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Intelligent transport systems — Vocabulary

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO ~~documents~~document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

This second edition ~~adds or modifies~~~~cancels and replaces~~ the first edition (ISO/TS 14812:2022), which has been technically revised. The main changes are as follows:

the following terms and groups of terms:

— have been modified:

— information security terms
(3.1.14)(3.1.14)

— connected vehicle (3.2.3.7)

— device component terms (3.2.10)

— connected vehicle roadside
equipment (3.2.3.3)(3.2.3.3)

— connected vehicle (3.2.3.7)

— device component terms (3.2.10)

— carriageway (3.3.1.5)(3.3.1.5)

— single carriageway
(3.3.1.7)(3.3.1.7)

_____ dual (3.3.1.8)(3.3.1.8)	carriageway	_____ geographic (3.4.1.7)(3.4.1.7)	feature
_____ multiple (3.3.1.9)(3.3.1.9)	carriageway	_____ point (3.4.1.8)(3.4.1.8)	destination
_____ motorway (3.3.1.21)(3.3.1.21)		_____ area (3.4.1.9)(3.4.1.9)	destination
_____ physical traffic separator (3.3.2.1)(3.3.2.1)		_____ coordinate (3.4.1.10)(3.4.1.10)	tuple
_____ kerb (3.3.2.4)		_____ point (3.4.1.11)(3.4.1.11)	coordinates
_____ kerb (3.3.2.4)			
_____ footpath (3.3.3.3)(3.3.3.3)		_____ network (3.4.2.8)(3.4.2.8)	location
_____ sidewalk (3.3.3.4)(3.3.3.4)		_____ geographic (3.4.2.9)(3.4.2.9)	descriptor
_____ escalator (3.3.3.5)(3.3.3.5)		_____ infrastructure (3.4.2.10)(3.4.2.10)	descriptor
_____ moving walkway (3.3.3.6)(3.3.3.6)		_____ jurisdictional (3.4.3)(3.4.3)	terms
_____ pedestrian crossing (3.3.3.7)(3.3.3.7)		_____ vulnerable road user (3.6.1.5)(3.6.1.5)	
_____ shared space (3.3.3.8)(3.3.3.8)		_____ protected road user (3.6.1.6)(3.6.1.6)	
_____ block-face (3.3.3.9)(3.3.3.9)		_____ anonymized vehicle reference (3.7.2.3)(3.7.2.3)	
_____ alley (3.3.5.11)		_____ vehicle equipment (3.7.2.4)(3.7.2.4)	
_____ alley (3.3.5.11)		_____ vehicle fuel type (3.7.2.5)(3.7.2.5)	
_____ road identifier (3.3.5.12)(3.3.5.12)		_____ vehicle identifier (3.7.2.6)(3.7.2.6)	
_____ service road (3.3.5.13)		_____ vehicle load type (3.7.2.7)(3.7.2.7)	
_____ service alley (3.3.5.14)(3.3.5.14)		_____ vehicle registration plate (3.7.2.8)(3.7.2.8)	
_____ facility terms (3.3.7)(3.3.7)			
_____ kerbside usage terms (3.3.8)(3.3.8)			
_____ road equipment terms (3.3.9)(3.3.9)			

_____ gross vehicle mass
~~(3.7.2.9)~~(3.7.2.9)

_____ gross vehicle mass rating
~~(3.7.2.10)~~(3.7.2.10)

_____ payment terms ~~(3.8.1)~~(3.8.1)

Any feedback or questions on this document should be directed to the user's national standards body.
 A complete listing of these bodies can be found at
www.iso.org/members.html~~www.iso.org/members.html~~.

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Introduction

The definitions found in this document have been formulated in accordance with ~~major~~ ISO International Standards such as ISO 704 and are based on a consistent concept model. It is recognized that the contents of this document are not exhaustive and that terminology evolves over time.

In most cases, the definitions provided within this document are suitable for general application throughout intelligent transport systems (ITS). In those circumstances where a term is intended for a specific domain of discourse or where the term can be used in multiple domains, the intended context is indicated at the beginning of the definition as bracketed text (e.g. "<ITS-S>").

In addition to a Bibliography, this document provides an index that provides an alphabetical listing of all preferred, admitted, and deprecated terms contained in this document.

Other standardization groups and organizations are encouraged to adopt the terminology in this document to promote better understanding of terms among ITS professionals worldwide. The terms and definitions contained within this document can be searched online at ISO's Online Browsing Platform available at <https://www.iso.org/obp>.

