CoCities
Newsletter

We welcome you to the second issue of the Co-Cities Newsletter with the primary aim to inform you about the project's progress, research results, important news and events. Each issue will be available in both pdf and accessible html format, from the project website: www.co-cities.eu

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Co-Cities at the Intertraffic Amsterdam, 27-30 March 2012

We invite you to update yourselves about the project's achievements at the Intertraffic Amsterdam, where Co-Cities will be presented in a booth from 27-30 March 2012. Intertraffic is the international trade fair for infrastructure, ITS traffic management, safety and parking. During this event, the project will offer the visitors the possibility to get to know the Co-Cities services via a demo which has been prepared by the partners for this event.

The project will further take advantage of this event to carry out the official handover from the InTime project to CoCities. CoCities, based on major research results of InTime (InTime Commonly Agreed Interface), will be an extension of this project. The handover between the two projects will take place on 29th of March at 17:00 in the Co-Cities booth.

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BRIDGING MARKETS AND TECHNOLOGIES

Fluidtime
Design Software Service

POLIS

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ptv
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Reading
BOROUGH COUNCIL

MemEx

ICTPSP
ICT POLICY SUPPORT PROGRAMME
part of the Competitiveness and Innovation Framework Programme CIP

Project website:
http://www.co-cities.eu

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UML Specifications for Co-Cities

One of the key activities in Co-Cities from a technical point of view was the definition of the technical specification of the system in relation to the reference architecture and cooperative requirements. In this respect a well defined and proven methodology for specification production has been discussed and adopted in order to achieve a consistent and high-quality result.

Viewing the Co-Cities reference architecture as an extension of In-Time, it was important to identify all features necessary for extending the In-Time Commonly Agreed Interface (CAI) and make it effective for use in Co-Cities, in order to best handle feedback contributions.

The In-Time CAI operates in a service oriented environment to make travel and traffic-related data interoperable between systems, due to a number of services being able to convey the information using a common, reference data format. The CAI is technically defined by well known WSDL specifications and GML-based information schemas produced from a conceptual model defined in Unified Modelling Language (UML).

The methodology for the production of the WSDL and GML starts from the informal identification of the necessary data features which the interface should be able to convey with appropriate service interfaces. Then from these elements, a UML-based modelling activity is achieved, in order to easily -yet formally- identify and specify all necessary data types, associations between objects, classes and their relations etc. At the end of the process, once the UML model is complete and consistent, it is converted into WSDL and GML for the production of a final, usable, specification.

This methodology, which is described in detail in eMOTION, In-Time and Co-Cities deliverables, can be summarised with the following schema which highlights, in yellow, the new elements introduced in Co-Cities for each step:

- Informal definition of features for CAI extension
- Additional UML elements
- Additional GML and WSDL specifications
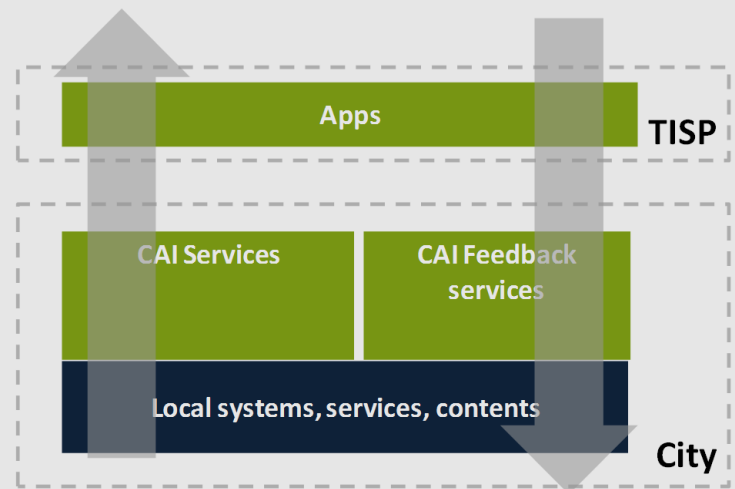
In Co-Cities, the complete set of "feedback features" was defined using a mechanism of selection, starting from the use case definition, which informally describes a number of situations and demonstration scenarios for Co-Cities. These features represent basically every individual dataset able to convey single pieces of information when formulated as feedback by the end user.

These features represent the "extension" to the already wide selection of features present in the

In-Time CAI. While In-Time enables the provision of services to Traffic Information Service Providers the additional Co-Cities "feedback" services and data are the basis for the integration of cooperative information provision from end users via TISPs mobile services.

