The future of GPS on board units for Mileage Based User Fees

IBTTA
Jersey City
GPS Based Tolling Projects

Germany
- System start 2005
- Vehicles >12t on all Highways
- > 600,000 OBUs

Switzerland
- LSVA OBU 2nd generation
- Implementation 2010
- Vehicles >3.5t on all roads
- 70,000 OBUs

Slovakia
- System start 2010
- Vehicles > 3.5t
- 260,000 OBUs
General opinions and expectations
What will be the next Gen OBU?

**Todays OBUs?**
- Form Factor
- Functional Design
- Energy Concept
- Flexibility

**Smart Phones?**
- Liability
- Responsibility
- Reliability
- Accuracy
- Security
- Enforcement
- Lifecycle
- Diversity of Types/Brands

**OEM Installed?**
- Question of Ownership
- Liability
- Exchange / Repair
- Interoperability Issues
- Development Lifecycle

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Technical Solution
Future oriented Device Architecture

Platform HW Concept

Flexible SW Architecture

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Two Solutions
Fix Installed And Temporary Installed

Temporary installed
Plug & Play solution
Internal antennas
Installed on the windscreen
Powered via cigarette lighter or rechargeable battery

Fix installed:
OBU splitted into two parts:
  OBU
  HMI Unit
OBU fix installed in the vehicle, invisible to the driver
HMI Unit installed in the drivers view area to provide necessary information e.g. about proper OBU operation.
The open in vehicle platform

*Architecture of a multi-purpose unit with many applications*

**Entertainment Platform**
- Radio
- Navigation
- Voice Communication
- TV / Video

**ITS-Platform**
- Car to x communication
- E-Horizon
- Others

**FMS-Platform**
- Asset and Freight Monitoring
- Messaging
- Others

**Secure Application Unit**
- *Digital Tachograph*
- Electronic Fee Collection
- Speed Monitoring
- EOBR

**Secure Application Extension**
- Tracking / Tracing
- e-Call
- Pay As You Drive
- Weight Monitoring

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Thank you very much for your attention!