ITS DEPLOYMENT GUIDELINES

FACT SHEET - UPDATE 2015

Speed Limit Information

Vehicle speeds directly affect road safety, traffic performance, environmental conditions and other aspects of road networks. Speed limits are enforced by road authorities to encourage appropriate driving speeds on their roads. The main function of a speed limit information service is to inform road users about the prevailing speed limits that apply on the roads they are travelling on. The service is particular useful to drivers travelling on unfamiliar roads or on roads with temporary speed limits are in place. This factsheet provides an overview of key components of a speed limit service based on the requirements specified within the 'TIS-DG04 Speed Limit Information Deployment Guideline' developed as part of the EasyWay project. EasyWay is a cooperation of road authorities and road operators across EU Member States that have teamed up to unlock the benefits of cooperation and harmonisation in the deployment of Intelligent Transport Systems.

Service Definition

The function of a speed limit information service is to provide road users with credible travel information about the prevailing speed limits that applies on the roads that they are travelling on.

Types of speed limit information

Speed limit information can be categorised into two different main types as follows:

Type 1: Static speed limit information which changes infrequently such as the legal speed limits displayed on roadside signs

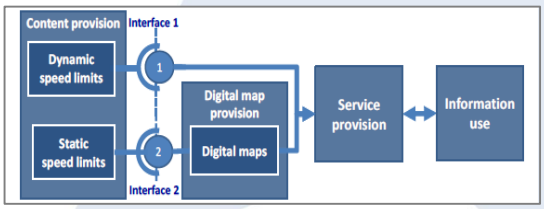
Type 2: Dynamic speed limit information which changes in response to prevailing road and traffic circumstances such as variable speed limits displayed on motorway signals

Delivery of speed limit information service

Delivery of speed limit information services will typically involve partnerships between public and private sector organisations. The main consumers of the information the service produces will include road users who require speed limit information to make decisions either pre-trip or on-trip, infrastructure managers and other stakeholders that service the information. Delivery platforms for the speed limit information service will range from traditional media such as roadside signs to innovative media such as VMS, in vehicle navigation systems, digital maps and smart phone applications.

Typical system architecture

A schematic overview of typical system architecture required to deliver a speed limit information service is illustrated in the diagram below.



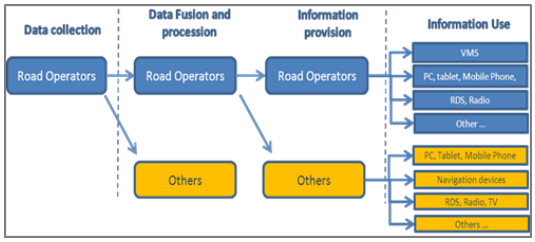
Key functional requirements

Key functions that must be executed in order to successfully deliver a speed limit information service include:

- *FR1: The source, scope and quality of speed limit information provided by content owners to content providers must both be defined as part of data interface descriptions.*
- *FR2: Speed limit information collected and information provided by content owners to content providers must be based upon both a consistent geographic reference model and a time validity model.*
- *FR3: If a speed limit information service involves road operators and service providers, information exchange platform systems between road operators and service providers should be implemented to update the databases.*
- *FR4: The frequency of the updates of the speed limit databases should be agreed and ensured by parties participating in the service.*
- *FR5: A feedback loop between service providers and the road operators should be put in place to ensure correct data provision and integration in the speed limits databases.*
- *FR6: To foster interoperability between all involved parties the sub-functions service and content provision should require an interface with the appropriate information structure for dynamic (variable) speed.*
- *FR7: To foster interoperability between all involved parties the sub-functions service provision and digital map provision should require an interface with the appropriate information structure for static speed limits.*

Key organisational requirements

The following diagram illustrates the interrelationship between the key stakeholders and functional components of a speed limit information service.



ITS DEPLOYMENT GUIDELINES

FACT SHEET - UPDATE 2015

Speed Limit Information Deployments

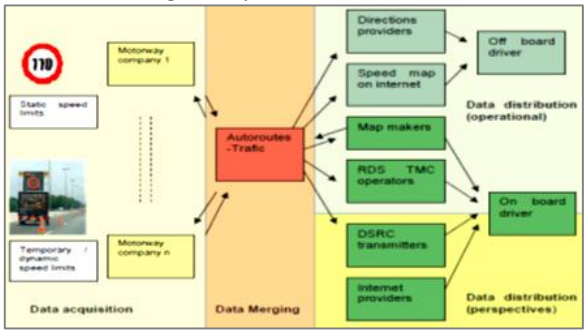
Autoroutes Static And Dynamic Speed Limit Map

The Autoroutes Static And Dynamic Speed Limit Map is an innovative project implemented by French motorways companies with the cooperation of ASFA to deliver improve safety and mobility on their roads. The project has sucessfully established a real time traffic information service that provides drivers with information about both static and dynamic speed limits thta applies across the road network. The information is delivered to drivers via their in vehicle navigation system and via the website of the concessionary companies www.autoroutes.fr.

The implementation of the project involved the collection of two categories of speed limit data across their network:

- Static speed limits (130, 110, 90 km/h) induced by road profile and geometry. These are set by police orders and rarely changes. Static speed limit data was collected and assembled in a single database.
- Dynamic speed limits caused by an impermanent factor (road works, traffic regulation, weather, pollution plan. An automatic process was set up to collect data on dynamic speed limits induced by roadworks on their network.

The Autoroutes-Trafic operational platform is used to manage and disseminate the collected data. Static speed limits is disseminated through map makers who has integrated the data into their navigation systems. Dynamic speed limits is transmitted in real time to in vehicle navigation systems via RDS TMC.



FRC Managed Motorway – Variable Mandatory Speed Limit (VMSL)

The Forth Replacement Crossing (FRC) project being implemented in Scotland will incorporate a managed motorway by using an Intelligent Transport System to help regulate the flow of traffic approaching and crossing the Forth. The system is expected to increase the efficiency and capacity of roads by improving traffic flow and reducing congestion, in turn helping journey time reliability and reducing emissions.

The FRC system includes overhead gantries, spaced regularly along the route, which include motorway signals and variable message signs to control traffic and inform road users. The use of the hard shoulder by buses (24 / 7) is also a key feature of the FRC Intelligent Transport System. The system can automatically detect incidents and provide information regarding the network.

The Intelligent Transport System will allow variable mandatory speed limits to be applied so that vehicle speeds can be managed during congested periods and in response to incidents such as vehicle breakdowns. The variable mandatory speed limits will be enforced.

The lane-specific motorway signals on the gantries will initially be set to blank. As traffic congestion builds up or if there is an incident, the lane-specific motorway signals will display reduced speed limits with a red ring surrounding the speed display. Cameras will be used to enforce the displayed speed limit. Once the level of congestion eases or the relevant incident ends the system will restore the speed limit to its normal level.

An online traffic visualisation tool will also be used to aid in the design, calibration and optimisation of the Managed Motorway corridor. The tool can display plots of traffic conditions and signalling including a colour coded plot of actual traffic speeds for a specified period against the variable speed limits signal settings to aid in the review of issues on the motorway network.

Further Information

dg.its-platform.eu

Questions and help

dg.its-platform.eu/user-support

www.its-platform.eu

EIP+ is supported by the European Commission´s Directorate Mobility and Transport