SLOVENSKI STANDARD
SIST EN ISO 19177-1:2026

01-julij-2026

Geografske informacije - Geoprostorski API za informacije v obliki ploščic - 1. del: Osrednji profil (ISO 19177-1:2025)

Geographic information - Geospatial API for tiles - Part 1: Core (ISO 19177-1:2025)

Information géographique - API géospatiale pour les tuiles - Partie 1: Profil minimal (ISO 19177-1:2025)

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35.240.70	Uporabniške rešitve IT v znanosti	IT applications in science

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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN ISO 19177-1

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English Version

Geographic information - Geospatial application programming interface (API) for tiles - Part 1: Core (ISO 19177-1:2026)

Information géographique - Interface de programmation d'application (API) géospatiale pour les tuiles - Partie 1: Profil-minimal (ISO 19177-1:2026)

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 19177-1:2026) has been prepared by Technical Committee ISO/TC 211 "Geographic information/Geomatics" in collaboration with Technical Committee CEN/TC 287 “Geographic Information” the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2026, and conflicting national standards shall be withdrawn at the latest by September 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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The text of ISO 19177-1:2026 has been approved by CEN as EN ISO 19177-1:2026 without any modification.

International Standard

ISO 19177-1

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Geographic information — Geospatial application programming interface (API) for tiles —

Part 1: Core

Information géographique — Interface de programmation d'application (API) géospatiale pour les tuiles —

Partie 1: Profil-minimal

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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 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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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 211, *Geographic information/Geomatics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 287, *Geographic Information*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement), and in collaboration with the Open Geospatial Consortium (OGC).

A list of all parts in the ISO 19177 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.

Introduction

This document is an ISO adaptation of *OGC API – Tiles – Part 1: Core* (OGC 20-057). The normative content is identical to that in the OGC standard, but some minor editorial changes have been made to bring this document in line with the ISO/IEC Directives, Part 2.

This document defines building blocks for implementing web application programming interfaces (APIs) that support the retrieval of tiled geospatial information. A web API is an application programming interface for either a web server or a web browser. This document is sometimes referred to as the "Tiles API".

The OGC suite of web API standards is an extensible framework for building HTTP-based services that can be accessed in different applications on different platforms such as the web, desktop, mobile, etc. This document specifies how different forms/types of geospatial resources are supported, such as tiles of vector features ("vector tiles"), coverages and maps (or imagery). Although this document can be used independently, the building blocks (e.g. subsets of the API definition that provide for specific functions) can be combined with other OGC API standards (or the ISO equivalents, such as ISO 19168-1) for additional capabilities or increased interoperability for specific types of data. This document references *OGC Two Dimensional Tile Matrix Set and Tile Set Metadata,* Version 2.0 (OGC 17-083r4). That standard defines logical models and encodings for specifying tile matrix sets and describing tile sets. A tile matrix set is a tiling scheme that enables an application to partition and index space based on a set of regular grids defined for multiple scales in a coordinate reference system (CRS).

This document is an alternative to *OpenGIS® Web Map Tile Service Implementation Standard* (OGC 07-057r7). Instead of a fixed web interface, this document focuses on simple reusable Representational State Transfer (REST) API building blocks which can be described using the OpenAPI specification. Whereas *WTMS OpenGIS® Web Map Tile Service Implementation Standard* (OGC 07-057r7) focuses on map tiles, this document is designed to support any form of tiled data.

Geographic information — Geospatial application programming interface (API) for tiles —

Part 1: Core

1 Scope

This document specifies the behaviour of web application programming interfaces (APIs) that provide access to tiles of one or more geospatial data resources (collections) that the web API offers.

This document describes how to:

— discover which resources offered by the web API can be retrieved as tiles;

— get metadata about the available tile sets (including according to which tile matrix set each tile set is partitioned and the limits of that tile set within a common potentially global tile matrix set);

— request a tile.

The core conformance class is defined in a way that can be easily included in a web API, even if that API does not conform to the *OGC API – Common* Standard. A web API can combine some requirements classes of this document with those of other OGC API standards (including *OGC API – Common*) to extend the scope of the web API by adding functionality.

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.

MASÓ, J., JACOVELLA-ST-LOUIS, J. (eds.) *OGC Two Dimensional Tile Matrix Set and Tile Set Metadata.* Version 2.0. OGC 17-083r4. Open Geospatial Consortium, 2022. Available at: https://docs.ogc.org/is/17-083r4/17-083r4.html

HEAZEL, C. (ed.) *OGC API – Common – Part 1: Core*. Version 1.0.0. OGC 19-072. Open Geospatial Consortium, 2023. Available at: https://docs.ogc.org/is/19-072/19-072.pdf

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/