
**Electronic fee collection — System
architecture for vehicle related
tolling —**

**Part 2:
Vocabulary**

*Perception de télépéage – Architecture de systèmes pour le péage lié
aux véhicules —*

Partie 2: Vocabulaire

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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*.

A list of all parts in the ISO 17573 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 a part of the ISO 17573 series that defines the system architecture for vehicle-related tolling. Part 1 gives a reference model for the system architecture, whilst this document (Part 2) provides a collection of terms and definitions within the field of electronic fee collection (EFC) and road user charging that are used in the different documents published in ISO and CEN under the general title, *Electronic fee collection*.

This document is based on guidelines from the relevant ISO International Standards for terminologies, in particular: ISO 704 and ISO 1087-1. Experiences were also drawn from more general work done on terminology, in particular from the work on the Nordic ITS terminology^[27].

This document is intended to be used as a reference by editors of documents in EFC and in related areas of standardization (such as Intelligent Transport Systems, ITS). It may also be used by the general public and the stakeholders in EFC as a vocabulary, fostering a harmonized language when describing EFC systems in specifications, reports and other texts.

As this document is intended to become the main source for EFC terms, any previous source references have intentionally been left out. However, source references are listed in the Bibliography.

It is foreseen that the terminology work on EFC terms will continue with addition of new terms, revision of existing terms and replacement/deletion of deprecated terms.

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Electronic fee collection — System architecture for vehicle related tolling —

Part 2: Vocabulary

1 Scope

This document defines terms within the field of electronic fee collection (EFC).

This document defines:

- terms within the fields of electronic fee collection and road user charging;
- terms that are used in standards related to electronic fee collection;
- terms of a more general use that are used more specifically in standards related to electronic fee collection.

This document does not define:

- Terms related primarily to other fields that operate in conjunction with EFC, such as terms for intelligent transport systems (ITS), common payment systems, the financial sector, etc.
- Deprecated terms.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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/>

3.1

absolute charging error

difference between the measured charge (*toll* [3.193]) value and the actual value as measured by a reference system where a positive error means that the measurement exceeds the actual value

3.2

acceptance testing

examination that a product, process or service is in conformity with the system specification

3.3

accepted charging error interval

interval of the *relative charging error* (3.154) that the *toll charger* (3.194) considers as acceptable, i.e. as correct charging

3.4
access credentials
AC-CR

trusted *attestation* (3.11) or secure module that establishes the claimed identity of an object or application

3.5
accountability

property that ensures that the actions of an entity can be traced uniquely to the entity

3.6
accreditation

third-party *attestation* (3.11) related to a *conformity assessment body* (3.46) conveying formal demonstration of its competence, consistent operation and *impartiality* (3.89) in performing specific conformity assessment activities

3.7
activist

especially active, vigorous advocate of a cause, especially a political cause

3.8
area charging
area pricing

charging based on road usage within a given area

3.9
asset

anything that has value to a stakeholder

3.10
assurance requirement

security requirements to assure confidence in the implementation of *functional requirements* (3.86)

3.11
attestation

issue of a statement, based on a decision that fulfilment of *specified requirements* (3.176) has been demonstrated

Note 1 to entry: The resulting statement, referred to in this document as a “statement of conformity”, is intended to convey the assurance that the specified requirements have been fulfilled. Such an assurance does not, of itself, afford contractual or other legal guarantees.

3.12
attack

attempt to destroy, expose, alter, disable, steal or gain unauthorized access to or make unauthorized use of an *asset* (3.9)

3.13
attribute

addressable package of data consisting of a single *data element* (3.54) or structured sequences of data elements

3.14
audit

independent review and examination in order to ensure compliance with established *policy* (3.141) and operational procedures

3.15
authentication

security mechanism allowing *verification* (3.233) of the provided identity

3.16**authenticator**

data, possibly encrypted, that is used for *authentication* ([3.15](#))

3.17**authenticity**

property that an entity is what it claims to be

3.18**automated number plate recognition****ANPR**

technology to automatically read vehicle registration plates

Note 1 to entry: A vehicle registration plate typically contains the indicator or the code of the country that issued the vehicle registration plate.

