

ITS DEPLOYMENT GUIDELINES

FACT SHEET - UPDATE 2015

Forecast and Real Time Event Information

"Forecast and Real Time Event Information Services" are defined as the provision of information about both expected and unexpected events to road users on identified road segments of the TEN-T network and interfaces. This predictive or real-time information could be provided on-trip and pre-trip using different information channels, accessible by the road user via different end-user devices. The service may comprise common information as well as individual (personalised, on-demand) information. "Events" are defined as – expected or unexpected – abnormal situations which may lead to adverse effects on the road regarding traffic safety, efficiency and environmental effects.

The Deployment Guideline (DG) sets clear targets, identifies the set of necessary European ITS services to deploy and is an efficient platform that allows the European mobility stakeholders to achieve a coordinated and combined deployment of these pan-European services.

General Service Definition

The main objective of providing forecast and real time event information and warnings to the road user is improving the safety and the efficiency of the network. Expected and unexpected events can develop into a traffic bottleneck, due to abrupt reactions of uninformed drivers. However, if those drivers knew about the upcoming traffic situation in advance, they would be prepared and could pro-actively adapt their speed and following distance, thus preserving smooth, stable and safe traffic flow.

Forecast and real time event information services allow traffic information to be factored into both pre- and on-trip journey

Harmonization focus

One main focus of this ITS deployment guideline is the internet-based pre-trip and on-trip traffic information used in combination with static or dynamic maps, where events are allocated to a position in the road network by displaying there a specific event pictogram. This type of display is already used by many service providers.

A second main focus lies on providing such information on-trip on Variable Message Signs (VMS), which are operated along

Current status of deployment

Forecast and real-time event information services are currently well developed and widespread across Europe. Many European road operators/service providers use websites as a means of information provision, which can assist with journey and route planning. Road network information combined with both historic and real time passenger information enables road users to make informed choices between private and public transport options and help impact on the mode choice of travel.

On-trip information using Variable Messages Signs (VMS) exists extensively across much of Europe.

Traffic information (spoken word), used pre-trip as well as on-trip, is available on several radio stations throughout Europe.

RDS-TMC (Radio Data System Traffic Message Channel) has been deployed in most European countries and deployment is underway

planning. This can alter the departure times, assist the driver to take more effective routing decisions, where appropriate, select another means of transport or even alter the decision to travel.

The provision of information to drivers enhances the travelling experience even if the information does not directly impact on network efficiency or safety. Better-informed drivers tend to be calmer and hence more concentrated. Other impacts are the increased mode share of public transport and reduced air pollution.

and before the access of the route by road operators.

Another focus is placed on the interface between road operators and national, regional or local broadcasters, which provide traffic event information to mass audiences through radio or via on-board navigation devices. Through the rapid evolution of mobile phone technology based end user devices, the provision of individual (personalised, on-demand) services is rapidly increasing.

in several Central and Eastern European countries. RDS-TMC Plus, available in Austria and free of charge, offers a qualified and faster RDS-TMC service. With the migration to digital broadcast bearers in the future, TPEG-Services are expected to replace RDS-TMC.

The use of in-vehicle navigation systems with traffic information is also widespread. These systems tend to have a data connection which offers them the possibility to connect with a service provider. There is also exponential growth in the market for smartphones and software applications which can act as in-vehicle navigation system. While some apps provide conventional turn-by-turn satellite navigation, other applications already offer the ability to help the driver avoid traffic.

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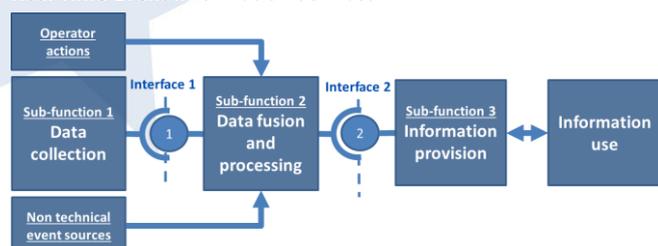
European Dimension

Forecast and real time event information influences the route choice of road users travelling both short and long distance and inter- and intra- national trips throughout Europe. Therefore, service providers should try to provide the information in different languages (if possible) or preferably in a language independent format (by using pictograms, symbols, etc.).

Existing deployments and road user information requirements across Europe are currently very different. So long as differences exist in national policies and investment strategies, stipulating minimum levels of service to be achieved is not practical.

Harmonization Requirements

Functional, operational, technical as well as look and feel requirements are proven to contribute to successful deployment and have been agreed on European level as elements that should be part of all deployments of this particular service. The following figure shows the typical functional architecture of a Forecast and Real Time Event Information Services.



These sub-functions and the provision of interfaces must be carried out to enable interoperability in those cases that the service is carried out by more than one organisation. Functional decomposition is recommended in any case to be prepared to involve further parties in the future.

Where different autonomous parties are involved, clear definitions of organisational aspects are a precondition for a successful implementation. The organisational and operational structure of the service as well as the role of each public organisation/body and its exact responsibility and tasks in the chain must be defined. Currently, the models for distribution of data are changing dramatically to miscellaneous combinations of cooperation between road operators and others parties. There is a different focus on deploying services for the forecast and real time event information, by private companies as well as by national authorities and road operators. A new approach for the future roles of the public and private partners could be required by initiatives like the deployment of Cooperative-ITS.

However, by defining the Levels of Service and criteria most important to the information service, future deployments can be made in line with this progression towards greater European harmonisation of service levels. Recommendations are given to provide this service in a more European context.

With the Delegated Regulation (EU) 2015/962, supplementing Directive 2010/40/EU, new rules are adopted to improve EU-wide traffic information services. Existing Real-Time Traffic Information services should be better available to more users by increasing EU-wide interoperability and continuity of data and services.

As a technical requirement, there is a need to establish standardised, interoperable interfaces between systems. They are essential for the delivery of many European objectives, like continuity of services and cross-border traffic management cooperation. Hence, European actors have themselves decided to actively contribute to the establishment of the required standardisation effort by launching a dedicated initiative and liaising with the relevant European standardisation body, namely with CEN TC278 WG8 "Road Traffic Data". The result of this cooperation is the "DATEX II" specification for interoperable machine-to-machine communication of ITS services, available as European Standard CEN/TS 16157.

The common Look & Feel advice is, that the core message of information provided for the end-user should always be consistent, whatever media or device is used for distribution.

The scope of European road operators is to provide Core European Services to the European road users. These services are harmonized in content and functionality, but also in their availability: The road users shall be able to expect a certain service offer in a specific road operating environment. In order to provide a basis for the harmonization process, a tool is needed to define such environments in an agreed manner. This tool are the Operating Environments (OE) – a set of pre-defined road environments combining physical layout of the road and network typology with traffic characteristics.

In essence, a set of 18 pre-defined OE has been agreed where each OE is a combination of three criteria:

- Physical characteristics – Motorways, other 3 / 4 lane roads or 2-lane roads
- Network typology – Corridor, Network, Link or Critical spot
- Traffic characteristics – Traffic flow and road safety situations (with optional additions).

Further Information

dg.its-platform.eu

Questions and help

dg.its-platform.eu/user-support



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