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Road traffic information service - Terminology

道路交通信息服务 术语

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Road traffic information service - Terminology

1 Scope

This document defines the terms and definitions, which are involved in the field of road traffic information services, including basic terms, terms of traffic information acquisition, terms of traffic information processing, terms of traffic information transmission and release, terms of traffic information service quality, terms of vehicle-road coordination traffic information service.

This document applies to road traffic information services and related fields of application.

2 Normative references

There are no normative references in this document.

3 Basic terminology

3.1

Vehicle navigation service

On the basis of the navigation electronic map, which is constructed by the application of geographic information system (GIS) technology, the positioning technology and communication technology are used for vehicle positioning, destination retrieval, determination of the optimal driving route, so as to provide static or dynamic optimal travel information for travelers, AND to guide the driver in a timely manner during the trip.

3.2

Vehicle breakdown information

Recorded information such as the location where the vehicle breaks down, time, main reason, basic situation of the vehicle, personnel situation

3.3

Illegal parking information

Recorded information on illegal parking behavior of vehicles, in prohibited parking areas or road sections.

3.4

Long-distance passenger transport line information

The information, which describes the main characteristics of long-distance highway passenger transportation line, which belong to different cities OR cross other cities even through its origin and destination are at the same city, AND has fixed driving routes, such as route, frequency, origin and destination, fares, etc.

3.5

Pre-trip information

The information, which is given to travelers before a trip, to plan a trip.

3.6

Pre-trip information service

Using advanced information technology, travelers can use various information terminals to inquire about current road traffic and public transportation related information, such as travel route, travel mode, travel time, etc., to provide travelers with travel advice information, thereby providing support for the travel of traveler.

[Source: GB/T 20839-2007, 6.1]

3.7

En-route information

Reference information, which is needed to find the best travel route and way, during travel.

3.8

Road traffic accident information

Information, which records the location of the road traffic accident, the type of the accident, the cause of the accident, the time of the accident, the degree of impact on the traffic, the situation of the relevant personnel.

3.9

Road traffic information

The information, which records the road surface conditions, traffic status,

Information, which describes the operating timetable, operating route map, fare and charging method, number of people getting on and off at the station, the degree of congestion in the carriage, the real-time geographic location of the vehicle, the arrival time of the vehicle.

3.16

Public parking information platform

Public parking information system

An information integration system, which is used for data support for parking information services and comprehensive traffic information services; integrates parking information resources; implements functions such as access, storage, processing, exchange, distribution of parking data, in accordance with certain standards and specifications.

3.17

Announcement information

Announcements about road safety, which are displayed on variable message panels.

Note: The content is divided into traffic guidance information, traffic safety warning information, traffic violation warning information, traffic safety publicity information, etc.

3.18

Customized information service

Travelers put forward specific information needs of users, through information query methods, such as traffic consulting telephones, the Internet, mobile phones and personal portable devices; obtain customized, comprehensive traffic information.

[Source: GB/T 20839-2007, 6.4]

3.19

Emergency incident

The non-periodic and sudden events on the road, which reduce the road capacity OR affect the traffic safety or public safety; have the characteristics of suddenness, destruction, unpredictability.

Note: It mainly includes traffic accidents, vehicle failures, scattered goods, road damage, natural disasters.

Traffic performance

The smooth and congested state of road or road network traffic operation.

Note: It is generally divided into smooth, slow, congested; it is detailed into smooth, basic smooth, light congestion, moderate congestion, serious congestion.

3.26

Route guidance service

The services, which use advanced information technology, to recommend reasonable travel methods and optimal travel routes for travelers, AND to provide scientific path guidance services during the travel process.

Note: The service information provided includes traffic control information, traffic accident information, traffic congestion information, road work information, road abnormality information, traffic service facility information, public transportation operation information, en-route guidance information, to reduce the time of vehicles or pedestrians as retained on the road network, thereby relieving the traffic pressure.

3.27

Traffic condition map

An electronic map, that visually expresses road traffic conditions, by the use of graphics and text in different colors.

Note: Generally, the red line segment represents congestion; the yellow line segment represents slowness; the green line segment represents smooth flow.

3.28

Real-time road traffic information

The information, which is composed of the real-time traffic flow status information of the road and the occasional real-time traffic accident information on the road, traffic control information, tidal lane information, road anomalies, road work information, etc., to reflect the information of road traffic conditions in real time.

3.29

Parking information

Parking lot information, which indicates the temporary parking or long-term parking for motor vehicles.

Note: It is mainly divided into public parking lot (garage) information and road parking lot

information. Public parking lot (garage) information includes parking lot (garage) name, location, open status, number of parking spaces, charging criteria, parking-related static information such as above-ground, underground, open-air, indoor, etc., as well as the dynamic information of real-time number of vacant parking spaces of parking lot (garage). The road parking lot information includes static information, such as road section name, parking time period, number of parking spaces, charging criteria, AND dynamic information such as the number of vacant parking spaces.

