Tracking & Tracing
Analysis of Current Status and Future Requirements

ChemLog T&T

Ing. Jaroslav Čermák
ChemLog T&T coordinator

Legal framework for transport of dangerous goods

- In Slovakia:
- Law on Road Transport (Zákon o cestnej doprave)
- Law on Railroads (Zákon dráhach)
- Law on Inland Waterway Transport (Zákon o vnútrozemskej vodnej doprave)

It is introduced functional system of safety officers, drivers and other employees training

Some of transport undertakings have functional system of dangerous goods transportation through the GPS

Provision Relating to Telematics and ITS at National Level

On 18th September 2012 was approved new **Law on intelligent transport systems in road transport (zákon o inteligentných dopravných systémoch v cestnej doprave).**

By this law is implemented Directive 2010/40/EU on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport.

- Projects in Slovakia:
- Project of Ministry of transport in Slovakia:

  - Transport Information National System,

  - Program for Supporting of ITS Development
- Centre of Excellence for intelligent transport systems and services (University of Žilina)

- Projects in Slovakia :

- RFID Laboratory in Slovakia - GS1 Slovakia
- Project of railcars tracking (Information system and RFID)- ZSSK Cargo
- Project of containers tracking ETISOFT Žilina
- Project of railcars tracking across Europe (GPS - Communicator) – BUDAMAR LOGISTICS, a.s.

T&T in road transport

- Satelite technology – GPS
- Driver in car – qualified service
- Monitoring of locality, speed, fuel....
- Information transmission continually – SMS per GSM
- Connection to car net, to car battery
- Connection of data in transport company
- New in Slovak law – intelligent transport systems – automatic signalisation of transport accident

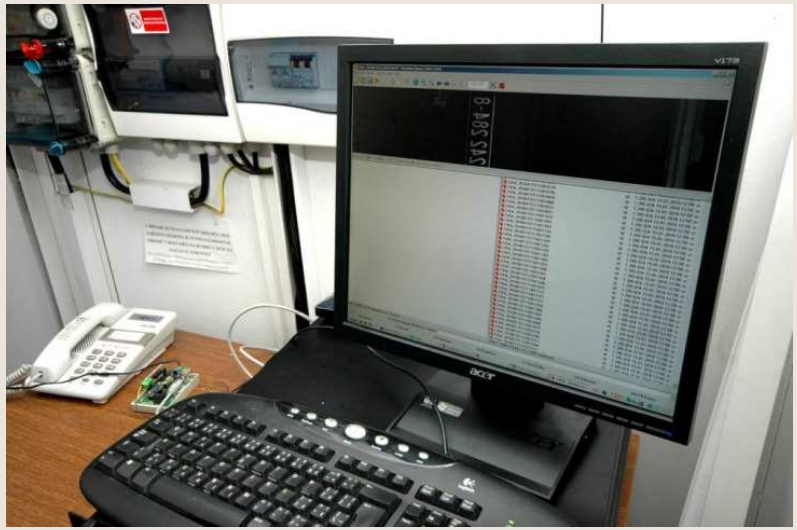
T&T in railway transport

- System of train localisation
- Operator of infrastructure have continuall monitoring
- Railway operator have to give operator of infrastructure summary of wagons in train
- Evidence of dangerous good wagons
- Optical identification of wagon number Star Cam
- Whitout tags, other information about wagon
- Now is tested in Ostrava – Czech rep.

