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Intelligent transport systems — Indoor navigation for personal and vehicle ITS stations —

Part 3: Requirements and specification for indoor positioning reference data

Systèmes de transport intelligents — Navigation interne pour station personnelle et véhicule ITS —

Partie 3: Exigences et spécification pour les données de référence de positionnement intérieur

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Foreword

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

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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

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, navigation in indoor space is considered a new killer application in the transport industry.

The objective of this document is to provide a basic data model and encoding format for indoor positioning reference data required for indoor navigation functionality for ITS applications. This document is intended to be used by designers, developers and providers of indoor navigation services. When implemented, this document is intended to:

1) provide developers and designers with concepts and appropriate information to implement indoor navigation services;

2) provide developers and designers with interoperable ways to use indoor navigation data from various sources for indoor navigation;

3) enable the provision of indoor navigation services to users;

4) provide developers and designers with an extendable base for indoor navigation.

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Intelligent transport systems — Indoor navigation for personal and vehicle ITS stations —

Part 3: Requirements and specification for indoor positioning reference data

1 Scope

This document defines requirements and specifications for indoor positioning references, which can be referenced for positioning in indoor space, for supporting indoor navigation functionality of a personal/vehicle (P/V) ITS station.

This document defines:

a) the composition of indoor positioning references for use in obtaining indoor positions for indoor navigation of P/V-ITS-stations;

b) the schema and encoding format of indoor positioning references for P/V-ITS-stations.

This document focuses on indoor positioning references. The following issues which are adjunctive but essential for commercial navigation services are beyond the scope of this document:

— authorized and authenticated access of users and services, including security;

— payment;

— preparation of indoor data which are necessary for indoor navigation;

— low-level communication protocols required to transfer and share data from and to a roadside ITS station or a central ITS station;

— other issues dependent on implementation of an instance of indoor navigation.

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 13184-2, *Intelligent transport systems (ITS) — Guidance protocol via personal ITS station for advisory safety systems — Part 2: Road guidance protocol (RGP) requirements and specification*

ISO 17438-1, *Intelligent transport systems — Indoor navigation for personal and vehicle ITS station — Part 1: General information and use case definition*

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13184-2 and ISO 17438-1 and the following apply.

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