



Working Group “Digital Maps”: Next Steps

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Background

- EC policy goal: Reduce the number of road fatalities with 50% by 2010.
- eSafety – Recommendation 11
 - Define requirements for a European digital road map database, with agreed road safety attributes. Create a public-private partnership to produce, maintain, certify and distribute this database.
- Advanced Driver Assistance Systems (ADAS)
 - In-vehicle systems to increase driving safety and comfort
 - The European eSafety map is one of the sensors



Working Group Digital Maps: Overview

- Operational from April – December 2005
- Co-chaired by TeleAtlas and Navteq
- Public and Private sector representation
- Review of related initiatives: EuroRoads, INSPIRE, HIGHWAY, MAPS&ADAS, SpeedAlert, SafeMAP
- Working Group and Plenary meetings
- Final Report presented to the eSafety Forum Steering Committee on 6 Dec. 2005, Brussels
 - http://www.escope.info/en/esafety_activities/esafety_working_groups/digital_maps.htm

WG Digital Maps: Objectives

- To define a business model for Public-Private partnerships that will ensure the availability of attributes relevant to eSafety in digital maps;
- To create Public/Private cooperation model to collect, maintain, certify and distribute the eSafety attributes that can be integrated into the digital roadmap database

Realizing the eSafety Map

- Extend current navigation maps fundamentally: Clear eSafety map requirements
- Improve Map Data Quality fundamentally
- Minimize investments required
- Solutions
 - Optimize field data collection processes: No final solution due to inherent latency problem
 - Optimize data flow from public to private sector: No immediate solution due to differences in data availability
 - A combined solution is required
- The private mapping sector started: The eSafety map for the major roads

eSafety Map Req's: eSafety Attributes

- In order of priority
 1. Legal speed limit
 2. Traffic signs
 3. Lane information (#, width, divider, conn.)
 4. Traffic lights
 5. Crossings (pedestrian, tram)
 6. Accident hot spots
 7. Slope (gradient)
 8. Banking (transverse gradient)
 9. Accident hotspots
- Source: Maps&ADAS project

6



Safety Attributes and Safety

Safety Attribute	Safety Application	Safety Effect
Legal speed limit	Speed Limit Assistance (e.g. Speed Alert)	Speed limit adherence, less speed accidents
Traffic signs (curve ahead), Enhanced geometry, Banking	Curve Warning	Safe speed drive, Less speed accidents and collapsed trucks
Slope (gradient)	Predictive Powertrain Control	Less fuel consumption, air pollution
Traffic signs (right of way), Lane information, Traffic lights	Intersection Assistance	Intersection related accident reduction
Traffic signs (curve ahead), Enhanced geometry, Banking	Curve Control	Safe speed drive, less speed accidents and collapsed trucks
Accident hot spots	Hotspot Warning	Warning for danger spots ahead
Enhanced geometry	Advanced front-lighting system	Enhances night vision
Legal speed limit, Lane information, Crossings	Adaptive cruise control	Less head-tail collisions
Lane information	Lane keeping/change assistance	Less unsafe lane departures
Legal speed limit, Lane information, Crossings	Stop & Go	Less head-tail collisions in traffic jams
Enhanced geometry, Lane information, Slope, Banking	Collision avoidance	Less accidents

Optimize Field Data Collection Process

- Part of the production process of the eSafety Map
- Responsibility of the private map providers
- Inherent latency problem: You can only capture reality after it has been created
- Relatively costly activity

Optimise Public - Private data flow

- Public Authorities are in charge of creating the eSafety reality
- A direct information flow from the planning/creation of the eSafety information to the eSafety map production/update process is required
- A Public-Private Cooperation between Public Authorities and Map Providers

Availability of Public eSafety information

- Available at different levels: Local, Regional, National
- With varying Completeness and Quality
- In varying form: Analogue, Digital
- With varying levels of accessibility
- Uniform approach is not applicable
- Complete overview is difficult to create:
Request for registration of available eSafety information at National Level

WG Digital Maps: Conceptual approach

A 3 phase approach:

- Phase 1: **COOPERATION:** Supply of e-safety attributes in the form they are available:
- * Map providers bear Logistical Costs
 - * Minimal extra effort for Public Authorities
 - * eSafety map available for Public Authorities
- Phase 2: **QUALITY ASSURANCE:** Development and Implementation of quality guidelines and improvement procedures
- * Quality Improvement and Cost reduction
- Phase 3: **OPTIMALISATION:** A standardized data flow supported by data exchange tools

Benefits

- **Public Private Cooperation**
 - On-time inclusion of Safety Attributes in E-Safety Map
 - Reduced data collection/compilation costs
- **Social and Economic Benefits**
 - Reduction of Traffic Accidents and related social costs
 - Reduction of Traffic Jams, fuel consumption and air pollution
- **Benefits for Public Authorities**
 - Uniform availability of eSafety information
 - The e-safety map as a repository, compliant to international standards
 - No investment required in phase 1
 - Phase 2 investments offset by enhanced quality management system

Next Steps so far

- Recommendation to discuss next step between WG and EC was not followed.
- Communication of the results to member States did not take place.
- Public Private project (ROSATTE) to implement recommendations was rejected by the eContentPlus program
- Informal continuation of ROSATTE to date without concrete results
 - A public-private cooperation will be unsuccessful without external funding
- How can we improve??