Co-Cities operates in relation to a number of reference service domains (e.g. Dynamic Multimodal Journey Planning, Road Traffic, Parking, Point of Interests and Public Transport) and makes provision of different types of feedback for each of them:

- services used to send a quality feedback about single information provided by the end user services operating in a certain service domain.
- services used to provide new information in a certain service domain
- services used to send an overall quality feedback about an end user service.

With these inputs, the formal extension of the CAI specification was possible. First, the necessary classes, data types and service interfaces were created in UML, and then were converted into WSDL and GML (XSD) definitions.

For the UML modelling a number of service interfaces were created, corresponding to the previous definition in terms of feedback services and service domains. The existing In-Time Data Model was used as a reference whenever necessary especially in order to keep consistency with the existing data and service definitions. In this respect, objects (e.g. a traffic event) sent as feedback data wouldn't have to be re-defined if they already exist in the model. The UML modelling and the supporting tools made it easy to identify and use existing features and to integrate new ones.

With the final specification ready the implementation activities could then start and in a short time we can expect to see the first Co-Cities services up and running.

Co Cities
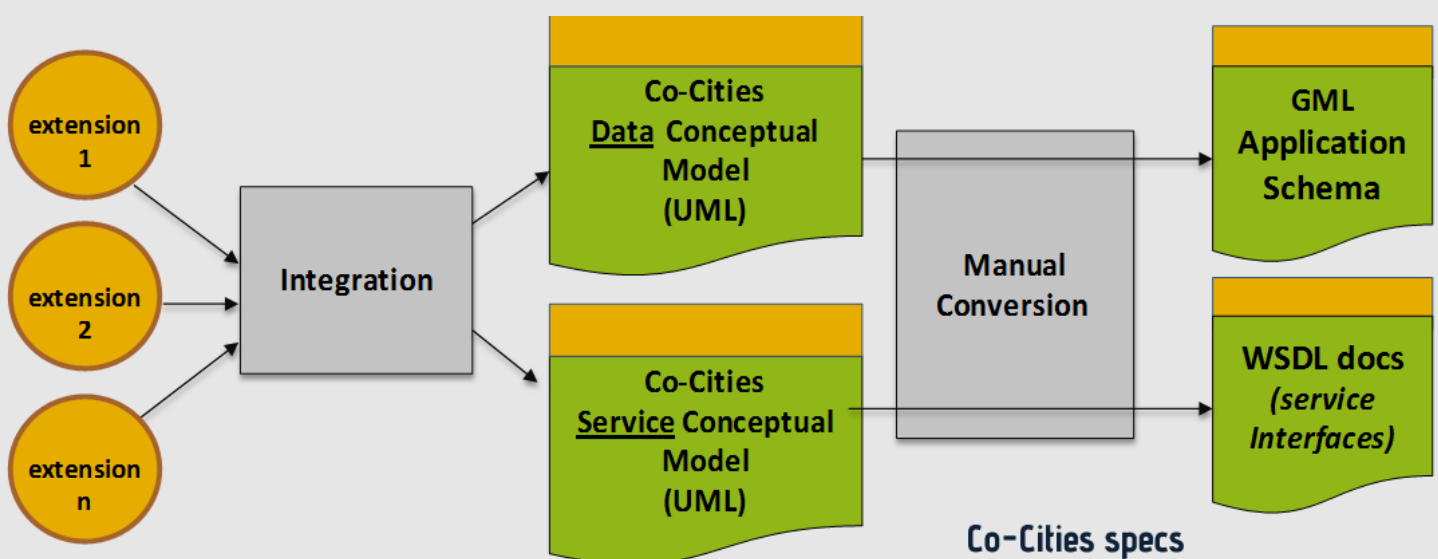
# Multi-modal navigation for the people of Readings

Telematix software, a.s. and Dynavix, a.s. will introduce a new iPhone application soon: multi-modal navigation, which users will be able to download through the AppStore for free.

