Ahead in the clouds

Julie Castermans’ frustrations as a regular trans-European traveller are about to be relieved thanks to the Internet of Mobility, a project that is uncoincidentally close to her heart.

In an era of booming new technologies, with ever increasing public spaces providing free Wi-Fi and with 55 per cent of the EU’s population owning increasingly connected smartphones - why, oh why can’t I book a trip to any other country in Europe, with one single ticket for all my transfers and be guided from my doorstep to my destination with real time travel information? Why can’t I use my Belgian public transport smartcard on the London metro? And once there, why can’t I easily find ONE catalogue of locally provided transport and travel services?

Well, here is the good news: a team of experts from different business sectors across Europe are currently investigating a single solution that would solve these problems. The solution is MOBiNET, or in other words, the Internet of (Transport and) Mobility.

Technology is not the problem, nor is the availability of customised transport

Over the next three and a half years, the €15.6 million MOBiNET project plans to capitalise on the widespread growth in smartphones, mobile data services, and cloud-based computing to launch a new generation of travel apps for European citizens, and transport services for businesses and local authorities.
“Each vehicle or traveller that comes to London should be able to access the same information (or mobile service) as if they were in their own hometowns”

John McCarthy, Transport for London

MOBiNET features

- An online B2B directory of Europe-wide transport data and services
- A unified mobile accounting, payment and clearing system, giving users a single account valid throughout Europe and simplifying roaming among providers
- An open business environment enabling providers to integrate third-party services with their own products
- A secure environment for in-vehicle and portable devices offering users a dedicated app-store, and service providers’ access to MOBiNET compliant user devices
- A business-to-business e-marketplace for the automatic negotiation of service agreements
- A Service Development Kit to simplify the creation of innovative MOBiNET services for end- and business users.

MOBiNET will make it easy to find transport apps

users through a Europe-wide framework or ‘service platform’. This service platform will help service providers deliver enhanced (and interconnected) services to existing subscribers as well as to reach new customers. For users, MOBiNET will offer a common interface which will help them find and subscribe to new types of mobile services such as real-time multimodal travel assistance, parking guidance, booking and payment schemes or Europe-wide virtual tickets for transit services.

Of course, many such platforms already exist but MOBiNET does not claim to replace any of them. Instead, it hopes to become the convergence point for all of them, or in other words “a platform of platforms”.

UNDERSTANDING WHAT USERS WANT

The project has started to analyse user needs and requirements for the platform and these will provide foundations for the development of MOBiNET’s central facilities and services.

Use case scenarios identify the highest priority services that can be used as reference implementations at pilot sites. Some will be brand new innovative services, others will be existing services that are adapted and migrated for testing in apps, but the real challenge is to simplify access for end users. The same is true for developers who want to expand their business and sell their products to a wider customer base.

MOBiNET’s proposed solution is to create a community of transport data and service providers that can link to

TERMINOLOGY

MOBiAGENT:
All MOBiNET functionalities available on the end-user device enabling applications to use MOBiNET, and enabling end users to manage their MOBiNET applications. End-user devices can be smartphones, tablets, cooperative onboard units, or other smart devices, providing runtime environment for the MOBiNET applications. The Communication Manager is a component of the MOBiAGENT providing intelligent selection of communication interfaces.

MOBiCENTRE:
Central core component of the MOBiNET platform at the heart of the service eco system. The MOBiCENTRE includes the service directory, the payment and identity management modules, as well as the Dashboard. The communication agent is a component in the MOBiCENTRE building a geographically-scoped picture of multi-technology connectivity of the MOBiAGENTS. It uses this information to offer a B2B multi-technology service to MOBiNET content providers.

MOBiNET Dashboard:
used by service providers to add their services into the MOBiNET service directory and manage their services.
different locations in Europe. On the basis of those reference services, functional and business-related requirements will be collected through stakeholder surveys.

The MOBiNET project is following the AGILE development method, meaning that a first iteration of the platform will be fully operational just 16 months into the project. Based on test results and feedback from early users, the requirements will be reviewed and extended to improve the platform before next release.

