STN	Inteligentné dopravné systémy Mestské IDS Manažment zóny kontroly pre UVAR (urban vehicle access restriction – obmedzenie vstupu vozidiel) pri použití prepojených IDS	STN P CEN/TS 17380
F		01 8622

Intelligent transport systems - Urban-ITS - Controlled Zone management for UVARs using C-ITS

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/20

Táto predbežná STN je určená na overenie. Pripomienky zasielajte ÚNMS SR najneskôr do októbra 2021.

Obsahuje: CEN/TS 17380:2019

130507

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2020 Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii.

TECHNICAL SPECIFICATION SPÉCIFICATION TECHNIQUE TECHNISCHE SPEZIFIKATION

CEN/TS 17380

October 2019

ICS 03.220.20; 35.240.60

English Version

Intelligent transport systems - Urban-ITS - 'Controlled Zone' management for UVARs using C-ITS

Systèmes de transport intelligents - ITS urbains -Gestion des zones contrôlées à l'aide du système C-ITS Intelligente Verkehrssysteme - Urbane ITS - Urbane ITS - Steuerung in einer "kontrollierten Zone" unter Verwendung von C-ITS

This Technical Specification (CEN/TS) was approved by CEN on 26 August 2019 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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

© 2019 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. CEN/TS 17380:2019 E

Contents

Page

	ean foreword	
Introd	uction	4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Symbols and abbreviations	6
5	'Controlled Zone' management	
6	Use cases	13
7	Elements of the CZRTM data dictionary	15
8	Messages and related security	
Annex A (normative) ASN.1 module of the CZ data dictionary		19
Annex	B (normative) Service announcement for the ITS application "CZ Management"	24
Annex	C (normative) LDM data objects for CZ management	25
Bibliog	graphy	26

European foreword

This document (CEN/TS 17380:2019) has been prepared by Technical Committee CEN/TC 278 "Intelligent transport systems", the secretariat of which is held by NEN.

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.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is part of a set of standards related to Urban ITS (U-ITS). An overview on U-ITS requirements is provided in CEN/TR 17143 ^[3], which was developed under the European Commission's mandate M/456 ^[1]. Technologies already developed for Cooperative ITS (C-ITS) under the European Commission's mandate M/453 ^[2] are applicable for U-ITS.

Management of traffic in a "Controlled Zone" (CZ) is relevant for at least the following reasons:

- Movement of vehicles in cities producing traffic congestion and overcrowding on public transport at peak periods are issues that a jurisdiction may wish to control in order to allow cities to better manage the flow of traffic.
- As cities and urban complexes expand, and there is a significant trend from rural areas to cities around the world, pollution and congestion in these urban areas becomes an ever more significant problem. Traffic, i.e. vehicle movements within the urban complex, is not the only polluter but is considered to be a source of pollution; other causes are e.g. air conditioning, central heating systems, coal and wood burning heating, factories.

A CZ, also referred to as an "Urban Vehicle Access Restriction" (UVAR) zone, is the enactment of a traffic restriction to adhere to a permanent or temporary regulation applicable in a defined area.

It is recognized that different jurisdictions will design and introduce their own CZ paradigms of different method and construct. However, independent of the goal to be achieved or the political objective, the basic technical requirements to manage road traffic in a CZ is similar, and the basic methodologies are the same.

The methodology specified in this document is referred to as geofencing, i.e. the creation of a virtual geographic boundary, which, in a strict sense, is part of "Access Control and Enforcement Systems" (ACES).

1 Scope

This document provides information and specifications enabling management of road traffic in controlled zones applying geofencing. Specifically, this document provides

- a "Controlled Zone Data Dictionary" (CZDD) for management of controlled zones providing an extendible toolkit that regulators can use e.g. to inform potential CZ users, e.g. vehicles, about
 - the CZ area, i.e. the geographical boundaries of the CZ;
 - CZ access conditions including exempts;
 - time windows indicating when these CZ access conditions are applicable, allowing the potential CZ users to select an appropriate routing, either by pre-trip planning or ad hoc re-routing,
 - and illustrations and guidelines on how to use this toolkit.

The toolkit is designed in compliance with the general ITS station and communications architecture specified in ISO 21217, and optionally applicable C-ITS protocols and procedures, e.g. ISO 22418:2018^[8] on "Service Announcement", EN ISO 18750 on the "Local Dynamic Map", and EN ISO 17419^[5] on globally unique identifiers.

Enforcement is out of scope of this document.

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 ISO 18750:2018, Intelligent transport systems — Co-operative ITS — Local dynamic map

ISO 21217:2014, Intelligent transport systems — Communications access for land mobiles (CALM) — Architecture

CEN ISO/TS 21177¹, Intelligent transport systems — ITS station security services for secure session establishment and authentication between trusted devices

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

¹ Under preparation. Stage at the time of publication: FprCEN ISO/TS 21177