A new way of navigation is intended for residents of Reading and the surrounding area, and they will be able to try it for free during April on their iPhone. This is a new type of service where all traffic information from otherwise separate systems are implemented into one service, including information on traffic congestion, public transport and train services. Currently, the system processes 3,895 bus stops, 3,026 train stations, 180 bus lines and 453 train lines. The system uses rail information from the whole of England, and the picture below shows which bus stops the system processes.
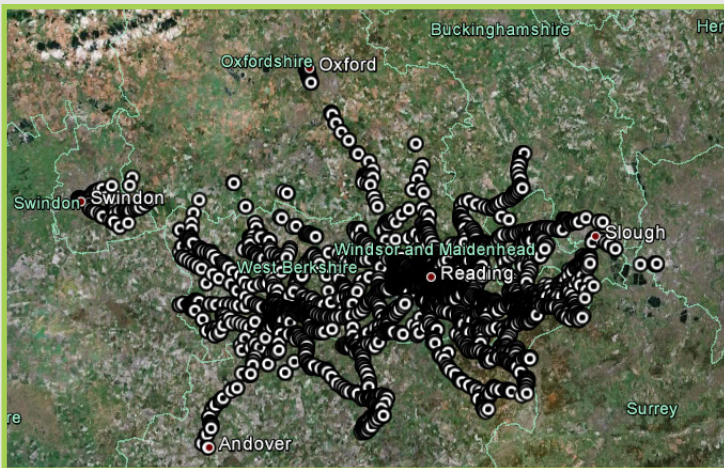
train stopped at the right place
3. Availability of transport

Walking and cycling route system is searches in regions 23, 24, 29, and 30 (see picture below).
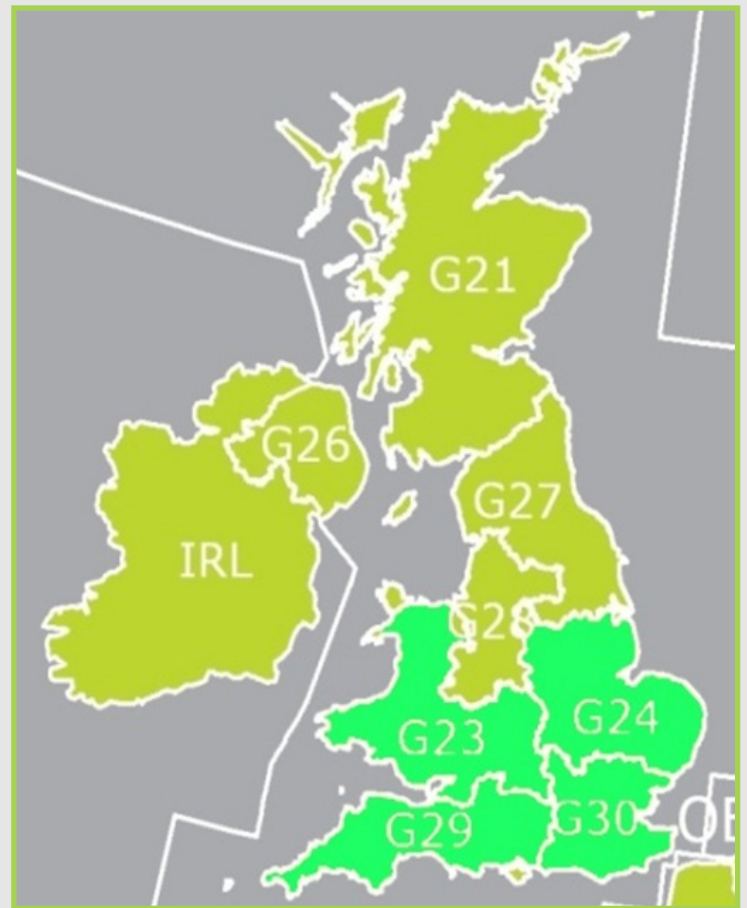
The application gets feedback for:
1. Overall rating service
2. If bus/train arrived at the right time and if bus/

Dynavix iPhone application sends feedback to the server where the data are processed. After that, the desktop application will collect statistics on the processed data from the server (online) and present them.

In the future, the system will also be a part of a new generation of Dynavix navigation systems that offers one of the first of this type of service as in the world. Dynavix thus presents a real comfort in the transport of individuals and would show the future trend in navigation solutions. The aim of the research team is to provide comprehensive and effective combined service to major cities and regions, which consists of a multifunctional transport across supply and transport capacity of the urban transport network. If such a service is applied in practice as well, other positive consequences will be:

- Less pollution, including CO_2 emissions and noise
- Less congestion
- Lower energy consumption
- Moving away from private transport towards public transport.

We can expect to see change in the travel behaviour of users of services which are efficiently exploited towards transport options. This is another contribution to the transport and environmental improvement of living conditions not only in large agglomerations.

