



# Easy-OBU

## *System requirements and properties of Easy-OBU*

Praha, 23<sup>rd</sup> of January 2013, Dr. Hannes Stratil



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 7<sup>th</sup> Frame Programme of the European Union

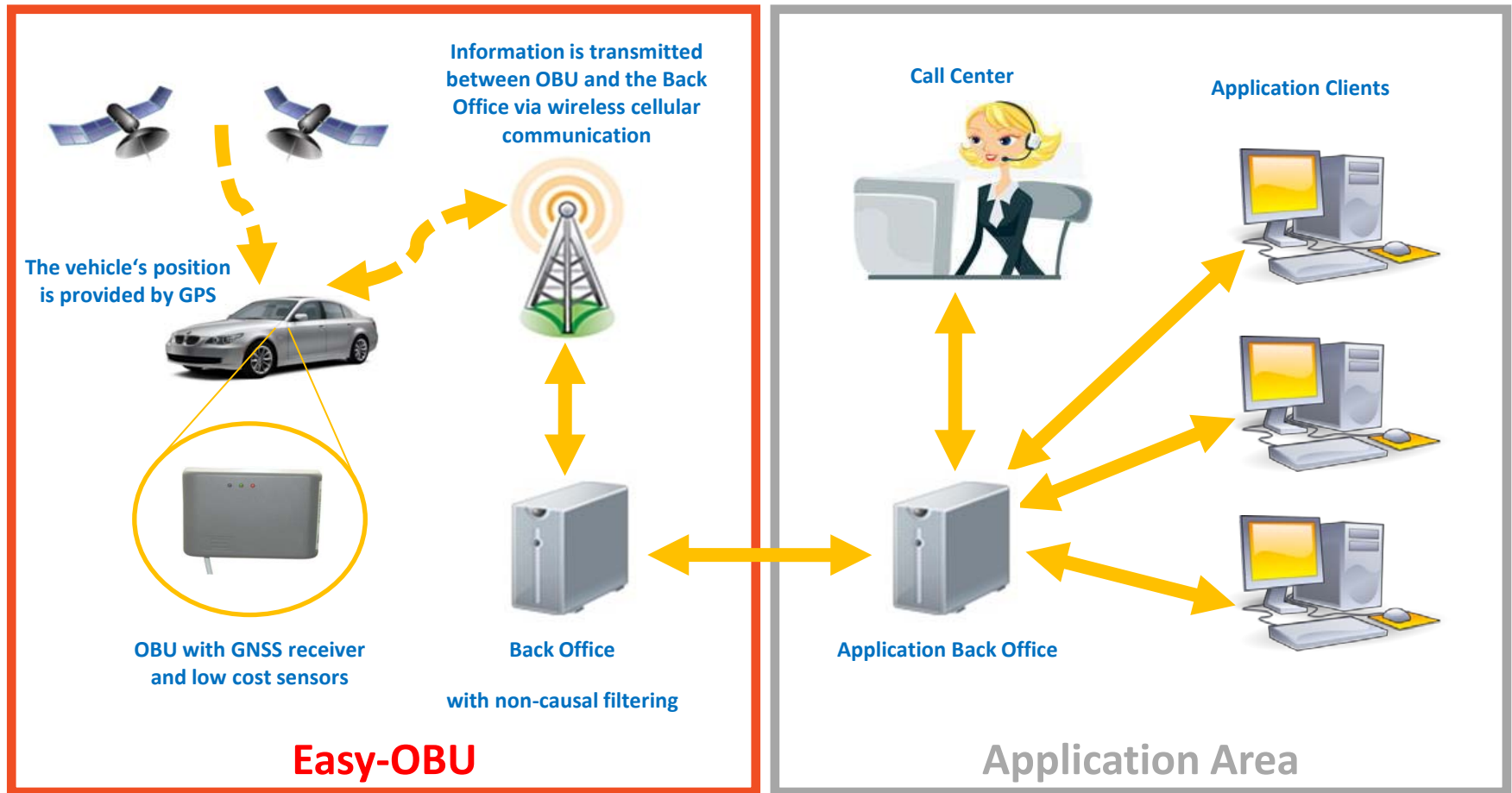


This project is funded by the European Union and carried out in the context of the Galileo FP7 R&D programme supervised by the GSA