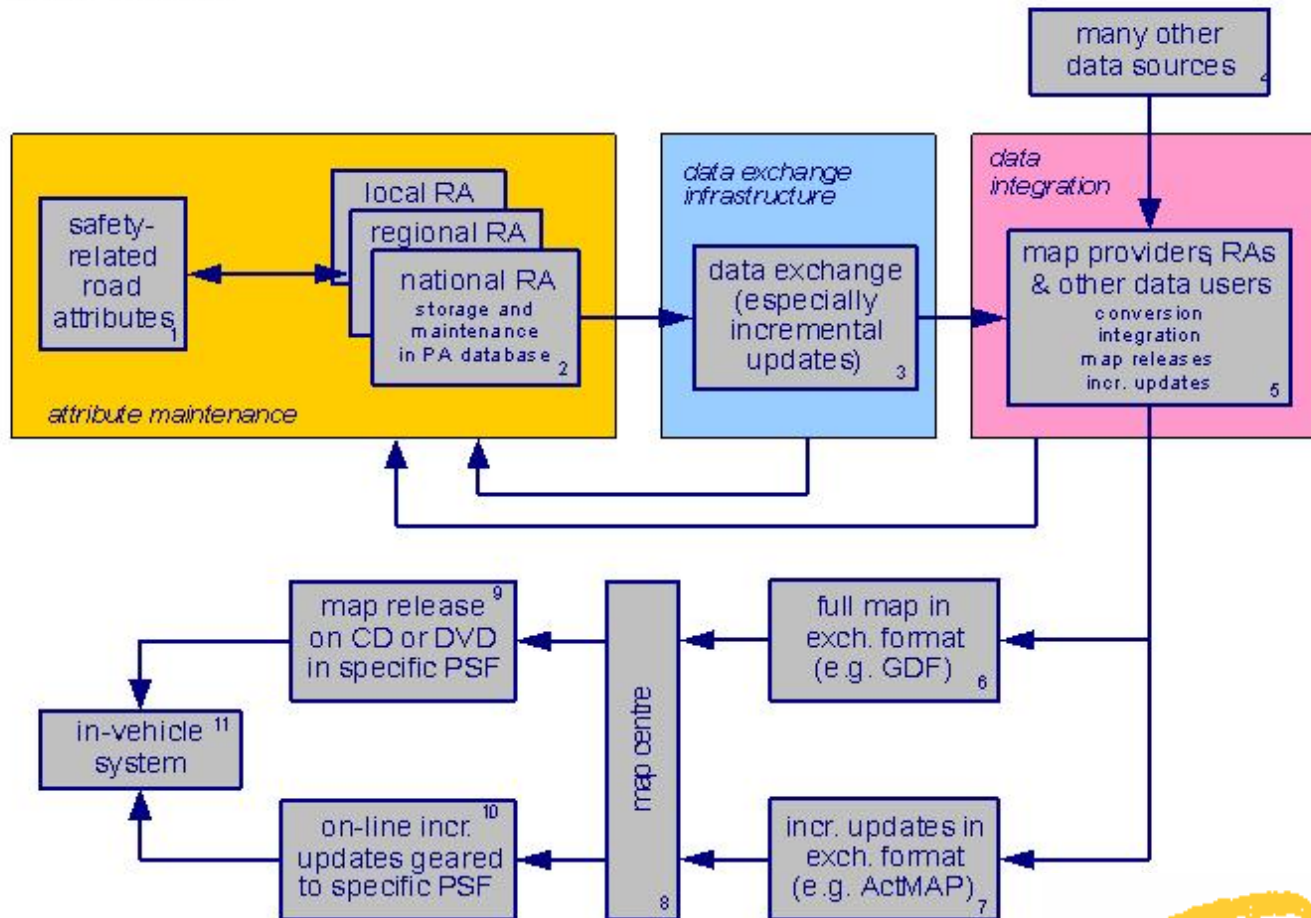
Next Steps from here.

- Steps by the Public-Private sector: The ROSATTE Cooperation Platform to submit a project proposal under EC FP7 (2007-2012) for financial support for development, test and validation of the road safety attributes exchange infrastructure, associated tools and related applications.
- Steps by the Commission
 - To support the ROSATTE Cooperation Platform in submitting a successful project proposal
 - To increase the awareness of the results of the Working Group Digital Maps at the member states
 - To request the member states to facilitate the creation of a national registry of available eSafety attributes in cooperation with the ROSATTE Cooperation Platform

ROSATTE Cooperation Platform

- Informal group of organizations to implement the recommendations of the Working Group Digital Maps of the eSafety Forum and to acquire funding to do this.
- ROSATTE Cooperation Platform intends to be open for membership of all public and private organisations that have a clear interest in ROSATTE activities and want to commit to supporting its objectives.
- Contact: v.blervaque@mail.ertico.com
- Interest so far from Map Providers and Public Authorities from UK, SWE, NO, NLD, FLA

ROSATTE and the eSafety Data Chain





Thank you for your attention

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