



NEWSLETTER

April 2009
N° 3

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Wide Scale network of E-systems for Multimodal Journey Planning and
Delivery of Trip Intelligent Personalised data



THEME TPT.2007.4

The connected traveller in the
city, region and world of
tomorrow



WISETRIP Consortium
informs you!

Are you a worldwide traveller?
Are you willing to learn about
Journey Planners?

WISETRIP could help you!

Read more about the project!



EUROPEAN UNION

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Wisetrip Architecture revealed

After months of joint work between Wisetrip project partners and taking into account the findings from the external user group survey, the Wisetrip Architecture has been designed and tested in line with the projected timescale and budget.

The envisaged system is divided into three fundamental layers.

- **1st Layer - Participating Services and Source Data:** These are the existing systems (i.e. journey planners or booking systems), external information and services (i.e. time, user position, external alerts) as well as the data environment including personal user data related to trip selection and user preferences.
- **2nd Layer – Main System:** It contains three main modules, a) the journey planning module (WISETRIP Core System), the personalization module and, on top of them the services module. The final journey plan is produced by the Core System and is handed to the Services for delivery or to the Personalisation module for further processing. Other sub-systems refer to interfaces with the other layers or data sub-systems. The WISETRIP Platform is interfacing to the 1st layer: a) The Core system interacts with the participating Journey Planners and b) the Personalisation System interfaces with external information, user data and profile through the real-time decision mechanism, which process all external & user data. The Services of the WISETRIP Platform are communicating with the devices of WISETRIP (3rd layer) through the intermediate 'Devices Interfaces Layer' that takes care of the open & harmonised interconnection to various devices. Knowledge of the platform includes a) data (geography, destinations, means and terms) about participating transport networks (that are presented through the participating journey planners of the 1st layer) and b) trip cycle model that is being used in order to build the personal trip life cycle data of each traveler.
- **3rd Layer – Distribution:** We call 'distribution' the function of providing the information and service to multiple users through various technological devices. The main role here belongs to the devices and the user interfaces running on top of them.

These three layers are illustrated in the Figure below:

Main Architecture

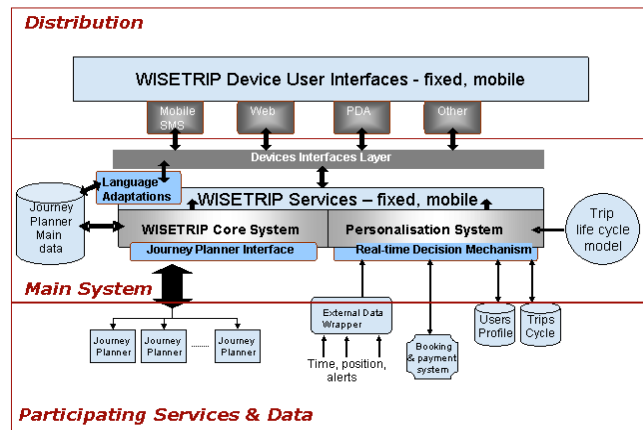


Figure 1: Overall WISETRIP Architecture

Analysing the WISETRIP Core functionality

The functions of WISETRIP Core System aim to handle the submission and processing of a specific User Query for trip information, as well as the provision of final response that is expected to satisfy the user demands. The Core functions are interacting with the Journey Planners interface in order to get the necessary information. To this aim the WISETRIP Core System includes the following functionality:

1. User Query submission:

- **Initial User Query:** The system takes as input the origin and destination, the time constraints and other limitations or user preferences that might exist.
- **Validation of User Query:** Before processing them, the system validates the query data (i.e. location names) and if needed user is asked to re-edit the query.

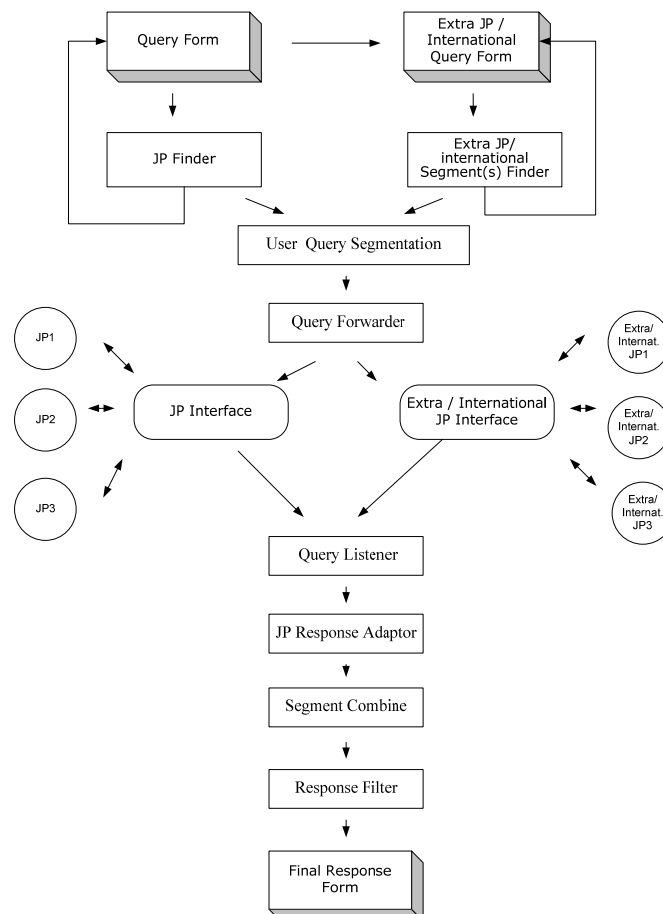
2. Trip segmentation to partial journeys:

- **Analysis to partial journeys:** the system identifies whether the initial User Query involves answers from one or more JPs, analyzes the requested trip to partial segments and formulates a series of queries to JPs that will provide the partial answers giving the trip segment to examine.
- **Management of international segments:** User query might include an international segment (predefined or not) and the system should take in mind the appropriate international route. In case that the international segment is not predefined the system will provide basic information about feasibility of transport among international end points.

3. Formation of final response:

- **Searching routes for each trip segment:** through the Journey Planner Interface, each partial routing problem is forwarded to the appropriate JP which replies with one or more optimum routes. An important issue is the order that the partial routing problems are forwarded to the JPs. International segments have to be answered first since international trips are tighter, and then based on these international routes the time constraints should be adapted to national routes where things are more flexible.
- **Combination of trip responses:** Given all partial responses the system produces complete trip routes and presents them to the user. Some of the available responses might not fit the user's criteria and these are marked by the User Interface as filtered out.

All functions are presented in the following flow diagram:

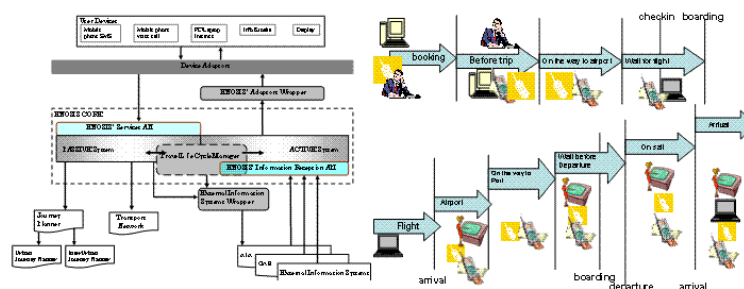


The Greek ENOSIS Journey Planner

ENOSIS constitutes a user friendly and easy to use information service to support travelers, within **multimodal urban and interurban transportation path in Greece**. The service accompanies the passenger/user from the moment of travel planning (i.e. ticket reservation) and the time of departure, until the arrival at the destination. Especially for Greece, where the transportation system is highly fragmented – because of the numerous islands, the high seasonality of the passenger traffic and the insufficient railway network – the usefulness of the system is obvious in order to serve the needs of tourism and Greek population.



Architecture & Travel Cycle



PASSIVE System: realize services provided to user **on demand**

ACTIVE System: automatically **push** information to user, based on events taking place during the trip's lifecycle

Travel Life Cycle Manager: follow the progress of a trip (designed via Passive System) and inform (via Active System) in real time the passenger for issues related to his/her trip.

The searching of combined multimodal routes within the ENOSIS system is the **first and unique** application that can locate alternative routes within multiple Greek destinations combining ferry routes, flights, urban and interurban bus transport. It is the result of long year expertise and research into issues related to routing algorithms and management of transportation routes.

The innovative feature of the system is the personalization function, which is based on the identification of critical points throughout the lifecycle of a trip and the relevant information that can be distributed through various means (such as mail and SMS) in order to make a trip easier, safe and the traveler well informed. As a result, personalized information about scheduled trips (route changes, scheduled time of departure – arrival, time changes etc.) is delivered to the passenger before and during his trip.

www.wisetrrip.eu.org



The main functions provided by ENOSIS are the following:

- **Search of a route within Athens metropolitan area (Attica):** It concerns the search of an urban route within the road network of Attica, which includes the city of Athens, its suburbs and its wide metropolitan area, served by a network of multiple transport modes. The traveler / user selects the origin and the destination, as well as the desired departure time (or/and arrival time). The system defines the shortest route between the two points based on the earlier departure time. For the specification of the optimum route, the system combines routes of Athens-Piraeus Electric Railways, Athens Metro, Athens Urban Transport Organisation and Attica Bus Operators. The system presents to the user the route in detail (date and departure / arrival time at every intermediate station and transition medium) while there is the possibility to illustrate the proposed route on a map.
- **Search of an interurban Greek route:** this function is intended to locate transport routes that connect the majority of Greek destinations. It accepts within query data the origin and the destination, the time and other limitations that may exist (e.g. limitations in the transport means). After processing the transportation network data, it delivers the result including all available combinations. For the specification of alternative routes presented to the user the system combines routes of airplanes, ferries and interurban buses. In cases where the proposed route requires an urban transition within Attica (e.g. from Piraeus port to the port of Rafina), the system also presents the relevant optimum route, nested within the full travel path. For every alternative route the system provides analytical information (date and departure / arrival time at every intermediate station and transition medium), as well as the possibility to illustrate the proposed route on a map.
- **Personalisation support:** From the time that the user, using the interurban route searching, selects the route that desires he/she can make a registration to the system, through the internet portal, and then he/she can get personalized information support through messages (email or sms) along the duration of the trip.

The traveler / user of ENOSIS can access information through multiple interface modes including a web site (www.enosis.gr), a voice portal, information kiosks, mobile SMS and electronic boards/displays. ENOSIS was implemented under the framework of the Operational Programme "Competitiveness" - "Transportation/Navigation" Action, supported by the General Secretariat for Research and Technology.



Journey Planners
Overview
(Continued)

Finland journey
planner overview

UK journey planners
overview

The Finnish Journey.fi route planner

The country wide door-to-door journey planner Journey.fi (www.journey.fi) provides information on rail and bus connections and walking routes in Finland. The service includes also the local public transport connections of the biggest towns.

The flight data has already been tested and will be implemented to the service in 2009. Also the ferries will be included in the service (serving buses, bicycles and walkers). Originally Journey.fi service was a R&D project of the Ministry of Transport and Communications.

In the Journey.fi service user can give his trips' origin A and destination B by pointing the places on the map or giving the street addresses or POI places. As a result the user gets detailed trip information and the route on the map. The routing algorithm and the maps are licensed by Logica. The data behind the service comes from a common data pool to where different stakeholders send their data as XML format.

Some figures about Journey.fi service:

- The amount of addresses in the service is about 20 million;
- The amount of road vectors is 3.2 million;
- The amount of time table rows is 24 million.

Traveline Scotland and Transport Direct

You can plan any public transport journey within Scotland and from Scotland to other places in UK.

Traveline Scotland (www.travelinescotland.com) aims to provide accurate, up to date and impartial timetable information to get you to your destination by the quickest public transport mode.

On the

[Plan your Journey](http://www.travelinescotland.com/journeyplanner/start.do) page (<http://www.travelinescotland.com/journeyplanner/start.do>)

you can select which mode or modes you wish to travel by.

When it is needed, full information on connections will be given to make transfers as smooth as possible.

Traveline also provides a telephone service available by calling 0871 200 22 33*. Lines are open 24 hours a day, 7 days a week. Calls cost 10p per minute from BT Landlines. Cost from mobiles or other providers may vary.

For journeys from Scotland to other places in Great Britain we advise you to use

[Transport Direct](http://www.transportdirect.info). (www.transportdirect.info)

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BUSBUSSOLA – Florence Journey Planner

The Province of Florence, for the management of the public transport service, has been subdivided into four main areas, whose one is the Florence metropolitan area. The public company ATAF, together with Li-nea the private public transport society partially owned by ATAF, is managing the public transport service in that area. In order to support any citizens in making use of the public transport service, ATAF is operating since 2007 the BusBussola Journey Planner (JP).

Busbussola (www.ataf.net) is single mode JP providing information on bus services, walking time being also included. As the most usual JP, Busbussola gives the appropriate journey path based on bus schedules; it offers a set of information in terms of the routes and scheduled time-tables that the users can view in a web-mask after they have made a selection of their trip in terms of origin and destination, timing and date on the Busbussola homepage.



Busbussola Home Page

There are two possibilities for the choice of an origin or destination: to define an address (municipalities, address) or to define a point of interests (between a list, i.e. stations, hospital, museums, libraries, etc).

The users can choose other parameters (less changes, shortest walking distance, no preferences) in order to optimize the journey calculation according their preferences. The list of possible trips is composed by the transport line, the pick up stop, the departures time, the drop off stop, the possible transfer to other transport lines, the travelled time, the travelled distance and the number of transfers. Selecting one of the solutions it is possible to enter a detail page in which the route is displayed on a map and a table is shown to the users with the all trip related information. In WISETRIP, Busbussola is one of the core JP to be integrated in the Wide-travel platform. In the last months, ATAF and technical partner Forthnet have discussed how to integrate the systems and the interfaces of Florence JP in the WISETRIP platform in order to join the WISETRIP requirements and the standardisation of the data output. The pilot site is in progress and further results will be achieved in the next period.