Note 2 to entry: Optical character recognition techniques are typically part of the technology associated with automated number plate recognition.

3.19**autonomous EFC system**

EFC system ([3.69](#)) which is able to obtain usage data using *on-board equipment* ([3.126](#)) independent from *roadside equipment (RSE)* ([3.161](#))

3.20**availability**

property of being accessible and useable upon demand by an authorized entity

3.21**average relative charging error**

ratio between the sum of computed charges (measurement) associated to a set of vehicles during a certain period of time and the actual charge due (reference) minus 1

3.22**back end**

part of a back-office system interfacing to one or more *front ends* ([3.85](#))

3.23**base standard**

approved International Standard, Technical Specification or ITU-T Recommendation

Note 1 to entry: This includes but is not limited to approved standard deliverables from ISO, ITU, CEN, CENELEC, ETSI and IEEE.

3.24**big-endian**

format for transmission of binary data in which the most significant byte appears first

3.25**billing detail**

information needed to determine or verify the amount due for the usage of a given service

3.26**black list**

list of users for which the service provider denies contractual responsibility

3.27**central account**

payment means ([3.134](#)), value or service rights stored in a central system

3.28

certificate revocation list

signed list indicating a set of certificates that are no longer considered valid by the certificate *issuer* (3.105)

3.29

certification

third-party *attestation* (3.11) related to *objects of conformity assessment* (3.124), with the exception of *conformity assessment bodies* (3.46)

Note 1 to entry: Certification is applicable to all objects of conformity assessment except for conformity assessment bodies themselves, to which *accreditation* (3.6) is applicable.

3.30

channel

information transfer path

3.31

charge object

geographic or road related object for the use of which a charge is applied

3.32

charge object detection

event marking the usage of a *charge object* (3.31)

3.33

charge object detector

functionality of the system responsible for detecting chargeable events associated with a *charge object* (3.31)

3.34

charge parameter change

event occurring within a tolling system, that is relevant for charge calculation, such as change of vehicle category, but not for the detection of a *charge object* (3.31) itself

3.35

charge report

information containing road usage and related information originated at the *front end* (3.85)

3.36

charging data

relevant data on the usage of a certain service

3.37

charging performance metrics

specific calculations used to describe the charging performance of a system

3.38

charging point

location where the *toll* (3.193) is charged

3.39

charging scheme

general description of a tolling system and its context including the motivation and strategy for the fee collection and the *toll context data* (3.197)

3.40

clearing house

organization that reallocates value generated in the payment system between the various actors, which enables these actors to execute settlement

3.41**common service rights**

service rights for use in two or more schemes

EXAMPLE Number of trips, usage allowance for a time span, zone and distance.

3.42**communication provider**

provider of information transmission services

3.43**compatibility**

suitability of products, processes or services for use together under specific conditions to fulfil relevant requirements without causing unacceptable interactions

3.44**confidentiality**

prevention of information leakage to non-authenticated individuals, parties or processes

3.45**conformance testing**

assessment to determine whether an implementation complies with the *specified requirements* ([3.176](#))

3.46**conformity assessment body**

body that performs conformity assessment activities, excluding *accreditation* ([3.6](#))

3.47**consent**

freely given specific and informed written permission allowing *personal data* ([3.136](#)) to be processed

3.48**context dependent itinerary**

itinerary ([3.106](#)) of which the syntax and semantics depend on the *toll domain's* ([3.201](#)) context data ([3.197](#))

3.49**context independent itinerary**

itinerary ([3.106](#)) of which the syntax and semantics are independent of the *toll domain's* ([3.201](#)) context data ([3.197](#))

3.50**continuous toll scheme**

toll scheme ([3.204](#)) where the charge is calculated based on the accumulation of continuously measured parameter(s)

EXAMPLE Distance and time.

3.51**cordons**

border line of an area

3.52**cordons charging****cordons pricing**

charging for the crossing of a *cordons* ([3.51](#))

3.53**cryptology**

principles, means and methods for the transformation of data in order to hide its information content, prevent its undetected modification or prevent its unauthorized use