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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 20839-2025

Replacing GB/T 20839-2007

Intelligent transport systems - General terminology

智能运输系统 通用术语

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 20839-2007 "General Terminology for Intelligent Transportation Systems". Compared with GB/T 20839-2007, except for the structure... Aside from adjustments and editorial changes, the main technical changes are as follows:

a) The terms "Intelligent Transportation System", "Intelligent Transportation System Framework", "Integrated Transportation Information Platform", and "Advanced Traffic Management" have been changed. "System", "Advanced Public Transportation System", "Operating Vehicle Management", "Advanced Vehicle Control System", "Emergency Management", "Intelligent Transportation" The definition of "cost-benefit analysis of transportation systems" (see 3.1, 3.4~3.6, 3.8~3.11, 3.14, and 2.1~2.4, 2.6~ in the.2007 edition) 2.10) The term "advanced traveler information system" was changed to "travel information system" and the definition was changed (see 3.7,.2007 edition). 2.5);

b) Added "Cooperative Intelligent Transportation Systems", "Intelligent Transportation System Standards System", "Intelligent Transportation Infrastructure", and "Intelligent Transportation Data" Terms and definitions for "management", "smart highways", "traffic information collection", "travel as a service", and "integrated transportation big data" (see 3.2, 3.3,...). (3.12, 3.13, 3.15~3.18)

c) The terms "urban traffic management and control", "traffic monitoring center", "regional traffic control", "intelligent traffic signal control", and "automatic" have been changed. "Adaptive signal control", "bus signal priority", "special vehicle monitoring", "parking management", "coordinated management of road-rail intersections", "video surveillance"

Definition of "system" (see 4.1-4.6, 4.8, 4.9, 4.10, 4.11; 3.1, 3.3-3.7, 3.9, 3.10, 3.11, 9.6 in the.2007 edition);

d) The terms and definitions for "comprehensive management of high-grade highways" and "exhaust emission supervision" have been deleted (see sections 3.12 of the.2007 edition);

e) Added the terminology and definition for "road network operation management" (see 4.12);

f) The terms "pre-trip information service", "in-transit driver information service", "in-transit public transport information service", and "personalized information" have been changed. Definitions of "services", "variable message signs", "variable signs", "route guidance", and "traffic broadcasts" (see 5.1-5.4, 5.6-5.8, 5.11). In the.2007 version (versions 6.1-6.7, 6.9), "vehicle navigation" was changed to "in-vehicle navigation" and its definition was revised (see 5.9,.2007 version). (6.8)

g) Added the terms and definitions for "smart travel services" and "mobile navigation" (see 5.5, 5.10);

h) The definitions of the terms "electronic toll collection," "free-flow electronic toll collection," "on-board unit," "roadside unit," and "user card" have been changed (see 6.1). (6.3, 6.5-6.7, 9.1, 9.4, 9.7~

9.9 in the.2007 edition)

i) The terms and definitions for "combined electronic toll collection system," "blacklist," and "transaction" have been removed (see sections

1 Scope

GB/T 20839-2025 is the Chinese national standard covering the vocabulary of intelligent transport - the architecture and its layers, the traffic data and its collection, the control and management functions, the vehicle-to-infrastructure communication and the traveller information services. It replaces GB/T 20839-2007 after eighteen years, in which the field acquired connected vehicles and everything that came with them. It was issued on 31 December 2025 and has been in force since 1 July 2026, replacing GB/T 20839-2007. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document defines common terminology in the field of intelligent transportation systems, including basic terminology, traffic management, information services, electronic toll collection, and passenger transport. Transportation services, freight services, integrated

transportation, emergency response, intelligent driving, intelligent transportation infrastructure and intelligent transportation data management. This document applies to information services, information processing, and information exchange in intelligent transportation systems and related fields.

2 Normative references

This document has no normative references.

3 Basic Terminology

3.1 Intelligent Transportation Systems Based on a relatively complete transportation infrastructure, and utilizing advanced information, communication, computer, automatic control, and system integration technologies, through... Proprietary technologies such as traffic information collection (3.16) and fusion technology, traffic object interaction, and intelligent traffic control and management are used to enhance the capabilities of transportation vehicles. The connection between carriers and users improves the operational efficiency of the transportation system, reduces traffic accidents, and lowers energy consumption and environmental pollution, thereby establishing a A safe, efficient, convenient, environmentally friendly, and comfortable integrated transportation system.

3.2 Cooperative Intelligent Transportation System (cooperativeITS) Intelligent transportation achieves intelligent collaboration and cooperation between vehicles and infrastructure, between vehicles, and between vehicles and people through the interaction of information between people, vehicles, and roads. Transportation system (3.1) architecture. [Source: GB/T 31024.1-2014, 2.1]

3.3 Intelligent Transportation Systems (ITS) standard system The basic standards, technical standards, service standards, product standards, and other standards related to intelligent transportation are arranged according to their inherent connections and logical relationships. It is an organic whole formed by scientific integration, guiding the coordinated development, standardized construction and effective operation of intelligent transportation systems (3.1).

3.4 Intelligent Transportation System Architecture (ITS) By linking the functional requirements of the intelligent transportation system (3.1) with the physical entities that carry these functions through information flow, a unified system is constructed. Standardized framework structure.

Note. The intelligent transportation system framework consists of user services, logical framework, physical framework, support system, and key technologies.

3.5 An information platform that integrates, consolidates, and manages transportation-related information to provide comprehensive transportation services.

3.6 To improve the operation of the road network, a comprehensive perception and analysis of elements within the transportation system, including people, vehicles, transportation infrastructure, and the environment, is required.

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