PD ISO/TS 5206-1:2023



BSI Standards Publication

Intelligent transport systems — Parking

Part 1: Core data model

bsi.

National foreword

This Published Document is the UK implementation of ISO/TS 5206-1:2023.

The UK participation in its preparation was entrusted to Technical Committee EPL/278, Intelligent transport systems.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Published by BSI Standards Limited 2023

ISBN 978 0 539 14691 2

ICS 03.220.01; 35.240.60

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This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 May 2023.

Amendments/corrigenda issued since publication

Date	Text affected

PD ISO/TS 5206-1:2023

TECHNICAL SPECIFICATION

ISO/TS 5206-1

First edition
2023-04-27

Intelligent transport systems — Parking —

Part 1: Core data model

Systèmes intelligents de transport - Stationnement —

Partie 1: Modèle de données de base

Reference number
ISO/TS 5206-1:2023(E)

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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 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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

A list of all parts in the ISO 5206 series can be found on the ISO website.

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.

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Introduction

Around the globe, new services and technologies are intersecting to create value-added convenience to customers and business owners while better utilizing available parking, mobility and transport infrastructure. Whether supporting car sharing, ride sharing, micro mobility services, prepaid parking, dynamic pricing in parking structures, remote management of operations, and/or improved reporting, the sharing of data is key to accelerating the adoption of these services.

To enable the sharing of data, the global community has collaborated to create consensus-built, international parking and mobility data specifications to establish a common language for data concepts and definitions in the parking, transport and mobility sectors. These “data specifications” define a common language composed of a set of data concepts and definitions that public and private property owners, operators and service providers can follow to facilitate communication between themselves and with the other industries. These specifications facilitate seamless integration, compatibility and communication between parking entities, mobility operators, the automotive industry, IT developers, ITS operators, services, and map and app providers, as well as other stakeholders.

These specifications, as defined in this document, seek to reduce the effort required to connect technology solutions to one another and to allow companies to refocus their resources on innovating new services and operations.

This document defines the structure, definition and relationships of data constructs relevant to parking and mobility data. This document provides a description of the data constructs in the context of the data model in Clause 6.

Annex A provides a data dictionary of definitions for attributes, classes and relationships.

Annex B provides a description of the data modelling approach defined in this document and how this relates to the CEN 16157 series "DATEX II" modelling approach, defined in EN 16157-1.

NOTE By choice, the Alliance for Parking Data Standards has substantively adopted the DATEX II modelling approach, as this can potentially facilitate simpler integration, at a later date, to data concepts and standards defining road traffic management and information concepts.

Annex C provides use cases and examples for the use of the data defined.

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Intelligent transport systems — Parking —

Part 1:
Core data model

1 Scope

This document defines terms, characterization and the relationship of concepts, defined using model-driven architecture methods, for parking and parking-related activities (both on-street and off-street) covering common data supporting business to business exchanges and end user services.

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 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country code*

ISO 4217, *Codes for the representation of currencies*

ISO 8601-1, *Date and time — Representations for information interchange — Part 1: Basic rules*

ISO/IEC 10646, *Information technology — Universal coded character set (UCS)*

ISO/IEC 19505-1, *Information technology — Object Management Group Unified Modeling Language (OMG UML) — Part 1: Infrastructure*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions 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

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

3.1.1
data receiving party
entity that is requesting or receiving data using the specification from a reliable data source

3.1.2
data distributing party
entity holding data with permission to distribute, that is issuing data using the specification to other entities

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