TISA - A Facilitator for Traffic Management and Safety- & Mobility-Information

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Content

- Evolution of TTI within ITS TPEG
- TPEG in the context of the ITS Station model
- Delivery Channels for Traffic and Travel Information (Service Provider Viewpoint)
- Definition of ITS
- ITS Lyon Demo - Traffic Management via TPEG
“The ITS sector is the biggest Industry nobody’s ever heard of!”

Scott Belcher
CEO of ITS America
Evolution of TTI within ITS

- Event-based road traffic information
- Co-operative system
- Vehicle will become a "communication node"
  - sensing & sending data (V2V/V2X)
  - receiving & fusing data (V2V/V2X)
  - in Europe based on standards according to mandate M/453 developed by ETSI and CEN

RDS-TMC via FM-Radio is a success story:
- the standard across Europe
- steadily growing worldwide
- 100+ million receiver on the road with public & private services

TPEG: "next generation"
- Traffic Information
- (extendable) multiple services
- fast digital delivery channels
- bearer independant
  - Dig. broadcast & cell com

whole set or toolkit of specifications, for offering a wider range of services to a wider range of users and devices
TPEG (Transport Protocol Expert Group):
- offers a method for transmitting multimodal traffic and travel information, regardless of client type, location or required delivery channel.
- uses the delivery / transmission media mainly "as it is".

In this context, TISA offers standards:
- to adapt to several digital radio standards like DAB and HD Radio (TPEG binary).
- for the use of TPEG in IP-networks (e.g. WiFi) the format tpegML in XML is used.
Delivery Channels for Traffic and Travel Information (Service Provider Viewpoint)

- **Digital Broadcasting**
  - Fixed total cost of transmission; unlimited number of users
  - Non-individualized / general TTI content for endusers

- **Cell Communication**
  - Transmission costs per user (e.g. annual subscription)
  - Specific TTI content, e.g. for individual route planning
  - Individual value-added services possible

- **Short Range Communication**
  - Free of subscription charges
  - low latency and very precise
Definition of ITS:

ITS - *Intelligent Transport Systems and Services* - is the integration of information and communications technology (ICT) with transport infrastructure, vehicles and users.

By sharing vital information, ITS allows people to get more from transport networks, in greater safety, more efficiency and with less impact on the environment.

... another definition could be:

Providing

- the *right information*
- at the *right time*
- to the *right location* (users)
The right information, at the right time to the right location
ITS Lyon Demo
- Traffic Management via TPEG
Future intelligent in-vehicle unit

Future in-vehicle units will combine information from various kind of external (communication) sources and internal sources.
TISA is ...

... a *partner platform* for

- Governmental- and Non-governmental organizations
- Profit organizations and Not-for-profit Organizations
- Service provider and Content provider
- Device Manufacturer and Car Manufacturer
- Broadcasters and Telecoms

... a platform *for you* if you want to

- deploy or develop systems / services ...
- ... of co-operative or non co-operative nature.
- provide or receive data / content / services ...
- ... free of charge or subscription based.
- start with analog (TMC) or go with digital (TPEG).
- address mass market or specific user groups.

... - not-for-profit organization
- Committee members and other „officials“ are being elected by the members
- Permanent secretarial support from Executive Office

*Membership-funded, Membership-driven* (members see backup)
Summary

- Real Time Traffic Information will become digital
- New communication media will enrich the content
- New communication media will enable new services
- Datex-2-TPEG conversion will bring Traffic Management Information directly into the vehicle
- TISA is a well established partner platform in the ITS sector
Backup
The European ITS Architecture

**Relevant Traffic Event**

- Traffic data from road-side telematics system
- "manual" sources
- In-vehicle data

**Infrastructure centric**

- EasyWay

**Broadcast centric**

- TISIA

**Vehicle centric**

- CAR2CAR

**Aquisition**

- Traffic data from road-side telematics system
- "manual" sources
- In-vehicle data

**Aggregation**

- Traffic Data Marke t Places
- Traffic Service Provide

**Dissemination**

- Roadside Infrastructure e.g. VMS
- Digital Broadcast
- Cell-communication

**User**

- Traffic Efficiency
- Value-Added Services
- Safety

**Traffic Efficiency**

- Traffic Data Market Places
- Roadside Infrastructure e.g. VMS
- Digital Broadcast
- Cell-communication

**Value-Added Services**

- In-vehicle consumption

**Safety**

- (ready to be) deployed
- In standardization

**Traffic data from co-operative (V2I) telematics system**

- in-vehicle data generation

**Roadside Unit**

- Short Range Communication (e.g. ITS G5)

**V2V**

- (ready to be) deployed
- In standardization

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Members of TISA

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France: Autoroutes du sud de le France (ASF)
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