About the company

Telematix Software, a.s. develops specialised software systems, including navigation, telematics, GIS and other applications, tailored for a wide range of clients. The company works on projects of various research projects in the field of telematics and information systems.
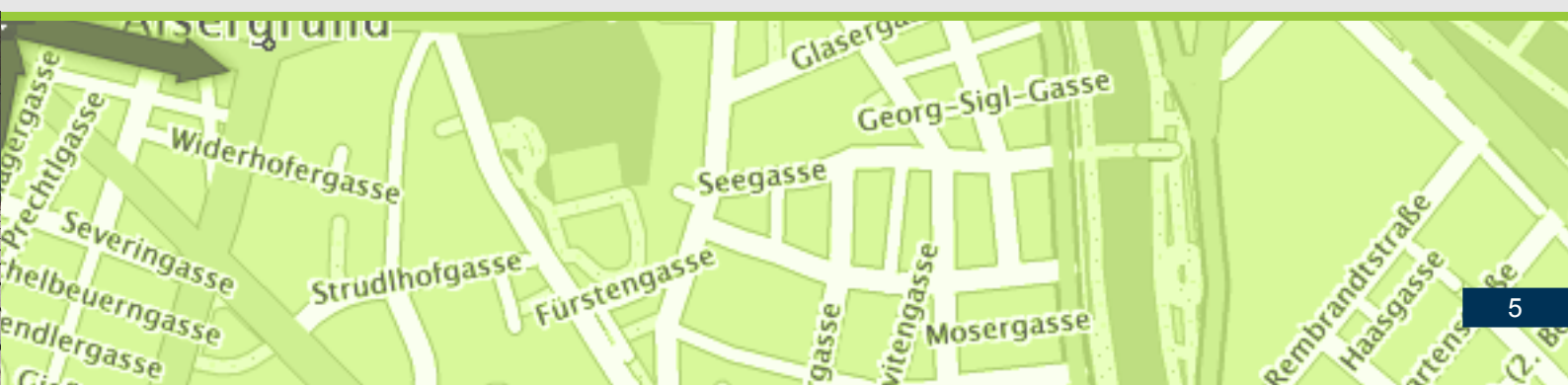
Reading participation in the Co-Cities projects

Reading is a city located in the Thames Valley to the west of London. It has a population of around 260,000 and is a key location for high-tech business in the UK with a vibrant economy. Reading Borough Council is a front-runner in the dissemination of live traveller information from its urban traffic management and control (UTMC) system. Since acting as one of the four UK UTMC development cities back in 2000, Reading has continued to take a leading role in the development of the standards as a UTMC development authority. UTMC is a set of specifications and standards agreed between the UK local authorities and suppliers which have enabled interoperability of systems within network management systems. There are over 100 authorities currently deploying UTMC systems.

As a UMTC development city, Reading is pleased to be part of the Co-Cities project. A greater level of feedback from travellers, particularly in real time, has the potential to significantly enhance the effectiveness of Reading's network management and traveller information systems. Co-Cities has a wide range of anticipated benefits and Reading is particularly interested in knowing from the travellers that there is an incident, and knowing why there is an incident in an area of the network which is not well monitored. This can help in responding with the implementation of more intelligent network management strategies. Reading is notified in advance of road works, however, road works can finish early or overrun, and in many cases they just affect a small part of the notification area on any one day. Better knowledge of the exact impact of road works will improve network management and provide more accurate and relevant traveller information.

Reading will be demonstrating a range of information and feedback services focused around public transport which are being developed by project partner Telematix. These are being built around Reading's real time passenger information system (RTPI). Reading and Reading Buses have invested significantly in the public transport infrastructure in recent years. Reading buses have one of the newest bus fleets in the country including hybrid vehicles which not only improve customer experience but also the environment. Reading continues to invest in infrastructure including bus lanes, bus gates and bus priority around the city centre to make public transport more reliable and attractive. The individual buses are colour coded to the route that they are operating on enabling passengers to easily identify "their" bus. Public transport travel is made easier with a state-of-the-art RTPI system and smartcard ticketing. Co-Cities is important in ensuring that a high-quality service focused around the needs of the travellers is delivered and that Reading is obtaining best value out of its investment in public transport.

A key area of interest for Reading will be evaluating Co-Cities in respect of its integration with UTMC for wide adoption in the UK. Co-Cities has the potential to bring valuable services to UTMC.