## Easy-OBU - System requirements

- Easy-OBU should provide - at least - the same or better performance as existing simple GNSS based positioning systems.
- Easy-OBU should use simple and mass-market components and sensors (GNSS, Gyrometer, Accelerometer)
- OBU should be easy to install into the vehicle
- Easy-OBU should improve the availability of position information for situations where GNSS signals are not available.
- Easy-OBU should improve the accuracy of position information in situations of large positioning errors.
- Retrospective calculation of position information for challenging situations should be used

# Easy-OBU project – System Architecture



# Easy-OBU - System interfaces

- **Interface 1**

Open interface at the central server

Used by end-users to access the data

Data in the central server are application independent

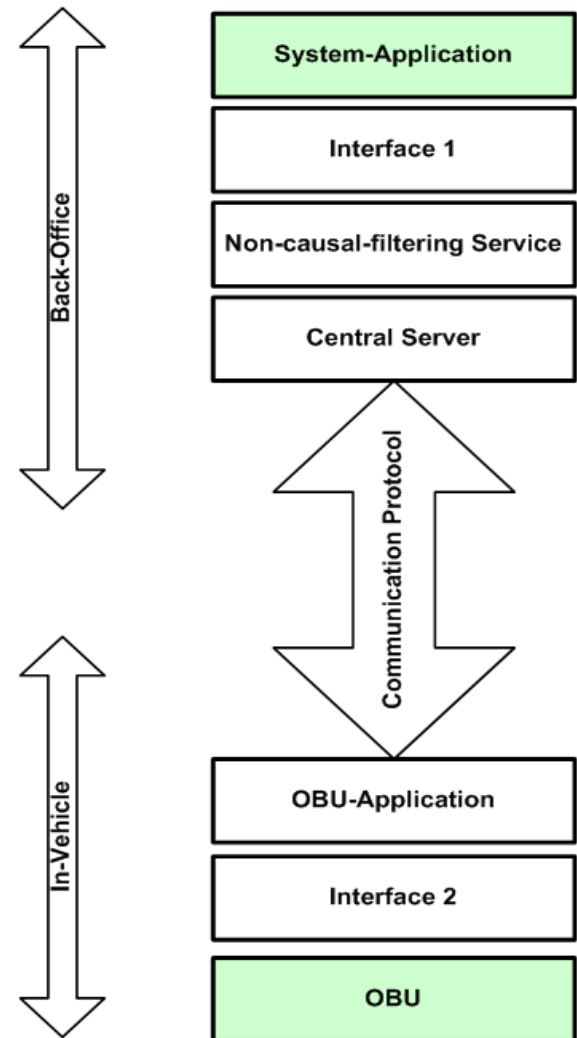
System application can run in another location

- **Interface 2**

Open interface inside of OBU

Specifies the sensor information required by Easy-OBU

Used by OBU provides to integrate their own OBU into Easy-OBU



## Easy-OBU – provided properties

### Performance parameter:

- Availability > 99.9 %
- Position accuracy: < 10 m
- Heading accuracy: < 5 °
- Velocity accuracy: < 2 km/h
- Accuracy of distance travelled < 1 %
- Time accuracy: < 0.5 s
- Position update rate: 1 Hz
  
- **Light weight unit in the vehicle**
- **Small in size (the view through the windscreen is not disturbed)**



### 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



## Dr. Hannes Stratil

Director R&D - Engineering

EFKON AG

[www.efkon.com](http://www.efkon.com)

[hannes.stratil@efkon.com](mailto:hannes.stratil@efkon.com)

Further project information:

[www.easy-obu.eu](http://www.easy-obu.eu)

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