Tracing and tracking satellite system of vehicles transporting dangerous goods – a public/private cooperation on the Arc Atlantique axe

I.T.F. / I.M.T.T. - 2 October 2009 – Lisbon
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1. The Partners

Three road transport companies:
- PERGUI LHEM (Lacq – France)
- TECNI RUTA (Bilbao – Spain)
- ANTARGAZ

One river transport company – CFT

One fleet operator – NOVACOM

Nine institutions:
- Emergency services
- Motorway companies
- Traffic management and information centres
- Ministry of transport regional agencies
2. Objectives and content

- Visualisation of vehicles on a road map (traffic direction, speed)

- Knowledge of the goods carried by the vehicles
  - Danger code, product code, product state, load status
  - Contact details (consigners, consignees)

- Information on traffic flow

- Alert management
Architecture

GPS/EGNOS/GALILEO

PRIVATE ACTORS

Carriers

CONSULTATION PROCESS/DATA ENTRY

CONSULTATION

Vehicles equipped with beacons

SATELLITE

GPRS
SMS

OPERATORS

TRACKING SERVER of PUBLIC AUTHORITIES

Visualisation Storage Filing

PUBLIC AUTHORITIES PARTNERS

Management road control centers
Motorways operators

Emergency services (fire, police, etc)

Administration (town planning, environment)

CONSULTATION
3. The dangerous goods monitoring server
   \textit{(based on web services)}

- reception of positioning information from beacons via the operator services
- association of beacon identifiers with vehicles
- management of vehicles from the different transport companies
- input by transporters of information concerning a journey
- display on a map of the positions of vehicles and information on journeys
- Administration and user rights
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### Seguimiento de Transportes de Materiales Peligrosos

**FORMULARIO TRANSPORTE**

| Matrícula: | 7371BGM |
| Baliza asociada: | 1135 |
| Conductor: |  |
| Código material (O.N.U.): | 1052 - FLUORURE D'HYDROGÈNE ANHYDRE |
| Código peligro: | 20 - Gaz asphyxiante |
| Forma producto: | Autre |
| Estado de carga: | Vado |
| Cantidad: |  |
| Expendedor:* |  |
| Destinatario:* |  |
| Comentario: |  |

**Crear**  **Cancelar**
What is GENTRAC?

Research & Development proposal to trial the cross border tracking and tracing of regulated transport (live animals, hazardous goods)

An innovative approach to public and private sector cooperation
The project proposal

• Track and trace the transportation of hazardous goods and live animals (regulated transport)
• Test various tracking technologies – Satellite, GPRS, GSM, DSRC
• Track the cross border movement of hazardous goods and live animals – Portugal through to the UK
• Build on the French VisuTMD pilot projects
• Share tracking data between public and private sector organisations
**GENTRAC objectives**

- Create a general tracking application, based on GNSS, that can support various services – e.g. road pricing, tracking & tracing
- Establish the dependability aspects and evaluate how GNSS meets them
- Develop business models, business cases and cost/benefit analyses for public and private sector actors
- Identify the minimum standardisation requirements to support pan-European tracking & tracing
- Evaluate the potential secondary benefits of tracking data e.g. journey time calculations
Benefits

• Quicker, safer incident management with less environmental impact
• Avoid secondary incidents through re-routing of hazardous goods vehicles
• Increased knowledge and understanding of how foreign truck movements on the road network
• Integrate tracking information with real-time traffic information to help freight operators avoid incidents and congestion
United Kingdom
Tracking and tracing
UK Database
Traffic control centre
Emergency Centre

CETE BORDEAUX
Tracking and tracing
French Database
Traffic control centre
Emergency Centre

ESTRADAS DE PORTUGAL
Tracking and tracing
Portuguese Database
Traffic control centre
Emergency Centre

Satellite
GPRS
SMS

Satellite
GPRS
SMS

GPS-GALILEO
EGNOS
Thank you for your attention

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