European Interoperability and the EETS: an Update

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Time for Intelligent Move

European Commission - DG Energy and Transport

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Aim and scope

• **Aim:** to achieve interoperability of electronic road toll systems in the Community

• **Scope:** applies to the electronic collection of all types of road fees, on the entire Community road network, urban and interurban, motorways, major and minor roads, and various structures such as tunnels, bridges and ferries
DIRECTIVE 2004/52/EC

Status

- Adopted the 29 April 2004 by the Council and the European Parliament
- In force since end of May 2004
- Transposition into national legislation before 20 October 2005. Infringement procedures under way against 6 Member States.
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Milestones

- Regulatory frame for the deployment of a unique **Electronic European Toll Service (EETS)** in three stages:
  - **First stage**: definition of the service by 1 July 2006
  - **Second stage**: 3 years later (mid 2009): service ready for HGV and Long Distance Coaches,
  - **Third stage**: 5 years later (mid 2011): service ready for all vehicles

- The Directive will not interfere with the pricing policies of the Member States, but the systems implemented should be capable to handle any charging policy decided at national levels.
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Principles of the service

• Open commercial service
• Basic principle: one single contract - one single onboard unit per vehicle
• Available on the whole tolled network
• Used for whatever toll or fee or tax
• Same quality of service in any country, non depending on the country where the contract is signed, the nationality of the vehicle or the driver
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CESARE EETS Model

European Commission
Directorate General for Energy and Transport
Two basic technologies:

- GNSS / GPRS as a future objective for all systems
- Microwave 5.8 GHz (DSRC)

Plus

- Possible link to the digital tachograph
- Other technologies allowed as far as they do not discriminate non-equipped clients
### DIRECTIVE 2004/52/EC

**EETS onboard unit**

<table>
<thead>
<tr>
<th>HMI interface</th>
<th>CEN DSRC interface</th>
<th>ES 200 674-1 V2.1.1</th>
<th>GPRC interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG 11 application</td>
<td>CARDME specification</td>
<td>ISO 17575 and MISTER</td>
<td>GPRS interface</td>
</tr>
<tr>
<td>EFC application (to be defined)</td>
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</tbody>
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**European Commission**

**Directorate General for Energy and Transport**

**ITS UK 11-Dec-07**
DIRECTIVE 2004/52/EC
Decision process

- **Regulatory Committee**
  Toll Committee: voting right limited to the 27 EU Member States

The link with the private sector is the ROAD PLATFORM launched by the road operators association ASECAP and supported by EC DG TREN.
Decision process

**Project or Expert Group**

- **Report**
  - **EUROPEAN COMMISSION**
  - **Proposals**
    - **Regulatory Committee (vote)**
      - yes
      - no

**DEFINITION**

- **European Commission**
  - **Directorate General for Energy and Transport**
  - ITS UK 11-Dec-07
1. WORKING GROUPS

1. DSRC technologies led by Jesper Engdahl (RAPP AG)
   - Report studied by EFC Expert Group 8 June 2005

2. Classification of vehicles led by Ken Perrett
   - Report finalised February 2005

3. Enforcement of EETS led by Jean Mesqui (ASFA)
   - Report studied by EFC Expert Group 9 June 2005

4. Certification centres led by Francisco Soriano (LISITT)
   - Report studied by EFC Expert Group December 2005

5. GNSS/CN technologies for EFC led by Wolfgang Beier (Toll Collect)
   - Report studied by EFC Expert Group 8 June 2005
Work Programme

- 6. Integration of OBU in vehicles led by Mike Hollingsworth (ACEA)
  - Report studied by EFC Expert Group December 2005
- 7. Role of the financial institutions in the system led by Klaus Philipp (AGES – DE)
  - Report October 2006
- 8. Verification of the Telepass Specification, follow-up of EG 1, led by Jesper Engdahl
  - Report studied by EFC Expert Group March 2006
- 9. Specifications for a pan-European satellite EFC system: led by Ian Catling
  - Report studied by EFC Expert Group March 2006
Work Programme

- 10. Technologies and specification for enforcement led by João Pecegueiro (Via Verde – PT)
  - Report studied by EFC Expert Group March 2006

- 11. Specifications for a pan-European EFC application on microwaves led by Bernhard Oehry (RAPP AG)
  - Report studied by EFC Expert Group March 2006

- 12. Security of the transactions launched October 2006, led by Stefan Eisses (NL)
  - Report received April 2007
2. CESARE III

- Follow-up of CESARE I and II
- Cesare II has provided important results for co-operation between road concessionnaires levying tolls
- CESARE III adapted CESARE II to the needs of the Stockholm group organisations
- Ended October 2006
3. RCI (Road Charging Interoperability)

- Project for demonstration under the frame of the 6th RTD Framework Programme
- Launched in July 2005 for 36 months
- Led by ERTICO and involves most of motorway and toll operators in Europe
- Demonstration of transactions by microwave as well as Satellite/GSM with the same onboard unit
- Two consortia of electronic suppliers have been selected to supply prototypes
European Interoperability

VIA-T
TOLLCOLLECT
TIS
TELEPASS
LSVA
ASFINAG

1 OnBoard Equipment

1 Contract
RCI partners

- Associations
- Toll operators
- Companies providing special expertise
- Truck maker
- Suppliers, European industry

Oene Kerstiens, ITS congress Aalborg

ITS UK 11-Dec-07
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Field tests early 2008
4. Commission orientations on the definition of the EETS service

- Technical elements of the EETS: DSRC and satellite
- Contractual and organisational elements: three entities recognised for the deployment of an open service market (Toll Chargers, EETS Providers and Users)
- Presented to Toll Committee 26 June 2007
Management issues

- Establish the rules of the game
- Monitor the operation
- Admittance of new members / exclusion of failing ones
- Supervise certification of equipment
- Arbitration of conflicts
- Manage technical specifications and their evolution
- Security key management
- ...
Enforcement issues

- Prosecution of toll violators (also cross-border)
- Mainly for free-flow systems
- Challenge: improve the legal framework to identify, stop and prosecute toll violators, including foreign registered vehicles
Other Applications of the OBU

- EFC is the key issue to introduce ITS services in the vehicles
- Other kinds of applications should be supported
- Starting with Fleet and Freight Management
- DG TREN mostly interested in Road Safety/Monitoring applications
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Revised timetable

• Regulatory frame for the deployment of a unique Electronic European Toll Service (EETS) in three stages:
  - **First stage**: definition of the service by **end 2008**
  - **Second stage**: 3 years later (**end 2011**): service ready for HGV and Long Distance Coaches,
  - **Third stage**: 5 years later (**end 2013**): service ready for all vehicles

• Progress towards defining the EETS is being made with a working document, based on the output produced by the Expert Groups and support projects, being considered by the Toll Committee
Thanks for your attention