



NSAI
Standards

Irish Standard Recommendation
S.R. CEN ISO/TR 21186-1:2021

Cooperative intelligent transport systems (C-ITS) - Guidelines on the usage of standards - Part 1: Standardization landscape and releases (ISO/TR 21186-1:2021)

S.R. CEN ISO/TR 21186-1:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

CEN ISO/TR 21186-1:2021

Published:

2021-01-20

This document was published under the authority of the NSAI and comes into effect on:

2021-02-07

ICS number:

01.120

03.220.01

35.240.60

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

S.R. CEN ISO/TR 21186-1:2021 is the adopted Irish version of the European Document CEN ISO/TR 21186-1:2021, Cooperative intelligent transport systems (C-ITS) - Guidelines on the usage of standards - Part 1: Standardization landscape and releases (ISO/TR 21186-1:2021)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

TECHNICAL REPORT

CEN ISO/TR 21186-1

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

January 2021

ICS 01.120; 03.220.01; 35.240.60

English Version

Cooperative intelligent transport systems (C-ITS) -
Guidelines on the usage of standards - Part 1:
Standardization landscape and releases (ISO/TR 21186-
1:2021)

Systèmes de transport intelligents coopératifs (C-ITS) -
Lignes directrices sur l'utilisation des normes - Partie
1: Paysage de la normalisation et diffusions (ISO/TR
21186-1:2021)

Kooperative intelligente Verkehrssysteme (C-ITS) -
Leitfäden zur Nutzung von Normen - Teil 1:
Normungslandschaft und Veröffentlichungen (ISO/TR
21186-1:2021)

This Technical Report was approved by CEN on 10 October 2020. It has been drawn up by the Technical Committee CEN/TC 278.

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

CEN ISO/TR 21186-1:2021 (E)

Contents	Page
European foreword.....	3

European foreword

This document (CEN ISO/TR 21186-1:2021) has been prepared by Technical Committee ISO/TC 204 "Intelligent transport systems" in collaboration with 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.

Endorsement notice

The text of ISO/TR 21186-1:2021 has been approved by CEN as CEN ISO/TR 21186-1:2021 without any modification.

This page is intentionally left blank

TECHNICAL REPORT

ISO/TR 21186-1

First edition
2021-01

Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards —

Part 1: Standardization landscape and releases

*Systèmes de transport intelligents coopératifs (C-ITS) - Lignes
directrices sur l'utilisation des normes —*

Partie 1: Paysage de la normalisation et diffusions



Reference number
ISO/TR 21186-1:2021(E)

© ISO 2021

ISO/TR 21186-1:2021(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Standardization at SDOs	1
4.1 General.....	1
4.2 Goals of standardization.....	2
4.3 Releases.....	2
4.4 SDOs.....	2
4.5 Standardization areas.....	3
4.6 Categories of SDO deliverables.....	4
5 C-ITS services	5
5.1 General.....	5
5.2 Service initiation and provisioning.....	8
5.2.1 Services for information dissemination based on broadcast messages.....	8
5.2.2 Services based on service announcement.....	9
5.2.3 Services initiated by a central station.....	10
5.3 Use cases.....	10
6 Releases	10
6.1 Disclaimer.....	10
6.2 Concept of releases.....	10
6.3 Management of releases.....	11
6.4 Examples of existing C-ITS releases.....	12
6.5 C-ITS release 2 from CEN and ISO.....	13
6.5.1 General.....	13
6.5.2 Release identification.....	13
6.5.3 Supported C-ITS services.....	13
6.5.4 Standards cluster.....	14
Bibliography	16

ISO/TR 21186-1:2021(E)

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 documents 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 204, *Intelligent transport systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 278, *Intelligent transport systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 21186 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 part of a family of deliverables from Standard Development Organizations (SDOs) for Cooperative Intelligent Transport Systems (C-ITS), which is a subset of standards for Intelligent Transport Systems (ITS).

ITS aims to improve surface transportation in terms of:

- **safety**
e.g. crash avoidance, obstacle detection, emergency calls, dangerous goods;
- **efficiency**
e.g. navigation, green wave, priority, lane access control, contextual speed limits, car sharing;
- **comfort**
e.g. telematics, parking, electric vehicle charging, infotainment;
- **sustainability**

by applying information and communication technologies (ICT).

The whole set of standards for deployment of C-ITS is difficult to understand by developers of equipment and software, especially ITS application software, and thus guidelines explaining a beneficial choice of standards (C-ITS Release), the purpose and interaction of standardized features, beneficial implementation approaches and guidance in developing ITS applications are a prerequisite for a fair and open market allowing early deployment of interoperable and future-proof solutions.

The ISO 21186 series provides necessary guidelines in multiple parts, each dedicated to a specific purpose:

- Part 1: Standardization landscape and releases (this document);
- Part 2: Hybrid communications^[32];
- Part 3: Security^[33].

This document can be complemented by further parts as required, for example:

- Usage of the service announcement protocol specified, for example, in ISO 22418;
- Dynamically extendable data and protocol parameters ("Information Object Classes" and "Information Object Sets"; based on ASN.1 type CLASS);
- Usage of the GTDM framework specified in ISO/TS 21184.

For deployment of ITS, especially C-ITS and the emerging Urban ITS and "Mobility as a Service" (MaaS) paradigms, consistent and complete sets of standards and profiles of standards including necessary parameterization are necessary in support of the targeted ITS services to be provided by means of ITS applications. Such sets are referred to as "C-ITS Release". This document presents the C-ITS standards landscape, describes a concept of Releases and exemplifies this concept with a "C-ITS Release 2".

At the time of writing this document, no applicable Intellectual Property Rights (IPR) issues were known related to this document. However, this document references standards, for which IPRs are known. Information on such IPRs is expected to be provided in those respective standards, which might be from any one of the Standards Development Organisations working on ITS or C-ITS.

Referencing other SDOs and their respective deliverables is in no way to be understood as an endorsement, but rather as an informative piece of information.

More details on the C-ITS domain can be found in the Brochure cited in Reference ^[129].

Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards —

Part 1: Standardization landscape and releases

1 Scope

This document

- describes standardization activities related to C-ITS on a global level by major standard development organizations (SDOs);
- explains the various purposes of deliverables from SDOs and introduces a classification scheme of such documents;
- describes methods on how C-ITS services are presented and performed;
- identifies an approach for C-ITS releases and exemplifies this approach;
- presents a list of standards (Bibliography) with special relevance for C-ITS.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

NOTE An approach towards a common vocabulary in ITS is presented in ISO/TS 14812¹⁾.

4 Standardization at SDOs

4.1 General

Standardization in general is the process of generating specifications by a recognized authority, i.e. an SDO, applying the principle of consensus finding prior to formal approval by voting according to the rules of the SDOs.

Regulatory requirements complement standards and specifications and should be considered for the deployment of equipment and the operation of services in the given regulatory domain.

1) Under preparation. Stage at time of publication: ISO/DTS 14812:2021.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-