadership would help bring forward new schemes.
3. The increasing evidence of beneficial impacts, allied with further actions to provide practical and financial support should further enhance the deployment of schemes with increased levels of integration.
4. Monitor impact of initial actions and determine if/when to implement other/higher level initiatives.

4.2. IFM project

John Verity – ITSO Ltd, Chief Advisor

The Interoperable Fare Management (IFM) project (2008-2010, www.ifm-project.eu) was a FP7 project aiming to make access to public transport networks more user-friendly by facilitating their accessibility.

The objective of the IFM Project has been to provide travellers with shared types of contactless media throughout Europe. The project has contributed to significantly lower the barriers to mobility and encourage the use of public rather than private transport.

The objective is to avoid the establishment of enduring isolated national solutions and to define a road-map leading the way toward pan-European interoperability.

The project is based on delivering an ICT environment that supports nomadic passengers. It will be delivered through work packages covering:

- A Trust Management model which should describe how trusted transactions can be made between different fare areas when an unknown customer uses an unknown smart card.
- A Privacy model through the definition of a set of common rules proposed to all European countries as an appropriate compromise between information needed for an appropriate services management and customers privacy protection, involving transport operators against undue dissemination of personal data.
- Potential applications, notably through the identification of common requirements for transport contactless media (including multi-application) and their associated benefits to enlarge interoperability.
- The development of a common organisation target model and elaborating migration paths to get this organisation model.
- The definition of basic requirements and fundamental IT design of an IFM as well as business rules and procedures that ensure interoperability.
- A forum supporting the consensus building and initiatives in the frame of IFM, based on consensus building. One of the major goals is the involvement of the maximum number of relevant organisations from EU member states, associated countries and candidate countries.

As its main outcome the IFM project found that a customer deliverable of a simple European interoperable Fare Management is feasible in a stepwise two track approach to facilitate early engagement. An important first step could be the building of an EU-IFM Alliance.

Track 1- PRIORITY LANE

- Use Multi-Application Platform
- Provide Portal to load remote multiple IFM Applications onto a single locally-issued media
- Update existing EU IFM Standards

Track 2- LONG HAUL

- Develop common EU-IFM Application
- Develop common Product Template
- Develop common Fare collection processes

5. SMART TICKETING: DEPLOYMENT ISSUES, PRIORITIES

Guido Müller – European Commission, DG Mobility and Transport

In order to organise and to structure a general discussion on Smart Ticketing a Metaplan exercise is proposed. Experts have two cards on which they provide simple answers to the question: **What are the main local level deployment issues for smart ticketing?**

Once the feedback from the experts is collected clusters based on common issues or subjects are proposed. After a vote the three with the highest vote are to be discussed by the experts:

1. User focus
2. Media
3. Interoperability and Intermodality

On a voluntary basis 3 discussion groups are made to debate on one of each item following these four questions:

- What are the most important issues in this area?
- What are the barriers or challenges to face?
- Which (possible) solutions could be foreseen?
- What could be included in the guidance documents?

The following sections summarise the results of the discussions in each group.

5.1. User focus

Most important issues in the area:

- Convincing a large public of the benefits of smart ticketing. The added-value could be complicated to identify for certain users.
- Information display: smart 'plastic' cards do not provide any information on the journey's details or the fares.
- Users' expectations are diverging: some want to dissociate their transport card from the others, some are looking for convergence; some like to use 'cheap' plastic cards, some other expect to concentrate everything on their smartphones. The different types of users induce different type of use. Operators should be ready to be flexible when implementing smart ticketing solutions.
- User support: there should be a service available to help travellers if they need to reschedule their trip or get reimbursed.
- Sensible populations: they include elders, foreigners and low-income travellers. Therefore smart ticketing solutions should not be too clever or exclusive. This means that usage should not be limited by skills or resources.

- Sustainability of the support: some supports are not viable (paper with bar codes) some others could get easily lost or stolen (smartphones).
- Groups: people travelling in group usually try to use one ticket (and associated fare). How could this be achieved with smart ticketing?

