Technical Report

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Geographic information — Gap analysis of geospatial standards for indoor-outdoor seamless navigation

Information géographique — Analyse des écarts des normes géospatiales pour la navigation continue intérieure-extérieure

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Foreword

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Introduction

With the spread of nomadic and mobile devices such as smart phones, and the rapid expansion of indoor spaces, many of the services and facilities related to the transport system have become accessible to indoor spaces. Consequently, indoor-outdoor seamless navigation is becoming more important as an extension of existing navigations. For indoor or outdoor navigation, there are several standardization activities which could improve interoperability of data and services.

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Geographic information — Gap analysis of geospatial standards for indoor-outdoor seamless navigation

1 Scope

The objective of this document is to analyse gaps in geospatial standards for indoor-outdoor seamless navigation. This document is intended to be used by designers, developers and providers of outdoor or indoor navigation services.

This document:

a) specifies the concepts for the indoor-outdoor seamless navigation;

b) outlines conceptual architecture and scenarios (or use-cases) for indoor-outdoor seamless navigation;

c) analyses the gap of the current geospatial standards for implementing the indoor-outdoor seamless navigation;

d) highlights standardization items to be proceeded to get more interoperability.

2 Normative references

There are no normative references in this document.

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
feature
abstraction of real-world phenomena

Note 1 to entry: A feature can occur as a type or an instance. Feature type or feature instance will be used when only one is meant.

[SOURCE: ISO 19101-1:2014, 4.1.11]

3.1.2
indoor entity feature
feature (3.1.1) constructed as indoor architectural components or features attached for a specific use inside a building

EXAMPLE Windows, doors, furniture and facilities are indoor entity features.

[SOURCE: ISO 19164:2024, 3.5]

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