
**Intelligent transport systems —
Navigation systems — Application
programming interface (API)**

*Systèmes intelligents de transport — Systèmes de navigation —
Interface de programmation (API)*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 17267 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

Introduction

The impetus for this International Standard was the recognition by the intelligent transport systems (ITS) industry of the need for standardization with respect to data access for map databases used by navigation applications. As the vehicle navigation industry has grown, so has incompatibility between navigation systems and map databases. Both a standardized physical storage format (PSF) and a standardized navigation application programming interface (API) can facilitate the interoperability between navigation systems and map databases.

The purpose of this International Standard is to define and structure the model for data access for Vehicle Navigation and Traveller Information Systems. This International Standard is not restricted to physical media and will be independent of any underlying physical storage format. While this API is primarily targeted at self-contained in-vehicle systems, it is expected to be usable by other applications that use map data results in essentially the same way. For example, it may be usable by client/server or distributed navigation systems and location-based services without further specialization.

This International Standard is the Application programming interface (API) specification. It represents the comprehensive specification of the API standard for navigation applications. This International Standard builds upon, and is consistent with, the other International Standards developed by ISO/TC 204/WG 3:

- ISO 14825, *Intelligent transport systems — Geographic Data Files (GDF) — Overall data specification*;
- ISO 17572 (all parts), *Intelligent transport systems (ITS) — Location referencing for geographic databases*.

Intelligent transport systems — Navigation systems — Application programming interface (API)

1 Scope

This International Standard specifies an application programming interface (API) for navigation systems. It specifies the data that may be retrieved from the map database and defines the interface for access. This International Standard specifies a set of function calls. It also specifies the design of the API and gives examples of its intended use. Furthermore, it gives the criteria to determine whether a data access library is in accordance with this International Standard.

This International Standard is applicable to the following functional categories of navigation applications:

- positioning;
- route planning;
- route guidance;
- map display;
- address location;
- services and point of interest (POI) information access.

2 Terms and definitions

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

2.1

address location

application category that deals with the task of expressing a real world position in terms of the data representation

NOTE Address location is one of the six application categories supported by the API.

2.2

address type

attribute of road section entity that specifies the type of house number ranges

EXAMPLE Distinction between base address, county address, commercial address, etc., or no address.

2.3

application category

basic sub-function within the set of functionality for vehicle navigation and traveller information system applications

NOTE This International Standard identifies six application categories: positioning; route planning; route guidance; map display; address location; services and POI information access.