Barriers and challenges to face:

- A showcase for public authorities: implementing smart ticketing solutions offers public authorities the opportunity to communicate on the mobility offer. There are political interests behind such a solution.
- Fostering public transport use: smart ticketing makes public transports more accessible and stress less for users, this advocates for their use.
- Levels of implementation: different levels of smart ticketing could be defined, from payment to booking. However a better solution (technically speaking) may not be the best for the public authority.
- Privacy: users should be reassured that privacy is maintained when smart ticketing solutions are implemented.
- Cost: the technological deployment of smart ticketing could be rapidly expensive, even if not visible by the users. On top of that it generally requests a strong back office.

Possible solutions:

- Justifying the investment: linkages with mobility-related services. The smart ticketing solution should integrate extra services, related to mobility (park and ride for instance).
- Providing a flexible / on-demand offer: users should have the possibility to load single travel tickets, or to get charged at the end of the day on the basis of travel calculation.
- A simple support: the plastic card plus 2D bar code solution is cheap and efficient.
- Status: usage of a simple status (plastic card) should be combined with the possibility to get a status on the account, the fare, etc.
- Targeting population: targeting specific group (youth, elders) should generate an incentive on the use of smart ticketing.

Elements of guidance:

- Smart ticketing should provide benefits for end users
- Operators should focus on a core market
- Operators should maintain users' trust into the system and demonstrate benefits
- Operators should capitalise on key problems and benefits
- Operators should consider the whole ticketing chain from booking to charging
- A high level generic framework supporting the implementation of smart ticketing could be made available

5.2. Media

Most important issues in the area:

- Occasional users: defining their solution might be complicated. They should be better identified, characterised. The commercial approach of operators is to be clarified too.
- Production costs: the cost of issuing cards should be limited.
- Investments costs: Public Transports support the investments and get incomes only during products retail.
- Permanent availability of bandwidth

Barriers and challenges to face:

- Legacy: it is complicated to change the media if a not yet obsolete solution is still running.
- Trust: end user should be confident in the solution.
- Contractors' position: contractors could have an interest in generating roaming costs thus increasing the cost of public transport.
- Research effort: public operators are sometimes not in favour of investing on more research.

Possible solutions:

- NFC (Near Field Communication) and bank cards: both offer adequate solutions, both are relatively mature.
- Real-time information: operators will have to converge to these solutions in the next years.
- Micropayment opportunities: this scheme should be investigated by transport operators.

Elements of guidance:

- Governance
- Investment support
- Risk analysis rather than prescription

5.3. Interoperability and Intermodality

Most important issues in the area:

- Identification of stakeholders: roles and functions in the chain
- Alignment of necessary cooperation with adequate competition
- Lack of standards in application (especially in some countries)
- Keeping the end user perspective (easiness, comfort, utility, etc.)

Barriers and challenges to face:

- Legislative aspects are numerous and potentially complex before deployment and while operating
- Scale could represent a great challenge from one public authority to the other
- Aligning legacy investments ("local heroes") and interoperability
- Cross-border trips are just a fraction of the whole ticketing use
- Large differences in status quo among the Member States
- Lack of interest in interoperability in ticketing industry

Possible solutions:

- Urban transport represent a critical mass which may help deploying interoperable solutions
- Supportive applications may help to implement interoperable solutions with a strong business model
- Migration as a window of opportunity
- Pressure from the market will facilitate solutions
- Finding specific forms of cooperation ("European ITSO")
- Greater awareness through European action
- Technical development will produce more powerful cards

Elements of guidance:

The guidance should basically address all of the identified issues above.

6. BEST PRACTICE COLLECTION

Guido Müller – European Commission, DG Mobility and Transport

Supporting document: “Urban ITS Best Practice Template”

Reminder: The very first mean of Urban ITS best practices will be to foster the cross-fertilisation on key applications between stakeholders. The potential target group will be the user community, represented by this expert group. It is understood that best practices should not be limited to success stories only, but could also benefit from information about unsuccessful implementation of urban ITS, if this information is made available.