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[https://www.iso.org/obp.](https://www.iso.org/obp)

[Additional related terms can be found in ISO/IEC/IEEE 24765.](#)

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Intelligent transport systems — Vocabulary

1 Scope

This document defines terms relating to intelligent transport systems (ITS).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 24765:2017 *Systems and software engineering Vocabulary*

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 24765 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— —ISO Online browsing platform: available at <https://www.iso.org/obp>
<https://www.iso.org/obp>

— —IEC Electropedia: available at <https://www.electropedia.org/>
<https://www.electropedia.org/>

3.1.1 Core terms

3.1.1.1 Entity terms

3.1 Core terms

3.1.1 Entity terms

NOTE Figure A.1 depicts the concept model for the terms defined in this subclause.

3.1.1.1 3.1.1.1

entity

concrete or abstract thing that exists, did exist, or can possibly exist, including associations among these things

EXAMPLE Person (3.1.1.6), (3.1.1.6), object, event, idea, process, etc.

3.1.1.2 3.1.1.2

immaterial entity

***entity* (3.1.1.1)**

entity (3.1.1.1) that does not occupy three-dimensional space

EXAMPLE Idea, process, organization, etc.

3.1.1.3 3.1.1.3

material entity

***entity* (3.1.1.1)**

entity (3.1.1.1) that occupies three-dimensional space

Note_1_to_entry: — All material entities have certain characteristics that can be described and therefore this concept is important for ontology purposes.

3.1.1.4 3.1.1.4

non-biological entity

material entity (3.1.1.3)(3.1.1.3) that is not and has never been a living organism

3.1.1.5 3.1.1.5

biological entity

material entity (3.1.1.3)(3.1.1.3) that was or is a living organism

3.1.1.6 3.1.1.6

person

biological entity (3.1.1.5)(3.1.1.5) that is a human being

3.1.2A.1.1 General system terms

3.1.2 General system terms

NOTE Figure A.2 depicts the concept model for the terms defined in this subclause.

3.1.2.1 3.1.2.1

system

combination of interacting *elements* (3.1.3.10)(3.1.3.10) organized to achieve one or more stated purposes

[SOURCE: ISO/IEC/IEEE 15288:2015, 4.1.46, modified — Notes to entry removed.]

3.1.2.2 3.1.2.2

transport system

system (3.1.2.1) *system* (3.1.2.1) of infrastructure *elements* (3.1.3.10)(3.1.3.10) and optionally *vehicles* (3.7.1.1)(3.7.1.1) that are jointly designed to move *material entities* (3.1.1.3)(3.1.1.3) from an origin to a destination

Note_1_to_entry: — Transport systems can also include any supporting system, such as information and control systems.

3.1.2.3 3.1.2.3

surface transport system transport system

transport system (3.1.2.2)(3.1.2.2) designed to move *material entities* (3.1.1.3)(3.1.1.3) across the surface or near-surface of the Earth

Note-1-to entry: A surface transport system can include tunnels, *bridges* (3.3.7.3) and similar *elements* (3.1.3.10)(3.1.3.10).

Note-2-to entry: There is not complete agreement on the precise limitations of a "surface transport system" within the ITS community. Currently, the term is almost exclusively applied to ground-based travel of goods and people over significant distances. The term is viewed as including ferry systems, which often form an integral part of a local surface transport system; it is less clear if it includes long-distance sea-fairing ships. The term "surface transport systems" is also generally limited to transport systems that cover a considerable distance (e.g. factory conveyance technologies are not often referred to as "surface transport systems"). It has been suggested that air travel, which is arguably a transport system designed to move physical entities between points on the surface of the ~~earth~~Earth, ought to be included in the scope of the term, but this perspective is not universally accepted. It is expected that the exact limitations of the term will be further refined as ITS matures.

Note-3-to entry: Due to the defined scope of ITS, the term "transport system" is intended to be interpreted as being synonymous with the term "surface transport system" unless explicitly specified otherwise.

3.1.2.4 3.1.2.4

intelligent transport system

ITS

intelligent transportation system

~~system~~ (3.1.2.1)system (3.1.2.1) comprised of information, communication, sensor and control technologies and that is designed to benefit a *surface transport system* (3.1.2.3)(3.1.2.3)

Note-1-to entry: "Intelligent transportation system" is the American English equivalent.

Note-2-to entry: Benefits potentially include, but are not limited to, increased safety, sustainability, efficiency and comfort.

Note-3-to entry: The full term (i.e. "intelligent transport system") is often used when the noun is used as a subject, whereas the ~~abbreviation~~abbreviated term (i.e. "ITS") is often used to modify another noun (e.g. "Intelligent transport systems provide ITS services.").

3.1.2.5 3.1.2.5

cooperative ITS

C-ITS

subset of *ITS* (3.1.2.4)intelligent transport systems (3.1.2.4) where information is shared among *ITS stations* (3.2.7.3)(3.2.7.3) in a manner that enables its use by multiple *ITS services* (3.5.3.1)(3.5.3.1)

3.1.3 General architecture terms

NOTE ~~Figure A.3~~Figure A.3 depicts the concept model for the terms defined in this subclause.