As mentioned earlier, one priority is ‘to simplify’ – a second priority is ‘to enable’. MOBiNET should be a universal framework that enables service, content and data providers to extend existing systems and services by providing new specific enablers. MOBiNET will add value to existing hardware or functionality by enabling their integration with complementary services in Europe. This would be the real value of MOBiNET: real “Europe-wide” availability.

THE BUSINESS CASE
Business needs must be translated into technical requirements early in the design process in order to be suitably included in the target MOBiNET architecture. To make MOBiNET economically sustainable, it is essential that all types of end user devices and operating systems are supported. Common security and identity management mechanisms also need to be agreed on. Other critical areas are payment management, operational support (e.g., a multilingual helpdesk) and clear rules for data ownership and revenue sharing and these will be critical to the success of MOBiNET if it is to establish itself as a credible framework to be used by the members of the future deployment platform.

MOBiNET “ALLIANCE”
The project doesn’t intend to leave it there. By the end of its three and a half-year term, to ensure that MOBiNET results in an operational platform attracting the majority of transport and mobility service and data providers, the

Initial use cases

Green light optimal speed advice (GLOSA) as a web-based service
Drivers whose vehicle can receive GLOSA services, can subscribe to a service informing them where (city, individual intersections) a GLOSA message is available.

Any interested user could add a subscription to GLOSA to an existing service, e.g., TomTom Live.

Data describing the location of GLOSA-equipped intersections would be added to the navigation map database in the user’s in-vehicle or portable device. It would be updated regularly, either by user download or by over-the-air push service.

Their on-board unit or nomadic device can use this information to plan a route including e.g., a maximum of GLOSA-equipped intersections, and to inform the driver in real time of the approach of such intersections.

Fleet operators could use this information for route planning; infrastructure operators for network maintenance, etc.

The GLOSA information could also be used by in-vehicle apps for green-light advisory messages to the driver, and for a smart start/stop assistant.

Marketplace for multi-modal journey planning and travel assistance
Service providers operating a multi-modal journey planner for a European city can use MOBiNET platform to extend their service to another European city.

MOBiNET is able to connect existing multi-modal journey planners [platforms] and enables a service provider to buy and sell its multi-modal journey planner [and database] through the platform.

MOBiNET does NOT aim at providing a Europe-wide multi-modal travel assistant, it fosters the aggregation of data from different sources across Europe. The MOBiNET service directory is a key feature for this: to hit the mark, it should enable rapid response to travel & transport user requests, while identifying data and service providers across Europe for local use.

REFERENCES
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3 Helmond (NL), Helsinki (FI), Vigo and San Sebastian (ES), North Denmark Region, Trondheim (NO), Turin and Piedmont Region (IT), London (UK) and Trikala (GR)
“MOBiNET is the first platform to implement cooperative systems as a service.”
Paul Kompfner, ERTICO – ITS Coordinator

The consortium will build the foundations of a public-private organisation driven by its members. This organisation will administer, operate and maintain the MOBiNET platform, and further grow its membership after the conclusion of the project.

This organisation will be an umbrella, covering both the User Community (e.g., both private and business end-users, as well as service and data providers who consume B2B services) and Supplier Community comprising all providers of transport and mobility data, content and services, to end-users, suppliers and developers. These providers would thus subscribe to become “Approved Suppliers” of MOBiNET, register services in the Service Directory and deliver MOBiNET-compliant Apps and services to their customers. Membership will be subject to acceptance of certain conditions, which are also part of the requirements exploration process.

The fact that MOBiNET is an R&D project that focuses not only on the technical but also economic issues is actually very innovative, and this approach offers a greater chance of answering some of these business requirements.

Paul Kompfner, ERTICO – ITS Coordinator

MOBiNET is the first platform to implement cooperative systems as a service.

To broaden the consultation required to gather requirements from stakeholders outside the consortium, MOBiNET will organise its first open stakeholder workshop in Helsinki, on 6 May 2013.

This is your chance to help shape how MOBiNET can revolutionise the world of online mobility apps and therefore we invite you to join us there to share your ideas and wish list for a truly Europe-wide service platform!

To register your interest, please email Manuela Flachi at m.flachi@mail.ertico.com.

More information at www.mobinet.eu