



Easy-OBU

Project Introduction



Easy-OBU research project in a nutshell: GSA supported international project aimed at an introduction of cheap positioning solution with improved accuracy

- **What are we doing:** we are developing and preparing market introduction of a new On-Board-Unit capable of providing more accurate location information in challenging situations (such as tunnels) at low cost
- **Who we are:** an international consortium consisting of Efcon (AT), PWP Systems (DE), Austriatech (AT), ITS&S Association (CZ) and ČVUT (CZ)
- **Public support:** the project is partially funded from the 7th Frame Programme of the European Union



This project is funded by the European Union and carried out in the context of the Galileo FP7 R&D programme supervised by the GSA

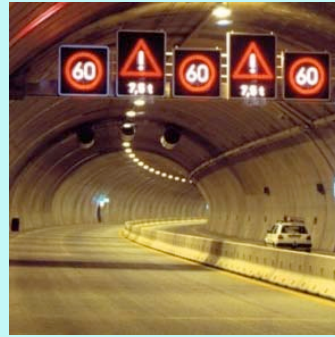
Short term signal loss is a major challenge for GNSS applications



GNSS systems are currently unable to cope with loss-of-signal situations that are all but uncommon. When signal is lost, the location information becomes unavailable or very imprecise. Even with introduction of Galileo and other new systems, this problem is here to stay.



Urban Canyons



Tunnels



Junctions with underpasses



Railways

Solutions for localization precision improvement are available, but at a commercially unviable price point of tens of thousands of Euros per vehicle.

Easy-OBU will apply new technologies and scientific methods to radically cut the cost of the localization information improvement

User focused design and ...

- one simple OBU that does not need anything but a power cord to connect with the car
- standard location information (GPS and Egnos) when GPS is available
- improved location information for loss-of-signal situations when GPS is unavailable

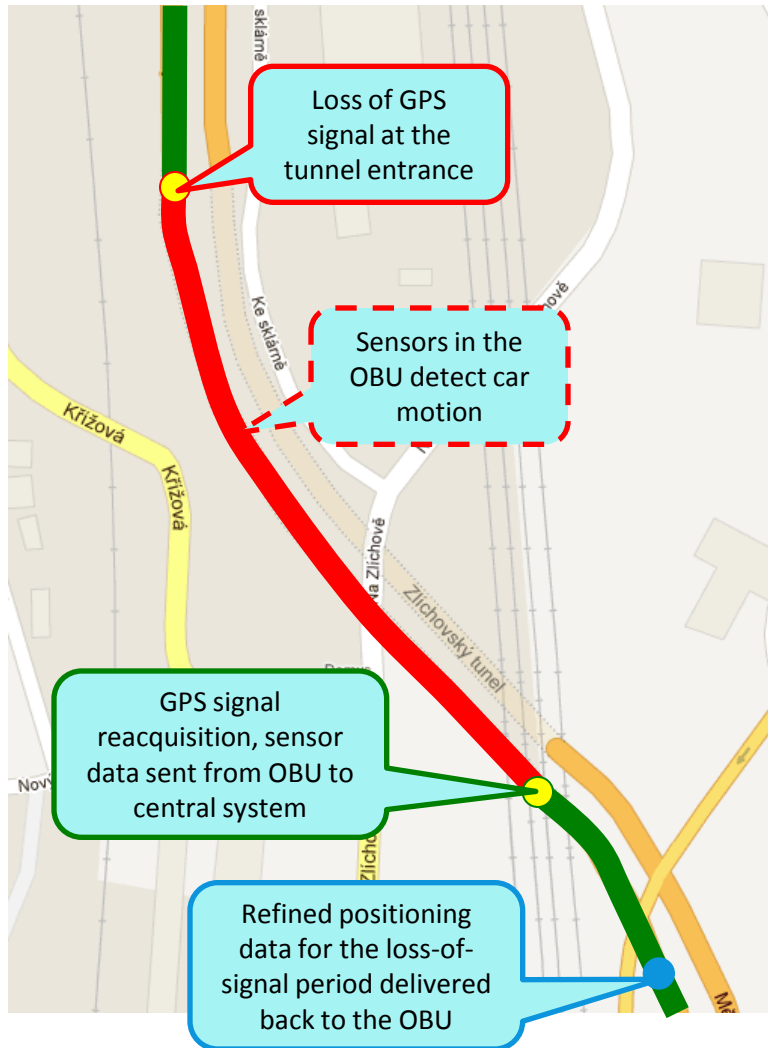
&

... the technology behind

- motion sensors integrated into the OBU (gyroscope, accelerometer)
- Application of non-causal filtering that delivers great location information improvement even in combination with low-cost sensors
- Open interfaces for integration

Simple, cost effective and commercially attractive solution for location information improvement able to compensate 95% of signal outages and ready for integration into various ecosystems

Easy-OBU can offer location precision improvement to applications that do not insist on real time availability of the location information



The only limitation of Easy-OBU (and a “price” paid for the low cost of the unit) is availability of the refined positioning data only after a short delay.

Easy-OBU is suitable only for applications that do not necessarily require the improved location information in real time:

- Shortly after leaving the tunnel, but not during the signal loss in the tunnel
- Examples of such applications may include:
 - Fee collection (tolling, parking etc.)
 - Car Sharing pay-per-use models
 - Route controlling (e.g. hazardous goods transport monitoring)
 - Fleet monitoring with analytics that requires a more precise location information
 - Insurance



EFKON AG
Dietrich Keller Strasse 20
8074 Rabba
Austria



pwp-systems GmbH
Otto-Hahn-Str. 20a
65520 Bad Camberg
Germany



**Austriatech – Gesellschaft des Bundes für
Technologie Politische Massnahmen GmbH**
Donau-City Strasse 1
1200 Wien
Austria



Sdružení pro dopravní telematiku
Nám. Franze Kafky 7
110 00 Praha 1
Czech Republic



České vysoké učení technické v Praze
Fakulta dopravní
Zikova 1905/4
166 36 Praha 6
Czech Republic

Ondřej Zaoral

Czech & Slovak ITS&S

Inoxive s.r.o.

www.inoxive.com

ondrej.zaoral@inoxive.com



Further project information:

www.easy-obu.eu

<http://www.sdt.cz/page.php?id=102>