The core concept (1/2)

• TN-ITS is about the exchange of static map information from the Road Sector, it is not about dynamic information:
  • Traffic regulation like speed limits and traffic signs
  • Road related features like banking and curvature

• Road authorities and map providers motivation:
  • Traffic safety and efficiency needs ITS maps that are accurate and up-to-date

• The map providers cannot do this without cooperation from the road authorities
The core concept (2/2)

- This requires road databases and distribution mechanism for the exchange of data
  - An increasing number of road authorities are using digital systems for storage and maintenance of data
  - However, many different GIS-systems and data models are in use

- Therefore a common exchange format is needed, enabling existing (legacy) systems to retrieve the changed data and distribute them to map makers.
History lesson

- **2006: Geo4Maps**
  - Combined initiative
  - Did not get funding

- **2007: ROSATTE**
  - Funded from 2008
  - DG INFSO project

- **2011: eMaPS**
  - Funded from 2011
  - To follow up the recommendations from ROSATTE

**2013: TN-ITS**

- Organisation
- Specification
- Support to members
- Solve problems
- ...
<table>
<thead>
<tr>
<th>Safety Attributes</th>
<th>Example of ADAS application</th>
<th>Change frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed limit</td>
<td>Speed alert</td>
<td>Very high (7-9% / year)</td>
</tr>
<tr>
<td>Traffic signs and regulations</td>
<td>Enhanced navigation (e.g. truck)</td>
<td>High</td>
</tr>
<tr>
<td>Lane information (number, width, divider, connectivity)</td>
<td>Lane keeping assistance, Lane departure warning, Curve warning</td>
<td>Medium</td>
</tr>
<tr>
<td>Traffic lights</td>
<td>Intersection assistance</td>
<td>Medium</td>
</tr>
<tr>
<td>Crossings (pedestrian, tram)</td>
<td>Enhanced navigation Vulnerable road-users protection</td>
<td>Medium</td>
</tr>
<tr>
<td>Toll barriers, motorway junctions, tunnel access</td>
<td>Obstacles / change of lighting / speed limit / inter-vehicle distance management</td>
<td>Very low (new road or reshaping)</td>
</tr>
<tr>
<td>Gradient (slope)</td>
<td>Curve warning Fuel consumption assistance (car and truck)</td>
<td>Very low (new road or reshaping)</td>
</tr>
<tr>
<td>Transverse gradient (banking)</td>
<td>Roll-over warning system (truck) Curve warning</td>
<td>Low</td>
</tr>
</tbody>
</table>

2014-06-18
Output of the ROSATTE project

- Complete framework to facilitate access, exchange and maintenance of spatial data from public sources including:
  - multi-level national/regional/local aggregation
  - Incremental updates of map data
- Technical & organisational guidelines
- List of what is still needed to be done
- Commitment for deployment
ITS Action Plan and ITS Directive

• The goal is to speed up market penetration of mature ITS applications and services in Europe
  • deployment and use of ITS in road transport
  • interfaces to the other transport modes

• Priority actions relevant for TN-ITS
  • (1.2) optimisation of the collection and provision of road data
  • (1.3) procedures for ensuring the availability of accurate public data for digital maps and their timely updating through cooperation between the relevant public bodies and digital map providers
ITS Action Plan area 1, action 1.3

1. EU-wide real time travel information (public and private roles)
2. Collection and provision of road data
3. Accurate public data for digital maps
4. Free minimum information service
5. Promotion of multi-modal journey planners

The study recommend a combination of ROSATTE and INSPIRE to deploy action 1.3 under the ITS Directive
Towards the end of ROSATTE, it became clear that:

- The ROSATTE framework and procedures could contribute to the deployment process of the ITS Directive/ITS Action Plan
- An alignment with the INSPIRE (Directive) framework would make it easier for the authorities and map makers to exchange ITS data
eMaPS and TN-ITS

Goals
Act as an enabler for the implementation of priority action 1.3 of the ITS Action Plan in the member states by:

- Establish an EU wide independent organisation, TN-ITS to implement the ROSATTE recommendations

- Aligning the organisation and framework with the INSPIRE framework legally, organisationally and technically
eMaPS: Mission of TN-ITS

- Establish working groups to address:
  - Linear/location referencing, establish best practises
  - Standardization and specification (aligned with INSPIRE)
  - Solve potential IPR and liability issues
  - Awareness and policy
  - Implementation and technical support

- Support members through guidelines, best practises and through a pool of experts

- Provide a solution for certification and quality monitoring
Working groups

- **WG 1 Location referencing (TomTom)**
  - Replace or enhance AGORA-C / OpenLR
- **WG 2 Specifications and standards (NPRA)**
  - Align ROSATTE specification with INSPIRE TN
  - INSPIRE SDIC “Transport Network ITS Spatial Data”
  - CEN/TC 278/WG 7
- **WG 3: Implementation support (TRA)**
  - Provide guidelines and best practices and support new implementation
- **WG 4: Generic tools and reference implementation (DoT Ireland)**
  - Provision of generic tools and a reference implementation
- **WG 5: Policy, awareness and dissemination (DfT UK)**
  - Policy contributions along the current EU Directives: ITS, INSPIRE, PSI
  - Promotion and dissemination actions
ITS Directive/ITS Action Plan
Action 1.3

ROSATTE

DMWG
eMaPS

ERTICO
TN-ITS

INSPIRE Directive

Complete technical framework
Complete organizational framework

Steering group
Secretariat
Legal and IPR issues

WG 1
Location/linear Referencing

WG 2
Standards/specifications

WG 3
Implementation member support

WG 4
Genreic tools

WG 5
Policy Awareness Liaison

TN-ITS SDIC
CEN/TC 278 WG 7

2014-06-18
Status of TN-ITS

• TN-ITS formally established
• Founding Members: NO, SE, FI, BE-FL, IE, UK, Nokia, TomTom
• The work organised in five Working Groups
• Board has been established
• Annual Activity Plan and Budget for the years 2013 and 2014 has been published
• First WG meetings (1, 2 and 3) held November 2013
Membership - current members

TomTom and HERE
Thank you!

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