

ETC-based Traffic Telematics

Synergies between Electronic Toll
Collection and Traffic Telematics



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ETC-based Telematics

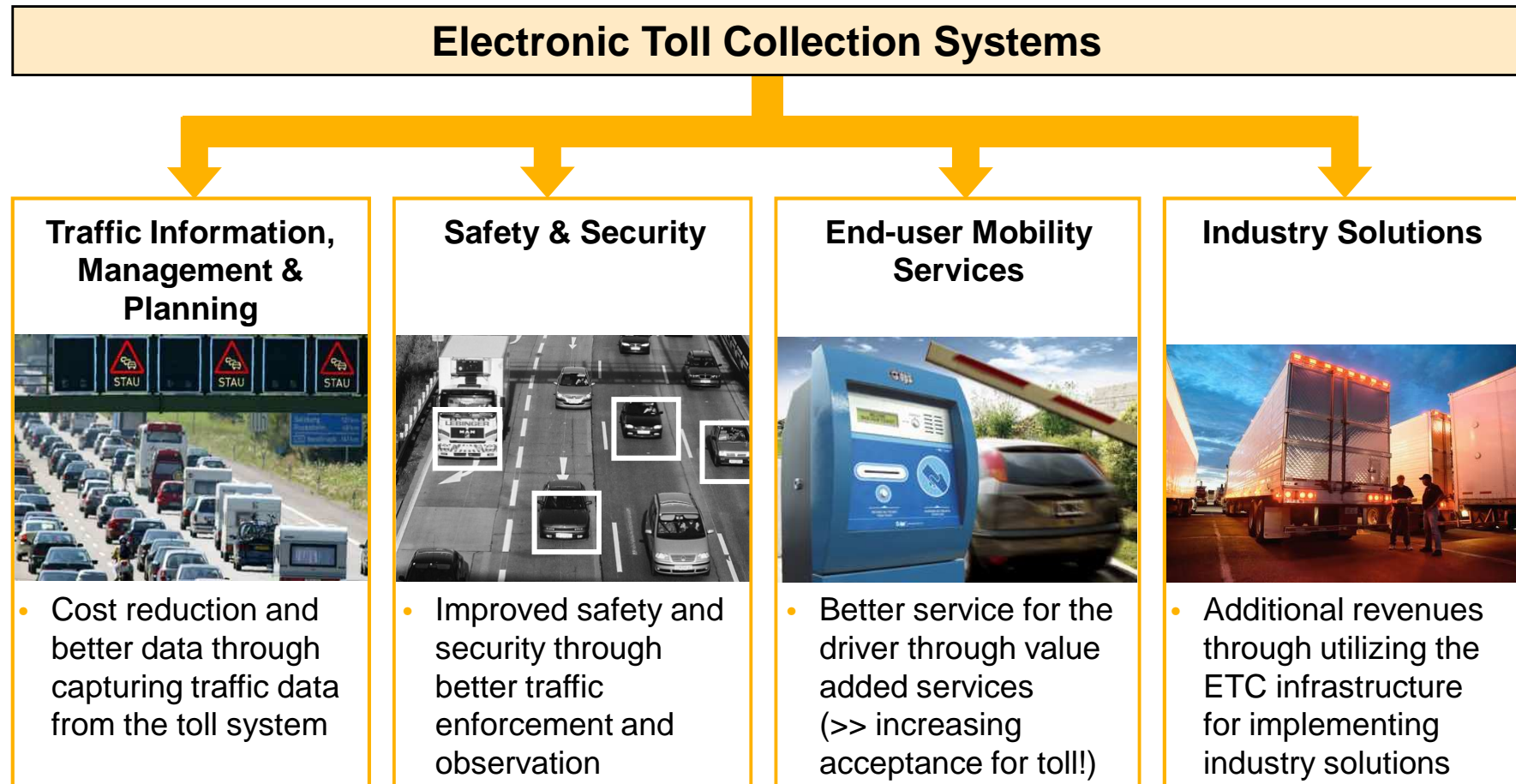
Trend:

- Re-use of existing tolling infrastructure as basis for other traffic telematics solutions
- In the future electronic toll systems will become the “backbone” for a broad spectrum of traffic telematics solutions

Main drivers:

- Cost reduction (re-use of ETC infrastructure)
- Better data (traffic management & planning)
- Increased safety & security
- Better service for road users (acceptance for toll)
- Additional revenues (concessionaires, EETS service providers)

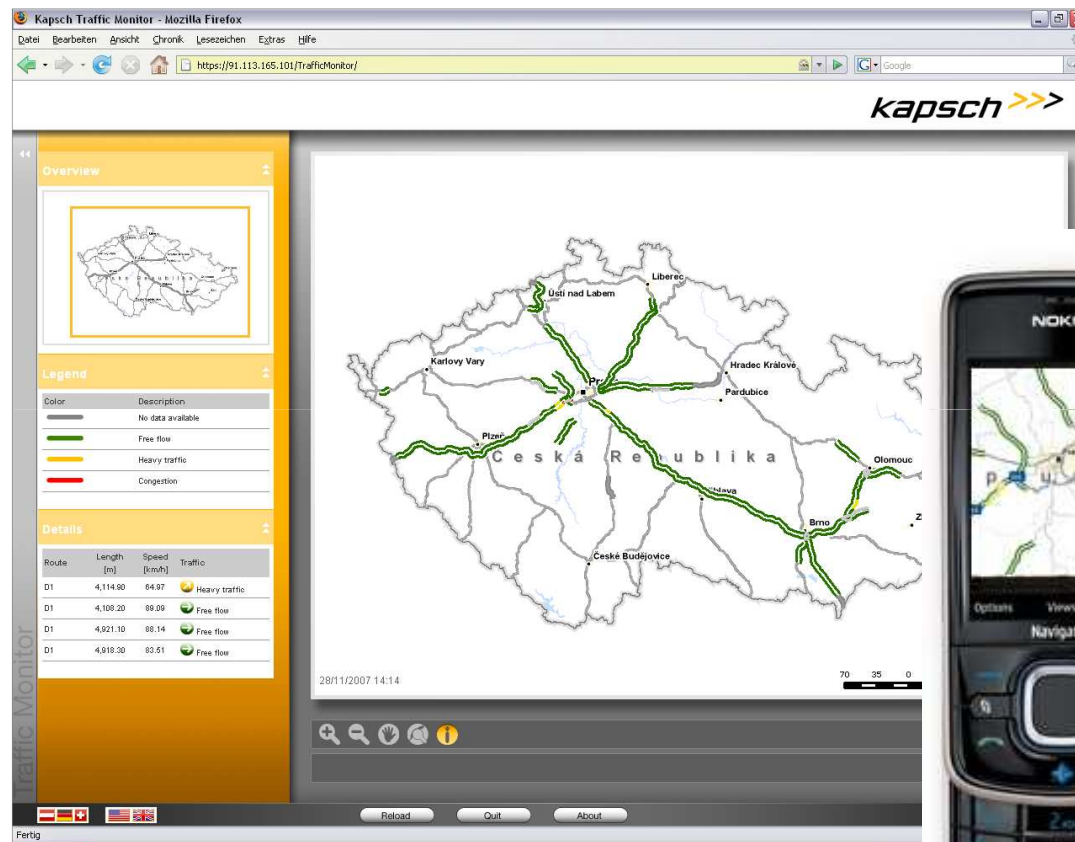
ETC-based Telematics: Fields of Application



Selected Sample Applications



Sample application 1: Traffic monitoring



Features:

- Calculation of real-time travel times and level-of-service
- Web front end
- XML interface to traffic management centers

