



MOBILITY MANAGEMENT SYSTEM

Developed over the past decade, mobility management is not based on the creation of infrastructure but rather on providing information to the public on the traffic situation, public transport, and various types of events.

CITIESmms (mobility management system) is a system for the management of mobility designed and created to provide users, whether already travelling or in the pre-trip phase, with travel information and advice on the type of transport to choose and routes to take.

This would further allow identification and management – both on a collective and individual level – of critical situations, and to draw up short, mid and long term strategies for the optimisation of traffic as well as to build a data-base for gathering significant information on the state of traffic and, more generally, on mobility.

ARCHITECTURE

CITIESmms is a Web application which contains a server to manage models and algorithms for the assembly and control of the state of traffic (supervision software), a database server for management of all traffic information and data, a map server for management of maps and a front-end server to interface with other applications.

USES FOR MOBILITY MANAGERS

CITIESmms provides the manager with a graphic interface made up of maps containing all of the static objects (place names, etc.) and dynamic content (information on the state of the network and its components).

CITIESMMS

A set of models, algorithms and diagnostic functions allows visualisation and monitoring of the state of the system, understood as a whole made up of the transport network (thoroughfares, routes, parking areas, etc.), field control devices (traffic-lights, variable message panels, etc.) and components of the system itself (such as connections to other sub-systems, databases, etc.).

On the basis of recorded data, the system can detect traffic anomalies, issue forecasts regarding blockages and suggest control strategies to the operator.

CITIESmms does not involve direct gathering of field data, but rather bases its processes on data provided by other connectable sub-systems, including traffic-lights, video surveillance, fleet management, carpark management, environmental monitoring and sensor networks.

The CITIESgerm module (management of events of significance for mobility) is the operator interface for the entering of information and news having an impact on travel and mobility management. Using CITIESgerm, the operator can enter new information on public events (trade fairs, meetings, sports events, concerts), factors which provisionally obstruct travel (road works, temporary road closures), anti-smog measures (for example, alternate number plate ordinances), or traffic accidents.

CITIESgerm uses the Datex (Data traffic exchange) standard in native mode, which codifies information according to a specific standardized dictionary at European level: thanks to this feature it can also very easily manage bidirectional exchange of information and news with other bodies and with the main information centres (such as CCISS - the Road Safety Information Co-ordination Centre, the Onda Verde program of Italian state broadcaster RAI, the Italian National Motorway Company, private radio stations, etc.).

The CITIESmat (monitoring and analysis of traffic) module processes information from other subsystems (control of data reliability, calculation of travel times based on information received from various public transport monitoring systems, constant data updates) and analyses it in order to provide indications on the state of traffic at various points in the network (determination of traffic flow index, identification of travel conditions on roads, main routes and areas).

The system furthermore allows generation of statistics on journey times and traffic data, subdivided by time of day or over a number of days, while differentiating between work days and holidays.

CITIESmms is also designed for addition of toolkits for generation of traffic models based on origin/destination matrices and the dynamic generation/simulation of traffic scenarios and forecasting of situation developments.

USE BY TRAVELLERS

Travellers may access the system via a browser or sms in order to receive live updates on traffic conditions or “news flashes” on any problems posed by events, trade fairs, sports events, temporary roadworks, anti-smog ordinances, alternate number plates, accidents, slowdowns, tailbacks, etc.

The added value of CITIESmms from the public point of view is that it provides the possibility of personalising the service according to individual preferences. Once registered with the site, the user can choose the content and information settings of most interest (traffic in particular areas, car-park capacities, webcam images, etc.) as well as information delivery times and modes (SMS, email, personalised webpage alerts, etc.). Another system function is “Route Guidance” for travel planning on public private or integrated networks, including information on parking at transport mode interchange points.