RFID identification in Duslo company

RFID gate in semi-automatic weighing system

System of optical identification - Star Cam



High Consequence dangerous goods monitoring

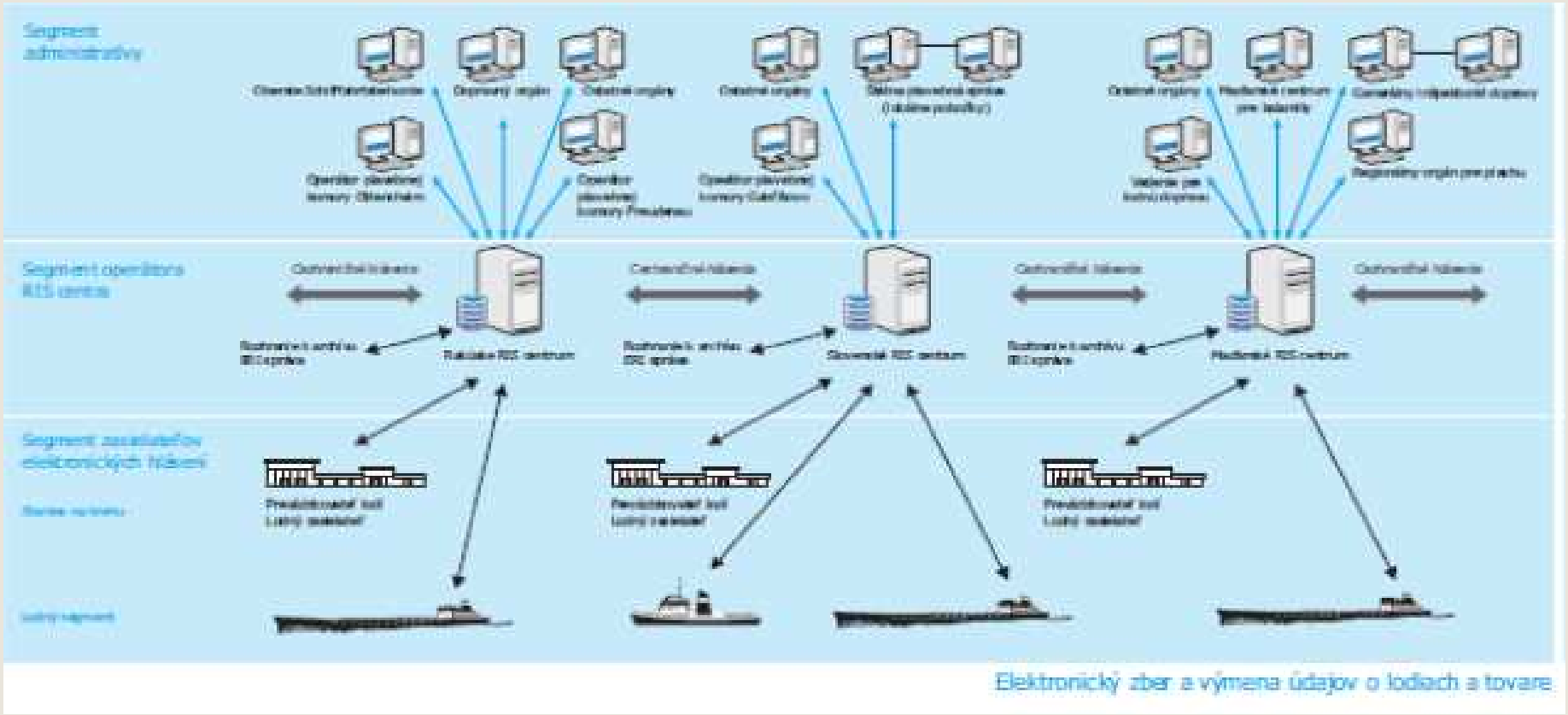
- GPS localization
- SMS information (2 time in hour)
- Alarm signal prompt
- 5 various binar signal
- Anti vandal version
- Battery for 5 year operation

Slovakia:

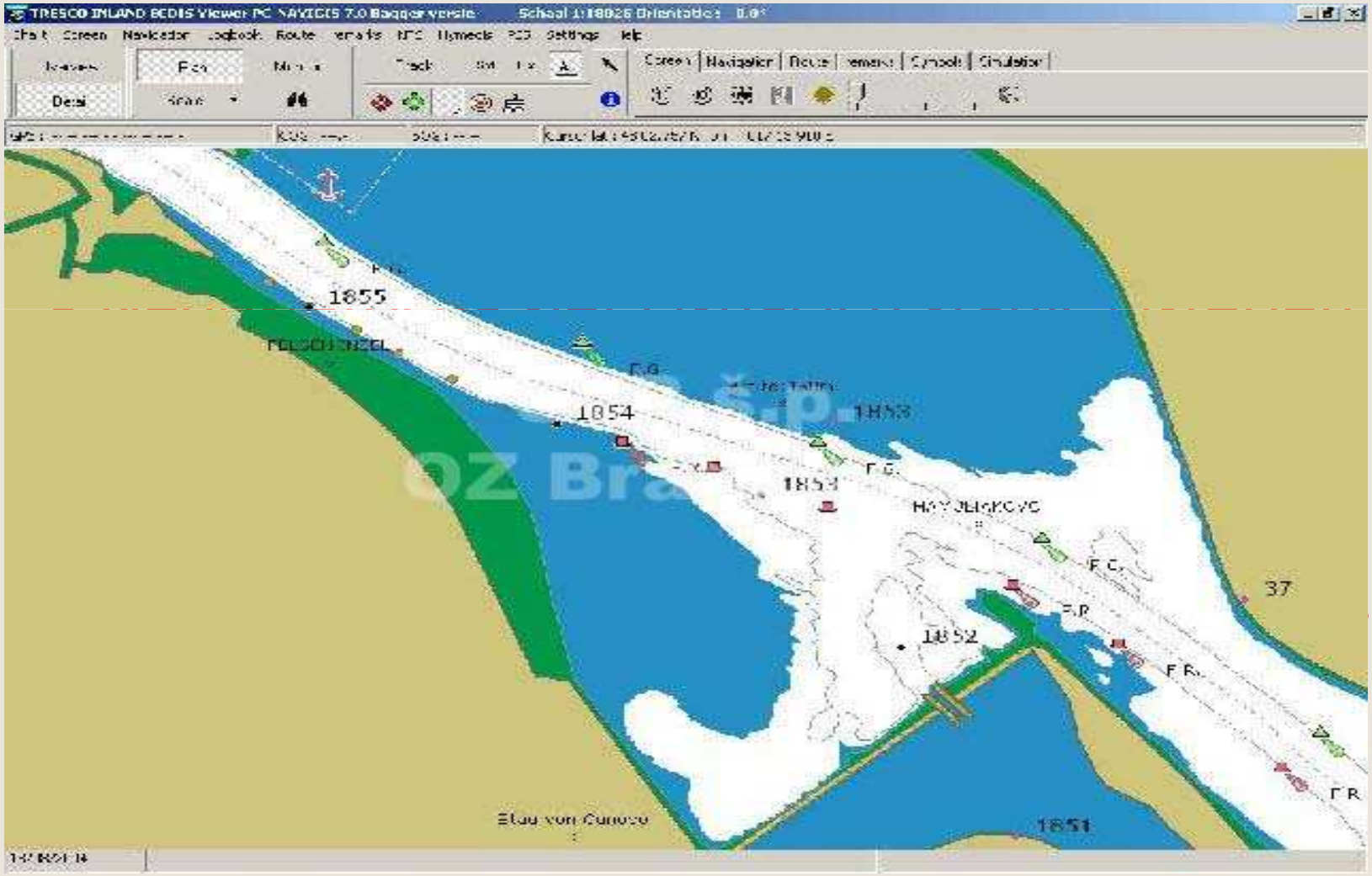
BUDAMAR LOGISTICS, a.s.

River information system – Danube

Structure of RIS – Danube



Digital map of Danube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Strengths of tracking and tracing

- Better organisation of drivers and vehicles and working and also competitive advantage in terms of efficiency of transport operations
- Faster reactions in case of problems
- Added value for customers

Weakness of tracking and tracing

- A high number of different technical solutions, which are adopted to special needs especially for transport undertakings
- Insufficient compatibility or interfaces between solutions
- Problems in unaccompanied transport (especially for intermodal transport – road transport is well covered, the rail transport is less covered)
- Little real time information

DEFINITIONS OF REQUIREMENTS FOR T&T

- Have information on transport alongside the whole supply chain
- T&T System which works for international transports
- Availability of real time information
- Better interaction with Emergency and Crisis management – higher Security
- Ensuring data protection of sensible information

DEFINITIONS OF REQUIREMENTS FOR T&T

- Ensure easy access of companies to the information about status of transport
- Availability of chemical goods relevant information (e.g. temperature, pressure, etc.)

ChemLog T&T – analyse

- Conjunction of existing systems
- Localisation per Galileo system
- Information transfer per GSM – SMS info
- Priority application – dangerous good 1.10 – telematic systems
- Application per ADR, RID – security of transport
- Alarm information - unit is open, leaked...
- Implementation per UN – WP 15? (ADR, RID, ADN)

Cooperant partner ChemLog T&T

- ZSSK Cargo – main railway operator
- Information systems in railway stations
- Connection and exchange of information with operators in neighbouring countries
- Activities are coordinated per COTIF, RIV....
- Prepared new information systems
- Trans Container Slovakia – terminal Dobra

Thanks for your attention