European Bus System of the Future

2011 Annual Polis Conference and Polis Annual General Assembly

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EBSF – General Information

- Large Scale Integrated Project funded by the European Commission DG-RTD (Directorate General for Research)
- The first about Urban BUS
  - Total Budget / Funding: 26 MEUR (16 MEUR)
  - 7th Framework Programme of the EU
  - 4 years project 2008-2012
  - 47 Consortium Partners from 10 Countries
  - 22 more members and 5 other Countries in User Group
  - More than 400 European experts involved in project activities

- EBSF coordinator: UITP - International Association of Public Transport
  - UITP represents about 3,400 mobility actors from 92 countries worldwide
“The whole is more than the sum of its part”

Aristotle, Metaphysics

Urban Infrastructure

Bus Vehicle

Operations

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The EBSF Consortium

ASSTRA, ATV Verona, CRF, D’Appolonia, Digigroup, FIT, Uni Roma 3, Uni Roma/DICEA, ATAC Rome, ATM Milan

ACTIA, CERTU, INEO, INRETS, Iveco Irisbus, Nantes Metropole, RATP, UTP, Veolia-Transdev

BIS Bremerhaven, Evobus/Mercedes, Fraunhofer, Berends, Hübner, INIT, MAN, PE Int., VDV, Bremerhaven Bus

Chalmers, Vasttraffik Gothenburg, Hogia, Volvo, Scania, Pilotfish

CRTM, TRANSYT-UPM, TEKIA, CEIT

TEC, UITP

TIS

BVK Budapest, Vultron

RATB Bucharest

Newcastle University

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The EBSF User Group

Follow project development and assess major aspects of the EBSF system definition

EUROCITIES, POLIS

ATC Terni, CTM Cagliari

Hamburg HHV, Hochbahn, Berlin BVG

City of Malmo

TFL, Arriva

KNV

STIB, De Lijn, Brussels Region

Keolis, Systral Lyon

Slovenská autobusová doprava Zvolen

TMB

Wiener Linien

Istanbul Municipality

Carris

DP Praha

TPG Geneva
EBSF – Phases

System Definition

Vehicle, Infrastructure, Operations

Development of key innovations

Test in real operational scenarios in 7 European Cities

End-to-end validation

Strategy
(recommendations, standardisation, exploitation…)

Definition of EBSF characteristics and functionalities

Use Cases

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Developing Key Innovations for Vehicle

- Accessibility, passenger flow, dwell time
- Internal Modularity
- Energy Management Strategies
- Driver Workplace ergonomics
- External Modularity
- Accessibility for special needs users
- Advanced Steering Techniques
- Standard IT platform on-board (Passenger info, Remote Maintenance…)

...Design solutions to improve attractivity!
Key Innovation areas for Urban Infrastructure and Bus Operations

- Interexchange stations
- Efficiency of travel (from pre-trip information to ticket validation)
- Intermodality with other PT and complementary transport modes
- Crossing Bus lines
- Transport policies and Traffic rules for urban bus services
- Operational costs of innovation
- Bus Stop scalable design and Prototype
- Standard IT platform for Back-Office Test-bench
Accessibility for all user categories

Easy and reliable information

Offer of services

Location

Main Focus: the user

Powerful & coordinated management

Integration of private and public modes

Fast and easy transfer

Interchanges

Quality, comfort, safety and security of waiting areas
Scalable design

EBSF Bus Stop

Prototype realisation
INTERNAL MODULARITY
TELEDIAGNOSTIC
DRIVER COMFORT

ON-BOARD COMMUNICATION
INFORMATION TO
PASSENGERS
INTEGRATED INFORMATION
SERVICES (ex-PT)
SOLUTIONS FOR
PASSENGERS COMFORT

MULTIMODAL INFORMATION
FOR PASSENGERS AND
DRIVERS
UNDERGROUND VEHICLE
LOCALISATION
INFORMATION INTEGRATION
IN THE CENTRAL-OFFICE

TELEDIAGNOSTIC
PREDICTIVE
MAINTENANCE
DEPOT MANAGEMENT

IMPROVED GUIDANCE AT
PLATFORM
ACCESSIBILITY FOR USERS
WITH SPECIAL NEEDS

ACCESSIBILITY
CENTRAL DRIVER POSITION
DWELL TIME TRAINING
SMART DRIVING

ACCESSIBILITY
PASSENGER CONFORT
TELEDIAGNOSTIC
TRAFFIC MONITORING AND
BUS PRIORITY

7 EBSF Use Cases
IT Platform workshop
Bus Stop presentation

Calendar of EBSF
events on
www.ebsf.eu

ROMEx
BREMERHAVEN
MADRID
BRUNOY (Paris)
GOTHENBURG
ROUEN
BUDAPEST
System Approach

- Definition of European Bus System of the Future functionalities (*trunk*)
- Development of key solutions (*branches*)

**EBSF: European Platform for Bus System Research**

"EBSF Roadmap" identifies areas and priorities for future bus system research
How is the European Bus System of the Future?

Intelligent, Innovative, Integrated
The European Bus System of the Future is

An intelligent system...
- efficient use of information
- different bus system solutions adapted to specific needs of all stakeholders

...with innovative vehicles and infrastructures...
- providing improved comfort to drivers and passengers
- providing improved accessibility to all the users
- making smart use of energy

...integrated in the European urban scenarios
- adapted to different modern and historical city contexts
- taking into account the future mobility trends
- featuring new services for passengers and operators
- core part of the whole transport network for citizens seamless mobility
Thanks for Your Attention

More Information?
- Public Deliverables
- EBSF Vision
- EBSF Compendium: System Definition
- EBSF Use Cases
- EBSF Roadmap for ERTRAC

On EBSF website