EASYWAY Project overview

ES1 Europe-wide Traveler Information Continuity & Co-modality
www.easyway-its.eu.

Many national and international information services on road and traffic conditions, including main cities, are discontinuous and not fully harmonised. They do not support inter- and co-modality as they are often mode specific. This can cause delays and costs for the European traveller and negative impact on the environment as the base for decisions before and during travel is not complete.

The European Study on Traveller Information Services will:

- develop a common understanding of traveller information needs in a European context. Specific attention will be given to transport corridors, intermodal interfaces and travel planning possibilities;
- support and guide the implementation of core traveller information services (which service levels are applied to which operating environment) defined by EasyWay;
- develop co-ordinated deployment guidelines for identified services;
- identify the need for regulations, directives and legislation that may be required;
- initiate and carry out experiments and pilot projects including but not limited to ETTIN, (a common European Traffic and Traveller Information Number) Connecting Traffic Information Portals, and the International Ferry Data Pool Project;
- develop a format for pilot project co-ordination at a European level;
- clarify the role and responsibility of the private sector versus the public one for building and providing traveller information services. The situation is very different from one country to another. There is a need for a clear picture and to identify the partnerships with the actors that are not in EasyWay;
- Identify the minimum levels of service for traveller information services which are in line with the overall objectives of EasyWay. Depending on the considered network, a minimum level of service should be targeted for helping reducing congestion and accidents.

Moreover, the following issues, identified at the end of the TEMPO Programme, will also be addressed within the study:

- consolidation and enhancement research in order to have an updated and prospective knowledge of user's needs in the field of traveller information services.

Market oriented requirements as a result of the availability of new services and technologies. **Easway and WISETRIP projects are currently in close cooperation.** Contact Peter Cullen, Transport Scotland, Peter.cullen@transportscotland.gsi.gov.uk



WISETRIP in operation

WISETRIP project meetings

3rd: Helsinki (FI) October 15th – 16th 2008

Presentation of Architecture Design and D2.2 contents (led by Forthnet). Detailed discussion on WP3 - Journey Planner core system development - and allocation of Tasks work for beneficiary partners (led by MOBISOFT). Presentation of WP4 on Personalisation System Design and Development (led by ETRA). The second day focused on WP6 on Integration, Validation and Demonstration (led by AUEB) and on dissemination activities (led by ATAF).

4th: Cologne (DE) on February 5th – 6th 2009

Focusing on WP3 and WP4 progress and initial reports for the later stages deliverables. Partners also discussed WP6 activities and a draft Evaluation Plan was presented. The meeting was finalised with the overview of dissemination activities

The 5th meeting will take place in Valencia (ESP) in May 2009, focusing on WP5 and WP6 activities.

WISETRIP presence

1. ITS Finland Summer Seminar Heureka, Tikkurila, May 2008 (MOBISOFT)
2. 10th International Conference on Application of Advanced Technologies in Transportation, Athens, May 2008 (AUEB)
3. INOVATE with Aberdeen at University of Aberdeen September 2008 (UoA)
4. European Week of Regions and Cities, Brussels, October 2008 (ATAF)
5. EASYWAY/VIKING workshop, Copenhagen, October 2008 (DESTIA)
6. 24th International Tourism Exhibition Thessaloniki, November 2008 (Forthnet)
7. i-TRAVEL project workshop Brussels, November 2008 (Forthnet, DESTIA, ATF)
8. 15th World Congress on ITS, New York, November 2008 (MOBISOFT)
9. 88th Transportation Research Board (TRB) Annual Meeting, Washington DC, January 2009 in Washington DC (ATF/UoA)

The fourth Newsletter will appear in Autumn 2009 and will be edited by Forthnet. The Newsletter will cover topics related to Personalisation System and JPs Integration. Contributions should be sent by September 2009 to mfos@forthnet.gr

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ETRA SA, Spain
High tech group for mobility and public services
www.etra.es



Mobisoft OY, Finland
SME focused on passenger transport telematics
www.mobisoft.com



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ATAF Spa, Italy
Public transport company of Florence
www.ataf.net



MemEx srl, Italy
Engineering company in field of Mobility and ICTs
www.memexitaly.it



BPV GmbH, Germany
Research organisation in urban planning and ITS
www.bpv-ac.de



ANGUS Transport Forum, UK
Non profit-making organisation
www.angustransportforum.org



DESTIA Oy, Finland
Company operating in traffic and infrastructure sector
www.destia.fi



HCTRC, China
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