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BSI Standards Publication

Space – Use of GNSS-based positioning for road Intelligent Transport Systems (ITS) – Metrics and Performance levels detailed definition

bsi.

National foreword

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English version

Space - Use of GNSS-based positioning for road Intelligent Transport Systems (ITS) - Metrics and Performance levels detailed definition

Espace - Utilisation de la localisation basée sur les GNSS pour les systèmes de transport routiers intelligents - Définition détaillée des mesures et niveaux de performance

Detaillierte Definition von Metriken und Leistungsstufen

This Technical Report was approved by CEN on 13 January 2020. It has been drawn up by the Technical Committee CEN/CLC/JTC 5.

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European foreword

This document (CEN/TR 17448:2020) has been prepared by Technical Committee CEN/JTC 5 “Space”, the secretariat of which is held by DIN.

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1 Scope

This document constitutes the main deliverable from WP1.1 of the GP-START project. It is devoted to a thorough review of the metrics defined in EN 16803-1 and proposes a performance classification for GNSS-based positioning terminals within designed for road applications. It will serve as one of the inputs to the elaboration of prEN 16803-2:2019 and prEN 16803-3:2019.

This document should serve as a starting point for discussion within CEN/CENELEC/JTC 5/WG1 on a consolidated set of performance metrics and associated classification logic. The proposals and conclusions appearing in this document are therefore only preliminary.

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.

EN 16803-1:2016, *Space - Use of GNSS-based positioning for road Intelligent Transport Systems (ITS) - Part 1: Definitions and system engineering procedures for the establishment and assessment of performances*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16803-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

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

4 List of acronyms

ADAS	Advanced Driver Assistance Systems
CAN	Controller Area Network
CDF	Cumulative Distribution Function
CEN	Comité Européen de Normalization — (*European Committee for Standardization*)
CENELEC	Comité Européen de Normalization Électrotechnique — (*European Committee for Electrotechnical Standardization*)
ECEF	Earth Centred Earth Fixed
ETSI	European Telecommunications Standards Institute
GBPT	GNSS-Based Positioning Terminal
GNSS	Global Navigation Satellite Systems
HPA	Horizontal Position Error
HPL	Horizontal Protection Level
IMU	Inertial Measurement Unit
ITS	Intelligent Transport Systems
KOM	Kick-Off Meeting
MEMS	Micro Electro-Mechanical Systems