The European Interoperable Fare Management Project (EU-IFM)

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Emerging Standards for Transport Smartcards

Transport Smartcards are currently governed by the following International (ISO) and European (CEN) Standards:

- Media: ISO/IEC 14443
- File Structure: ISO/IEC 7816-4
- Architecture: EN ISO 24014-1 (IFM)
- Applications: EN 15320 (IOPTA)
- Data Elements: EN 1545
- Security: ISO 15408 (Common Criteria)
European Interoperability

The main drivers for Public Transport are:
• Social inclusion
• Mobility
• Harmonisation
• Procurement
• Scale economics
… and support for the Green Agenda by removing barriers to modal switching

IFM Interoperability

EU-IFM needs to support Public Transport interoperability at three levels:
• Local Schemes
• National Schemes
• International Schemes
EU-IFM Vision

The main National IFM organisations have a shared vision:

- Create an EU-IFM network to provide direction, co-ordination, networking of Best Practice,
- Implementation planning of a pan-European IFM initiative
- Promote further links to ISO and European Standards including NFC and the Security and Certification of devices

Initial funding from DGINFSO

EU-IFM Project Aims

- Aim is to ensure cross-border interoperability of Transport Smartcards is enabled across Europe
- Develop a Road Map towards a EU-wide concept where:
  - Customers use their local Transport Smartcards outside their home network
  - Transport authorities have the tool-set to build new systems using standardised Specifications
  - Deliver the associated Security Environment
  - Charter a way through Privacy Issues
European IFM Deliverables

- Common Model for IFM across EU
- Open architecture
- Commercial framework between members
- Security Environment with a Trust Model and set of IFM Rules
- Privacy Charter

EU-IFM Work Packages

1. Trust and Security Management Model
2. Privacy Charter
3. EU-Application and Interoperable Media
4. IFM Organisational Structure (including safeguarding existing ones)
5. Back Office Systems to ensure system-wide interoperability
6. A Forum to provide Consensus Building and Dissemination and Feedback at European level

Together with Project Management and Co-ordination
Project Organisation

- Project Coordination: **John Verity, ITSO, UK**
- Project Management: **TÜV Rheinland Consulting**
- Partners from **France, Germany** and **UK**
- Europe-wide Consensus Building, Dissemination and Feedback through **UITP EU-IFM Forum**

EU-IFM Vision

- Payment processes are no longer a barrier to the use of Public Transport across EU
- Seamless accessibility to different Public Transport Networks using the same Portable Media
- Smartcards will have migrated to a Secure Element on a Portable Object (Mobile Phone, PDA, USB device etc)
- Individual IFM Applications can co-reside in a multi-application environment
- An EU-IFM Application usable across many Networks
Steps to European Interoperability

Routes to European Interoperability

Track 1 (Priority Lane)
Interoperability through common multi-application processes and a Common Portal

Track 2 (Long Haul)
Common EU-IFM Application and Templates
Expected Impacts

- Greater Awareness of benefits of smartcard solutions for mobility to both Customers and Network Operators
- Widest possible range of Media leading to cost benefits
- Access over-the-internet and over-the-air
- Transportability and Interoperability of Media between schemes
- Respect of Privacy across schemes
- Enhancement of Security and minimisation of Fraud
- Consensus on value of cooperation
- Dissemination of knowledge of how to set up a scheme
- Promotion of Best Practice to spread excellence
- Facilitation of Back Office communication
  ... demonstrating material benefits to Customer, the Green Agenda, Mobility and Social Inclusion

Related Study by DG MOVE

- EC Smart Cards Study:
- Assessing possible future approaches .. how to:
  - encourage interoperability
  - reduce potential barriers
- Involves Stakeholder consultations .. including scheme owners and practitioners
  - contributions will help to shape future policies and practices
IFM2: Issues raised

• Early Adoption to avoid wasteful expenditure
• Standards Maintenance including removal of split between CEN TC224 and CEN TC278
• Convergence with Road Tolling / ERA
• Convergence with developments in NFC / Mobile and EMV / EPC
• Migration of Legacy Schemes
• Currency and Settlement

For more Information:

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