3.30

Parking guidance system

A system, which is composed of data acquisition, data processing, data release modules, communication links; uses multi-level roadside information release screens or mobile terminals as carriers, to provide the location, occupancy states, number of parking spaces of public parking lots (garages) and road parking lots, in a certain area, to guide drivers to park.

3.31

En-route public transport information service

Utilize advanced communication, electronic and multimedia network technologies, to enable travelers on their way, to obtain the real-time public travel information services, through the electronic stop signs, in-vehicle electronic display screens, voice prompt systems, bus consultation service telephones, personal inquiry terminals, on the roadside, in stations, on platforms, in vehicles, so that travelers can make appropriate adjustments to travel routes, methods, times during travel.

[Source: GB/T 20839-2007, 6.3]

3.32

En-route driver information service

The information service, which is provided to the driver, during the trip, through the on-board information unit or roadside dynamic traffic information display device, including driving operation prompts, real-time traffic conditions, optional routes, route guidance, vehicle running status, accident warnings, etc., which are helpful for drivers to travel. Such information can locate and navigate the vehicle, through the path guidance system, thereby providing the driver with the optimal driving route and assisted driving instructions.

[Source: GB/T 20839-2007, 6.2]

3.33

integration and other technologies, through advanced traffic information's acquisition and fusion technology, traffic object interaction and intelligent traffic control and management, etc., and other proprietary technology, to strengthen the connection between vehicles, carriers and users; improve the operation efficiency of the transportation system; reduce traffic accidents; reduce environmental pollution, so as to establish an efficient, convenient, safe, environmentally friendly, comfortable integrated transportation system.

[Source: GB/T 20839-2007, 2.1]

4 Traffic information acquisition

4.1

Vehicle identification method

A method for accurately identifying specific vehicles, by identifying vehicle license plates through video image recognition technology AND identifying motor vehicle electronic signs through radio frequency identification technology.

4.2

Magnetic vehicle detector

A device, which detects the influence of vehicles on geomagnetism through magnetic sensors; can obtain road traffic parameters, such as traffic flow on the road and instantaneous vehicle speed, through one or more combinations; can feedback the parameters to other devices, by wireless or wired communication.

[Source: GB/T 35548-2017, 3.1]

4.3

Road traffic monitoring and controlling equipment

A device, which is installed on a road or vehicle, for traffic control and traffic information acquisition.

4.4

Read-write equipment

An electronic device, which performs data reading and writing operations, on electronic identification of motor vehicle, based on UHF radio frequency identification technology.

Note: It consists of read-write unit, antenna unit, feeder unit.

[Source: GB/T 35786-2017, 3.1]

4.5

Probe vehicle; floating vehicle; floating car

Probe sensor

The vehicle or mobile intelligent terminal, which is equipped with a global navigation satellite system (GNSS) receiver and information transmission equipment; can be used for data collection of traffic parameters.

4.6

Probe data; floating car data; FCD

The data of the vehicle identification code, acquisition time, vehicle position, instantaneous speed, driving direction, which is obtained by the floating car sensor.

4.7

Probe vehicle system; floating car system

A system, which consists of a floating car, a traffic data processing center, and a communication link between the two. It exchanges data in real time with the traffic data processing center, through a certain proportion of floating cars in the traffic flow; combines the infusion and analysis of historical data and traffic flow detection data from other fixed detection facilities, to obtain an accurate understanding of the overall road traffic conditions.

Note: According to the function, it is divided into three parts: floating car data acquisition, floating car information processing, dynamic traffic information release.

4.8

Loop detector

A vehicle detector, which senses the vehicle through the reduction of the inductance of the induction coil, when the vehicle passes through or is stationary in the detection area of the induction coil.

[Source: GB/T 26942-2011, 3.2]

4.9

Loop detector system

A comprehensive detection device, which is composed of multiple vehicle detectors

4.14

User generated contents of traffic information

A way for travelers to collect road traffic information, based on mobile Internet technology.

Note: Travelers collect on-site traffic information, through mobile intelligent terminal equipment (such as smart phones, car navigation terminals, etc.), AND feed it back to the traffic service center. The service center analyzes and processes the uploaded mass data, to obtain real-time traffic information and the information on changes in roads and transportation facilities, etc., in turn serves the travelers.

4.15

Video traffic flow detector

The detection equipment, which uses the video image processing technology, to collect and process dynamic information of traffic flow on the road, thereby detecting and outputting the data, such as vehicle type, traffic flow, average speed, headway, headspace, time occupancy, space occupancy, in the target area.

[Source: GB/T 24726-2021, 3.2]

4.16

Parking information acquisition device

A device for collecting parking space information in a parking lot, which consists of a parking space collector, a communication module, a display module.

4.17

Microwave traffic flow detector

A device, which transmits low-energy microwave signals to vehicles in the detection area; detects road traffic parameters, by identifying the microwave signals, which are reflected by vehicles.

[Source: GB/T 20609-2006, 3.1]

5 Traffic information processing

5.1

Optional route

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