

ITS DEPLOYMENT GUIDELINES

FACT SHEET - UPDATE 2015

Weather Information

The main objective of providing weather information to the driver is improving the traffic safety and the efficiency of the European road transportation system. If the driver is informed on the upcoming weather situation he is able to adapt his driving behaviour. Weather information can be included into both pre- and on-trip journey planning. This may reduce congestion and the number of fatalities and accidents. The vision is that a user provided with high quality information will react and adapt his travelling and driving behaviour including a change of routes, modes or trip schedule (time of departure) as well as changes in the way of driving.

What are Weather Information Services?

The provision of Weather Information Services covers in most cases the following dynamic information:

- Common weather information / data such as air / road temperature, precipitation, wind direction / speed, road traffic related weather messages
- Special forecast information leading to weather warnings about reduced visibility, heavy rain or snowfall, strong winds, etc.
- Infrastructure-specific information on weather sensitive parts of the network such as a bridge (which can be closed due to special wind conditions). This information assumes particular significance (i.e. negative influence on road safety) particularly in areas which experience extreme climatic conditions, for example, the coastal areas, the Scandinavia, the Baltic area or the alpine countries.

What are the harmonization requirements?

The functional architecture defined in this Deployment Guideline covers both weather information and weather warnings. The functional requirements listed in this DG have been derived and adapted from the European ITS Architecture,

the FP7 project "In-Time", and additional requirements have been defined by EasyWay Expert and Study Group.

Functional requirements that are required or recommended to fulfil

- FR1: The system **should** support road maintenance and infrastructure management (expert service) and **should** be able to collect process and disseminate weather information for travellers (end user service).
- FR2: The system **should** provide information in the native language(s) at the output location, and from a user selected choice of other appropriate foreign languages, when applicable.
- FR3: A written system **should** provide information using graphical representation or text. Graphical form **should** include the use of maps as well as text.

Level of Service requirements that are required or recommended to fulfil

- LoSR1: In the case that pre-deployment surveys / evaluations provide the necessary evidence to proceed with the deployment of the ITS-service "Weather Information", the minimum and optimum LoS **should** respect the Level of Service to Operating Environment mapping table in the Deployment Guideline.

Level of Quality

The "Levels of Quality table" reflects the requirements of the data quality which are needed for Forecast and Real Time Event

Information Services. The definitions of the table are according to the ISO/PDTR 21707 standard.

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Levels of Quality Table: Weather Information				
Criteria	0	1	2	3
Accessibility	Weather mapped to area/ region	Weather mapped to section/ corridor	Weather mapped to sections with homogenous meteorological and topographical attributes	Weather mapped to single point
Availability	N.A.	N.A.	N.A.	N.A.
Timeliness	< 120min.	< 60min.	< 20 min.	< 5 min.
Update frequency	6h	3h	1h	< 1h
Quality assurance	No regulation	Either input or output (partial check)	Service chain check (full)	Information Quality Assurance
Cross verified	No verification	Information from one source – reliability not confirmed	Information from one or more sources – reliability confirmed	Collaboration from more than one source (data fusion from neighboured stations) - Reliability confirmed
Accuracy	N.A.	N.A.	N.A.	N.A.
Forecast Horizon	Forecast at t=0	Forecast > 6h	Forecast >12h	Forecast >=24h

Additional optional requirements and/or advice

- The system **must not** do anything to reduce the safety of either the travellers in the vehicle (e.g. distracting the driver by overloading him/her with too much simultaneous information), or the staff using to operational equipment, e.g. in toll booths.
- The system **should** have a minimum impact on the driving task (distraction).
- The service **should** provide a high level description of the message sets and data to be exchanged in data transfers.
- The system **may** be able to recommend short term road maintenance activities, including winter maintenance, based on data collected from the road infrastructure possibly combined with the current and/or forecast weather conditions.
- The system **may** support time predictions for a particular trip (weather information as inputs parameter for a travel time estimation given to users by info services).
- The European standard EN 15518:2011 Winter Maintenance Equipment – Road Weather Information Systems as well as the German technical bulletin “Technische Lieferbedingungen für Streckenstationen” (TLS, draft version 2010) as well as the “Hinweise zur Erfassung und Nutzung von Umfelddaten in Streckenstationen” (FGSV 306, 2010) **may** be considered particularly in relation to the collection of road weather station data.

EIP+ update

In 2015, all corridor projects were requested to provide feedback on the application of Deployment Guidelines. In total, 8 weather information questionnaires were returned covering one corridor project and 3 member states. A new chapter 3.2 was added to

Part B of the TIS-DG06 Weather information to summarise this feedback. Furthermore, one new deployment example was added to Part B. Recommendations were provided how to update the guideline during the EU EIP project.

Further Information

dg.its-platform.eu

Questions and help

dg.its-platform.eu/user-support



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