The group started discussing on the template circulated previous to the meeting. Experts are invited to comment the document.

Remarks are provided on different sections to be completed or amended:

- General description: problems and objectives to be detailed; transport modes to be detailed.
- Implementation: existing sections to be detailed; sections on investments and operating costs to be added.
- Results: section on innovation to be added.

The Best Practice template will be updated and circulated among experts. To ensure a large understanding of the Best Practices collection as well as its efficiency, the contractor will elaborate a context note to be distributed together with the template. This note will aim to clarify the use, objectives and expected nature of the responses to be provided by the contributors.

Regarding data collection, Experts commit to disseminate the template and note among their environment to maximise feedbacks. The contractor will process information and collect extra data. Nevertheless Experts represent a crucial entry point to get qualified information.

Next Actions:

1. Template update	Contractor, EC	March 2011
2. Context note elaboration	Contractor, EC	March 2011
3. Best Practice collection start up	Contractor, Experts	April 2011

7. WORK PLANNING

Guido Müller – European Commission, DG Mobility and Transport

Next steps for the Expert Group will be to concentrate on Best Practices collection and Guidelines elaboration. For this purpose Guido Müller proposes the group works under the following division of tasks:

- DG MOVE / RTD:
 - Coordinate groups
 - Contribute to first draft
 - Policy guidance
 - Stakeholder and internal consultation
 - Finalisation process
- Core Team:
 - Outline of paper
 - Coordination of revision process
 - Finalisation process
- Other members:
 - Feedbacks and comments
- Contractor:
 - First draft coordination
 - Contribute to writing
 - Feedbacks and comments

To complete this task allocation, three of the four Core Groups in relation with the key applications have been set up. A first allocation has been made on the basis of the distributed questionnaire and has been adjusted during the meeting (see below). Due to the uneven distribution with two "popular" subjects and two difficult ones, the allocation needs to be reflected again. Especially the key application of ITS for Urban Logistics is posing a problem.

<i>Core Group</i>	Travel Information	Traffic Management	Smart Ticketing	Urban Logistic
<i>Rapporteur</i>	Coldefy	Kearns	Blaquière	<td>
<i>Team</i>	Brown Eliassen Fiby Izdebski Lefebvre Meeuwissen Planath Tofting Tyriniopoulos Vlemmings	Albrecht Beasley Franco Haselberger Jensen Leihs Spell Tomassini Van den Abeele Winning	Diego Bernardo Hedin <to be reinforced>	<td>

The Core Groups will be responsible for the first outline of the guidelines, for providing inputs as well as checking the conformity of the Guidelines in their field. They are also entry points for collecting Best Practices.

8. NEXT MEETINGS - AOB

Guido Müller – European Commission, DG Mobility and Transport

Next meeting was originally planned on 8 June in Lyon, following the EC ITS Conference and during the ITS Europe Congress. This schedule is apparently not ideal since Experts may wish to attend sessions of the congress.

The next Urban ITS Expert Group meeting is rescheduled on **21 June 2011**. It will focus on Traffic and Travel information.

The European Commission intends to have a short session to present the activities of the Urban ITS Expert Group during the EC ITS Conference on 6 June in Lyon. A presentation will be made by one expert of the group.

APPENDIX

AGENDA

9.00-9.30	<i>Registration and Coffee</i>	
9.30	Welcome	Magda Kopczynska
9.40	Adoption of Minutes from 1 st Meeting	
9.45	Scope of Guidelines	Discussion of EC Draft Paper
	Experiences in Smart Ticketing	
10.30	<ul style="list-style-type: none"> • Results of the EU Smart Cards Study 	Steve Tarry, AECOM
10.50	<ul style="list-style-type: none"> • Road Map for Interoperable Fare Management – The IFM Project 	John Verity, ITSO
11.10	<ul style="list-style-type: none"> • Discussion 	
11.30	Coffee Break	
11.50	Deployment Issues – Local Priorities	Guido Müller
12.35	Organisation of Afternoon Working Groups	
12.50	Lunch Break	
14.00	Working Groups on most important issues from previous session	Three working groups
15.00	Feedback from the Groups	Reporters
15.30	Coffee Break	
15.50	Best Practice Collection	Guido Müller
16.20	Work Planning: Core Teams	
16.40	Next Meetings, Any other business	
17.00	Closing of the Meeting	