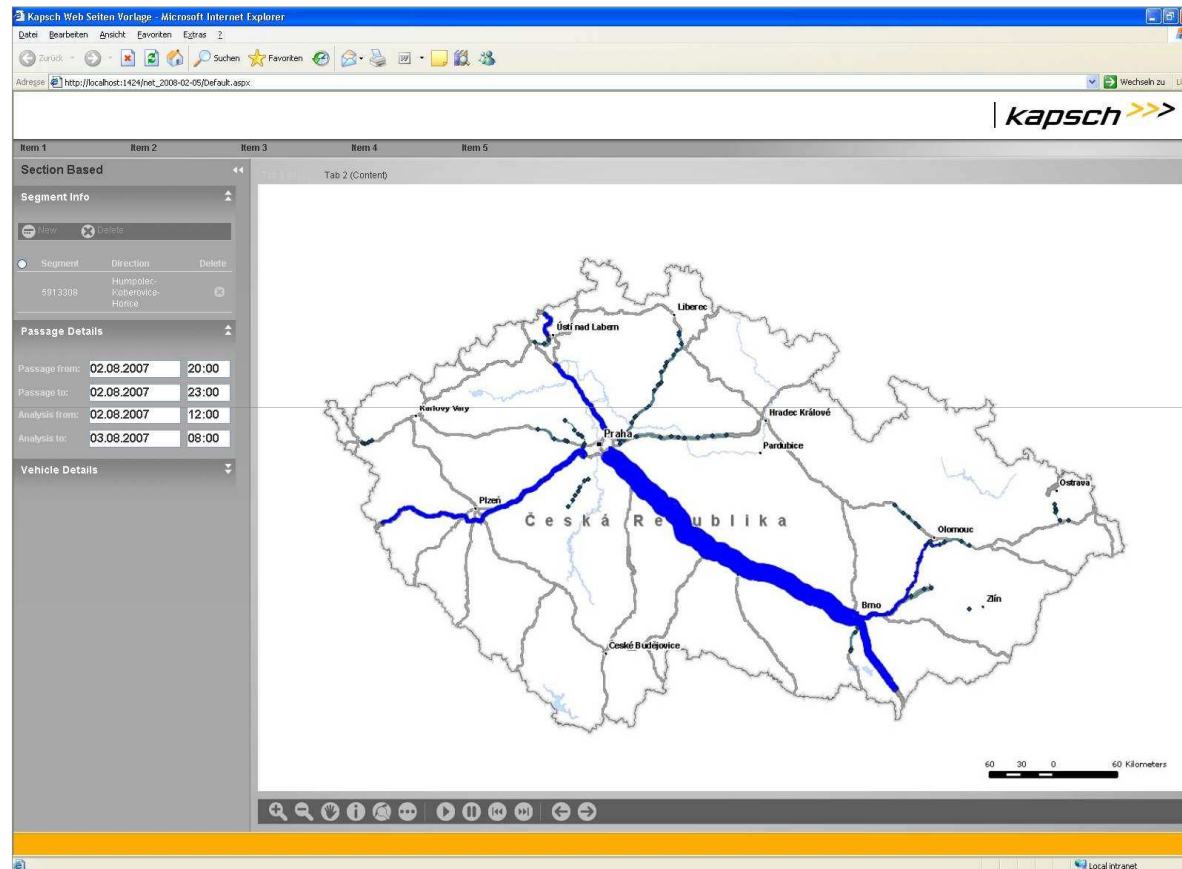
Field of application:

- Traffic management (incident detection and travel time prediction)

Benefits:

- Cost savings (reduced traffic sensor network)
- Better quality in traffic information

Sample application 2: Traffic flow analysis



Features:

- Route analysis of vehicles on tolled roads

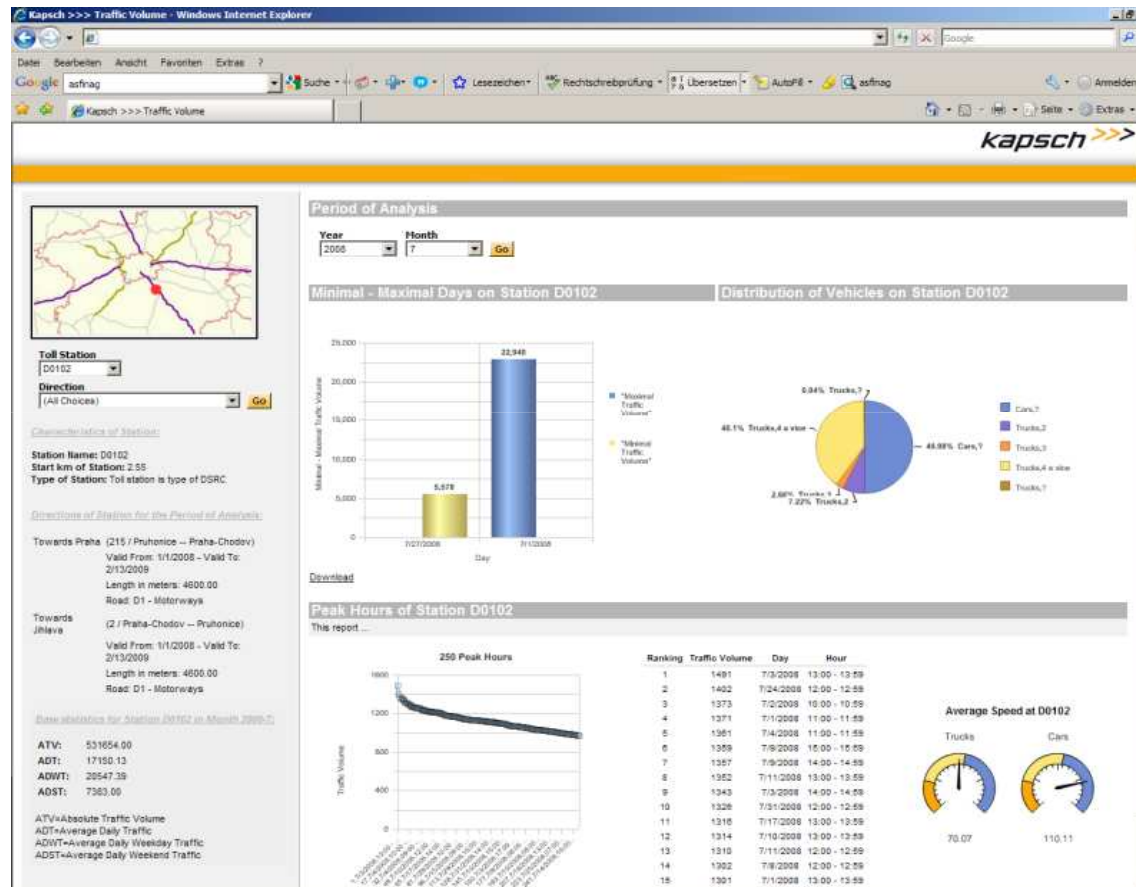
Fields of application:

- Traffic planning
- Traffic policy
- Others (e.g. advertisements)

Benefits:

- New dimension in traffic analysis (> better data for political decisions, infrastructure planning etc.)

Sample application 3: Traffic Statistics



Features:

- Traffic statistics for the tolled road network

Fields of application:

- Traffic planning
- Traffic policy
- Others (advertisement)

Benefits:

- Cost effective generation of traffic statistics
- Permanent counting (high data quality)
- Additional data (e.g. segment based data, statistics based on toll attributes [emission class, nationality])

Case Study: Traffic data capturing on CZ highways

- Calculation of travel times and level of service based on toll data for all sections of the tolled road network in CZ
- Capturing of short-term and long-term traffic data using the laser scanner of the Enforcement stations
- Provisioning of the data to the national traffic management center in Ostrava via XML web services



Telematics Platform

Tolling System



Outlook

Passenger car tolling will push ETC-based telematics applications

- Traffic management: better data quality
- High OBU penetration leads to increasing market potential for commercial add-on applications (e.g. access, payment)

EETS will further drive ETC-based telematics services

- EETS service providers will offer additional service in order to attract users

Toll tariff-based traffic management

- More and more traffic will be managed based on variable or dynamic tariffs

Think of traffic as an opportunity !

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