Advanced Passenger Information in the Open way

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Abstract The paper aims to present the experience gathered from in the Italian alpine cities of Bolzano and Merano within several projects, in detail "Bolzano Traffic" and "realtimebus merano", concerning the introduction of experimental open ITS platforms destined to local service providers for the diffusion of advanced traveller information services and the future deployment of cooperative mobility systems in the region. Several end-users applications targeted to the needs of different user groups have been developed together with local companies and research centers; a partnership with the EU Co-Cities project has been moreover activated. The services are based on real-time travel and traffic information collected by urban traffic monitoring systems or published by local stakeholders (e.g. public transportation operators). In this paper we would like to show how this project helped our company, a local public transport company, to increase the quality of the traveller information significantly. An active involvement of end-users travellers, who have recently started testing these demo applications for free, is actually on-going.

1. Company Background

SASA SpA-AG is a transportation service company in South Tyrol/Italy. We are providing public transport services with 159 busses and about 330 employees in 3 cities: Bolzano, Merano and Laives. We are a fully public owned company. In 2012 we decided to go OpenData with planned data, after the implementation of a monitoring system on the busses, we decided to publish the real-time data as OpenData too. As expected, this increased the interests in our data and in the applications created from this date significantly.

2. Getting OpenData

The decision of getting OpenData in our company was taken in 2013. In 2014 UITP, a worldwide network of public transport stakeholders, published an action plan for public transport companies,

what are the advantages of going OpenData[1]. Since our Opendata portal is online (www.sasabus.org), we have a community with more then 20 developers and designers. They produced various applications, which will be presented in the following chapters. One interesting thing was the collaboration with the OpenStreetMap (OSM) Community. They asked us for the data, which they integrated in OSM [2]. But not only they integrated it, they fixed some errors in the data. So being OpenData can be an additional control of your data too.

3. Applications

Various applications has started to grow. On the main application, SASAbus, the company starts to contribute. Why this? This was very important to sustain the community in developing other services and Applications. Since now they have created the following known applications.

3.1. SASAbus

SASAbus was one of the first projects using open data. This application was developed outside our company, and then added some development internally to add the real-time data. Mostly the community maintains this project. It can be downloaded from the Google Play Market. In this application the end-user can looking for bus stops or single busses, where they are, an how much delayed they are. One of the additional point is the possibility to have the communications from our company to the end-user about strikes, deviations, etc, or the possibility to check the parking slots available in the city of Bolzano.

3.2. Realtimebus merano

This web-application is based on the freegis.net server, a standardized OpenSource server for geo-applications. It is reachable at bus.meran.eu. This server allows us, to publish the real-time positions of all our busses to the public. There is an API for making calls for other applications, but there is an User Interface for the passengers to. The interesting thing is here, that our company didn't initiate this project, the tourist authority has taken our data and build upon the project. Since they released the project under an OpenSource license (Gnu Public License v3+), the other city (Bolzano) has forked it and is creating it's own web service for the busses, adding the data of parking slots and other transportation data.

3.3. SASAbus html5

SASAbus HTML5 is a beta HTML5 application reachable at html5.sasabus.org implemented by the community SASAbus as an OpenSource project, in line with our choice to move towards open solutions. Being OpenSource most of the functionalities are continuously updated and extended by the community, also in the direction of other client applications (e.g. Android). At present, the application publishes static information only (e.g. timetables, lines, rides, etc.); a traveller may

check for example the next bus schedule at a specific bus stop, plan a trip through the urban PT service or check if there are any communications about disservices (e.g. strikes).

3.4. Project "Bolzano Traffic"

The Municipality of Bolzano in partnership with TIS innovation park started in 2011 a local innovation project called "Bolzano Traffic"[3], funded by the European Regional Development Fund (ERDF). The objective of the project is to create an open ITS platform that can put 3rd parties service providers in the condition to offer advanced traveller information services to the local travellers through a business-to-business (B2B) chain. More specifically, the platform is directly linked to the Traffic Control Centre (TCC) of the Municipality of Bolzano, which collects several real-time traffic information through different roadside monitoring systems (e.g. parking occupancy, traffic levels, etc.) and to the control center of our company, which provides real-time bus information. The platform is technically based on the free and open source software (FOSS) GIS reference implementation developed in the INTERREG Italy – Switzerland "FreeGIS.net" project for the publication of geo-spatial information in compliancy with OGC services and the EU INSPIRE directive [4].

4. Future

In the future we would like to extend our OpenData Services with an advanced routing planner, which considers not only the real time bus data, but the real-time traffic data coming out from "Bolzano Traffic", adding information from other transport services (e.g. parking availability, car sharing, bike sharing, etc.) to give the end-user a real-time-routing information to let him choose the most adapted result. We are planning the use of interactive totem in collaboration with the municipality of Bolzano and the TIS Innovation Park as an additional communication channel for the travellers.

References

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