

## Electronic Toll Collection in Czech Republic



**“The combination of DSRC & GNSS/GPS technologies tested for the first time in the history of ETC in the commercial environment.”**

**Karel Feix**  
Managing director



Two years operational experiences  
of toll electronic system.



## Benefits of microwave technology

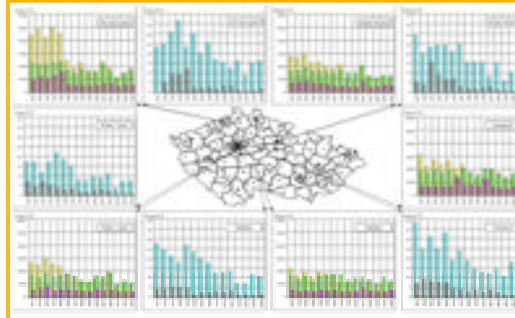
- Because of undeniable benefits of microwave technology Kapsch would complete the electronic toll collection system on future highway and motorway network in DSRC microwave technology.
- Kapsch will extend the existing DSRC microwave electronic toll system to cover another approximately 1,000 km of new highways and motorways, the construction of which is scheduled to begin till the end of 2017.
- More than 2,100 km of highways and motorways in Czech Republic will be in future tolled with DSRC microwave technology.

## Electronic tool operation experiences.

**Short time implementation**



**Cost-effective indicator and PPP**



**Number of users and OBU's**



**Toll system effectiveness**



**Transport safety and telematics**



# Extension of the toll electronic system.



## Toll system extension

**DSRC technology extension  
in all new highways**



**Electronic coupons for time-based  
fee for personal cars**



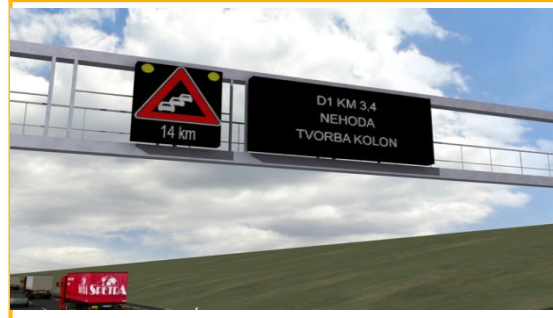
**Toll collection for vehicles  
above 3.5 tonnes**



**Hybrid tolling solution for low  
class roads**



**Traffic Management System**



**City charging in Prague**



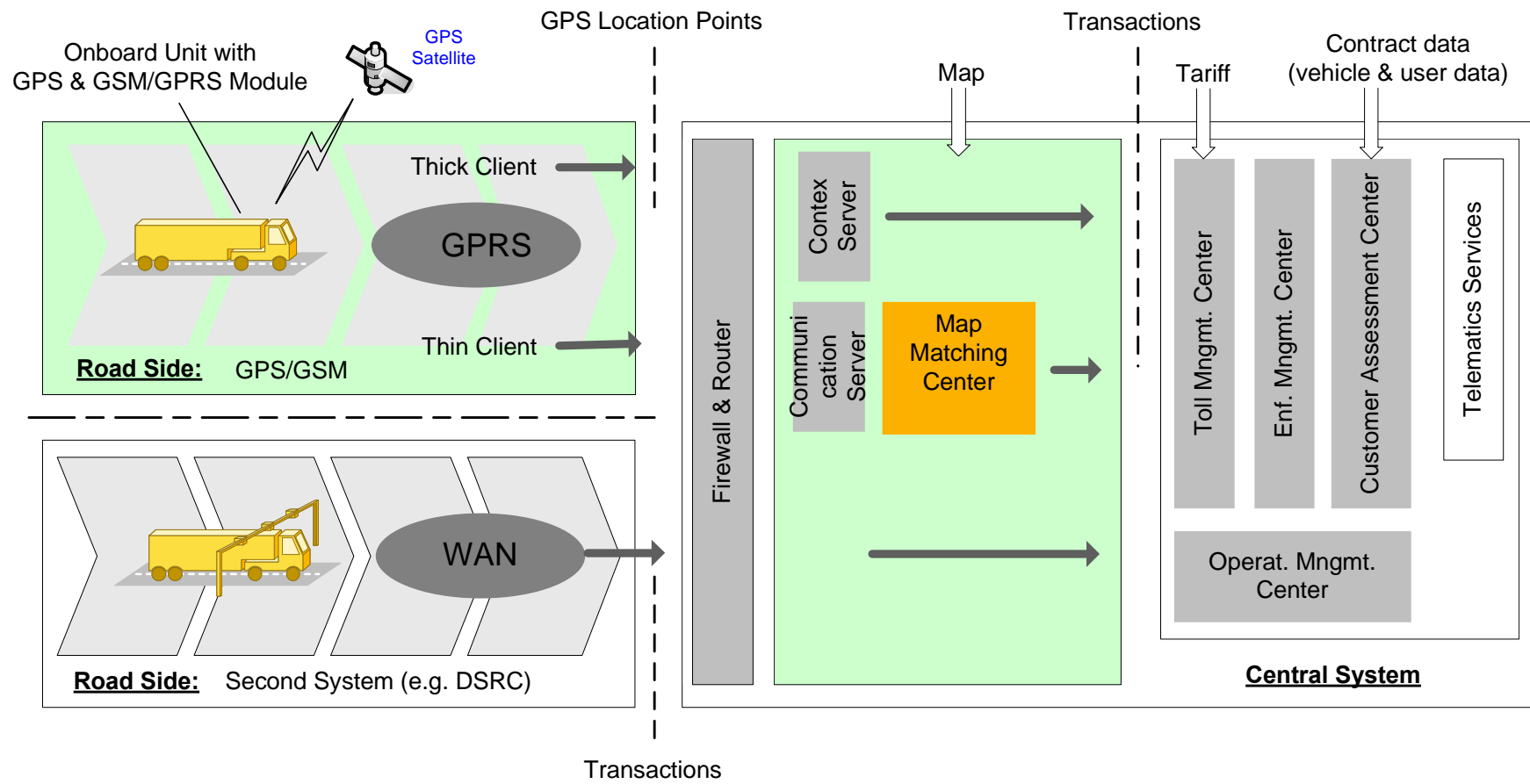
# Hybrid toll collection in Czech Republic.



## Pilot Project of the Czech Hybrid system

- Kapsch implemented the interface for a future satellite-based toll collection system to achieve the hybrid toll system, which combines existing Czech Electronic Toll System with satellite technology.
- The hybrid system was implemented in July 2008 and now runs a pilot project of the hybrid toll system with 10.000 testing cars (5.000 by Kapsch, 5.000 by RSD and MoT).
- Electronic driver's logbook application for Czech post (3.500 vehicles)
- Current Overall matching performance is 99,2%
- Average time between recording position and final matching is 20minutes including data collection time which is currently set to 10minutes
- Map Matching applicable on all road network classes in the Czech Republic
- The pilot project of the hybrid toll system will run for two years in real traffic.

# The Czech Hybrid System at a high level



## Hybrid On Board Unit



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