News section

## 1st Co-Cities Forum
(Brussels, 11 October 2011)

The first meeting of the Co-Cities forum took place on October 11th at Polis premises in Brussels.

The Cooperative Cities Forum is open to all stakeholders. Members of Co-Cities will provide input and comments on the project activities. In particular, they provide input on the content of the Cooperative Cities platform and on the roadmap for the deployment of cooperative systems in the urban environment.

The first workshop provided information on the project and began to build a core group. Co-Cities' pilot cities Reading, Bilbao, and Florence presented their activities in the project. They interacted with the participants, including representatives from the cities of Rotterdam, and the provinces of North Brabant, Milan and Toulouse.

The dialogue between the members of the Forum and the project will continue through Polis, until the next meeting of the Co-Cities Forum.
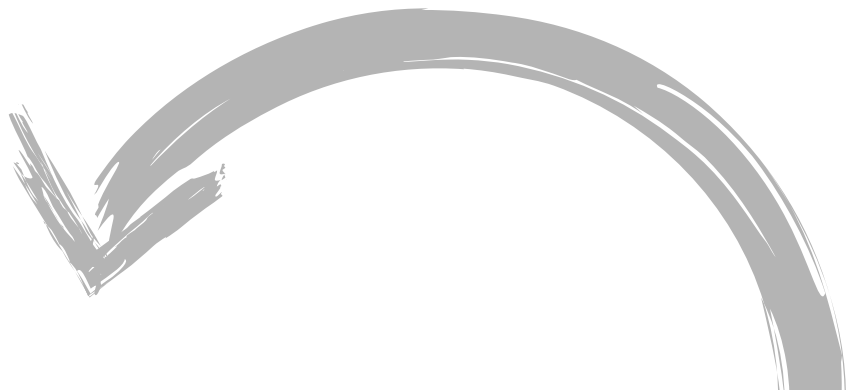
Co-Cities in the 1st SmartCity Expo & World Congress
(Barcelona, 29 November- 2 December, 2011)

Co-Cities was presented in the 1st SmartCity Expo & World Congress in Barcelona, Spain. Organised among others by Atos, partner of the Co-Cities consortium, this event brought together key speakers and representatives of the leading organisations with the most innovative ideas in the world.

Through keynote conferences, round tables and parallel sessions, the congress inspired debate on the different issues raised in the programme. Prestigious speakers and representatives of the leaders of the most innovative Smart City initiatives around the world attended the SmartCity World Congress.
Co-Cities was presented as one of the

six dimensional axes, the Smart moving axe, defined by Atos in order to classify the different types of Smart City Services, endowments and activities from self-decisive, independent and aware citizens. The Co-Cities project provides added valued to the smart city services by permitting end users to report their feedback to the traffic management, therefore improving the transport information services.

eChallenges Conference
(Florence, October 26-28, 2011)

The goal of the eChallenges Conference 2011 was to stimulate rapid take-up of Research and Technology Development (RTD) results by industry and in particular SMEs, and help open up the European Research Area (ERA) to the rest of the world.

Thematic areas addressed in the Conference Programme included, amongst others, eGovernment and eDemocracy, eInfrastructures, Mobility & Security.

The Co-Cities project contributed to the mobility area by offering an outlook on the developments on traffic information, highlighting the following topic: "Multimodal Real-Time Traffic Information in urban areas is the future cooperative?"

The idea and functionalities, as well as the expected impacts of Co-Cities in terms of enhanced traffic management were presented to an interested audience from different countries, and questions were answered on both the technical concept, and on the attractiveness of Co-Cities for towns and regions.

The positive feedback from the audience was a good signal, showing that Co-Cities was on the way to attracting more follower cities.

Galileo Application Congress
(Prague, January 26-27, 2012)

The Galileo Application Congress Prague provided an excellent platform to re-connect with the European Satellite Navigation Community, and catch up with the latest trends in applications development for Galileo and EGNOS.

The conference was about the prospects of Galileo and its benefits in the different fields of life, amongst them land transport and traffic management. Co-Cities highlighted at the congress its potential for "Increasing efficiency, and the economy of transport infrastructure use". The organisation of transport management was shown as it is today, and as it can be in future. For this, the concept of Co-Cities gives a valuable contribution with the feedback loop services from single mobile users to city traffic management. Service delivery platforms for such tasks were presented, and the need for precise and robust positioning was pointed out.
The experts from the community agreed with the outlook presented and the implications for GNSS as an element for building it.

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