ATTENDEES

URBAN EXPERT GROUP – MEMBERS

Present

Name	First name	Organisation	Stakeholder group	
ALBRECHT	Hanfried	AlbrechtConsult GmbH / OCA	Consultancy / Nat ITS Association	DE
BEASLEY	Simon	Reading Borough Council / UDG	Local Authorities / Nat ITS Association	UK
BLAQUIERE	Alexandre	Tisseo - Toulouse Public Transport Authority	Public Transport Authority	FR
BROWN	Tony	Hampshire County Council	Local Authorities	UK
COLDEFY	Jean	Greater Lyon Region	Local Authorities	FR
ELIASSEN	Jarl	Trafikanten AS	Travel Information Provider	NO
FRANCO	Gino	Mizar / Swarco	ITS Industry	IT
HEDIN	Johan	Hybris Konsult	Standardisation bodies	SE
IZDEBSKI	Piotr	ZTM Warsaw	Consultancy	PL
JENSEN	Helge	City of Oslo	Local Authorities	NO
KEARNS	Steve	Transport for London	Local Authorities	UK
LEFEBVRE	Olivier	STIF Ile-de-France	Public Transport Authority	FR
MEEUWISSEN	Marcel	City of Enschede	Local Authorities	NL
SPELL	Sabine	Volkswagen AG	Automotive Industry	DE
TØFTING	Svend	North Denmark Region	Local Authorities	DK
TOMASSINI	Maurizio	ISIS - Rome	Consultancy	IT
TYRINOPOULOS	Yannis	Hellenic Institute of Transport (HIT)	Research	GR
VLEMMINGS	Tiffany	National Data Warehouse for Traffic information	National Authorities	NL
WINNING	Ian	City of Cork	Local Authorities	IE

Excused

DIEGO BERNARDO	Enrique	EMT - Madrid Public Transport Authority	Public Transport Authority	SP
FIBY	Hans	Transport Association East Austria	Public Transport Authority	AT
HASELBERGER	Rainer	City of Vienna	Local Authorities	AT
LEIHS	Dietrich	Kapsch TrafficCom	ITS Industry	AT
PLANATH	Susanne	Swedish Transport Administration	National Authority	SE
VAN DEN ABEELE	Didier	Alstom Transport	ITS Industry	FR

EXTERNAL EXPERTS

Name	First name	Organisation	Function
JANSSEN	Sjef	VDV – German Association of Public Transport Undertakings	General Manager, VDV Core Application GmbH
VAN IEPEREN	Johan	UITP	UITP Information Technology and Service Industry Committee Manager

EUROPEAN COMMISSION / CONTRACTOR

Name	First name	Organisation	Function
OCAKOGLU	Gzim	European Commission, DG Mobility and Transport	Head of Section
MÜLLER	Guido	European Commission, DG Mobility and Transport	Project officer <i>Secretary of Expert Group</i>
BORTHWICK	William	European Commission, DG Mobility and Transport	Policy officer
KENIS	Eric	European Commission, DG Mobility and Transport	Policy officer
BOETHIUS	Eva	European Commission, DG Information Society and Media	Policy officer
MERCIER-HANDISYDE	Patrick	European Commission, DG Research	Project officer
HINRIKUS	Hanna	European Commission	Member of Cabinet Kallas
STROTMANN	Max	European Commission	Member of Cabinet Kallas
BRIAND	Yann	Algoé	Senior consultant

Excused

KOPCZYNSKA	Magda	European Commission, DG Mobility and Transport	Head of Unit <i>Chair of Expert Group</i>
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