

SLOVENSKI STANDARD

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Elektronsko pobiranje cestnine - Postopki za preskušanje opreme - 2. del: Preskus skladnosti za aplikacijski vmesnik vgrajene enote za elektronsko cestninjenje (ISO/TS 14907-2:2011)

Electronic fee collection - Test procedures for user and fixed equipment - Part 2: Conformance test for the onboard unit application interface (ISO/TS 14907-2:2011)

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Elektronische Gebührenerhebung - Prüfprozeduren für Nutzer und feste Ausrüstungen - Teil 2: Konformitätsprüfung der Anwendungsschnittstelle von fahrzeuginternen Einheiten (ISO/TS 14907-2:2011)

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Perception du télépéage - Modes opératoires relatifs aux équipements embarqués et aux équipements fixes - Partie 2: Essai de conformité de l'interface d'application de l'unité embarquée (ISO/TS 14907-2:2011)

Ta slovenski standard je istoveten z: CEN ISO/TS 14907-2:2011

ICS:

35.240.60	Uporabniške rešitve IT v transportu in trgovini	IT applications in transport and trade
43.040.15	Avtomobilska informatika. Vgrajeni računalniški sistemi	Car informatics. On board computer systems

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TECHNICAL SPECIFICATION
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CEN ISO/TS 14907-2

November 2011

ICS 35.240.60; 43.040.15

Supersedes CEN ISO/TS 14907-2:2006

English Version

Electronic fee collection - Test procedures for user and fixed equipment - Part 2: Conformance test for the onboard unit application interface (ISO/TS 14907-2:2011)

Perception du télépéage - Modes opératoires relatifs aux équipements embarqués et aux équipements fixes - Partie 2: Essai de conformité de l'interface d'application de l'unité embarquée (ISO/TS 14907-2:2011)

Elektronische Gebührenerhebung - Prüfprozeduren für Nutzer und feste Ausrüstungen - Teil 2: Konformitätsprüfung der Anwendungsschnittstelle von fahrzeuginternen Einheiten (ISO/TS 14907-2:2011)

This Technical Specification (CEN/TS) was approved by CEN on 31 October 2011 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.

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Foreword

This document (CEN ISO/TS 14907-2:2011) has been prepared by Technical Committee CEN/TC 278 "Road transport and traffic telematics", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 204 "Intelligent transport systems".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN ISO/TS 14907-2:2006.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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TECHNICAL SPECIFICATION

ISO/TS 14907-2

Second edition
2011-11-01

Electronic fee collection — Test procedures for user and fixed equipment —

Part 2: Conformance test for the onboard unit application interface

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*Perception du télépéage — Modes opératoires relatifs aux équipements
embarqués et aux équipements fixes —*

*Partie 2: Essai de conformité de l'interface d'application de l'unité
embarquée*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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.

ISO/TS 14907-2 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

This second edition cancels and replaces the first edition (ISO/TS 14907-2:2006), which has been technically revised.

ISO/TS 14907 consists of the following parts, under the general title *Electronic fee collection — Test procedures for user and fixed equipment*:

- *Part 1: Description of test procedures*
- *Part 2: Conformance test for the onboard unit application interface*

Introduction

This part of ISO/TS 14907 describes tests that verify OBU conformance of implementations of functions and data structures for EFC applications.

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Electronic fee collection — Test procedures for user and fixed equipment —

Part 2: Conformance test for the onboard unit application interface

1 Scope

This part of ISO/TS 14907 describes tests that verify on-board unit (OBU) conformance of implementations of functions and data structures, as defined in the implementation conformance statement based on ISO 14906:2011, for electronic fee collection (EFC) applications. After the tests of isolated data items and functions (C.1-C.2), an example is given for testing of a complete EFC transaction (C.3).

The scope of this part of ISO/TS 14907 comprises definitions of OBU conformance assessment tests of

- basic dedicated short-range communication (DSRC) L7 functionality;
- EFC application functions, (standards.iteh.ai);
- EFC attributes (i.e. EFC application information);
- the addressing procedures of EFC attributes and (hardware) components [e.g. integrated circuit cards (ICC) and man-machine interfaces (MMI)],
- the EFC transaction model, which defines the common elements and steps of any EFC transaction, and
- the behaviour of the interface so as to support interoperability on an EFC-DSRC application interface level, see Figure 1.

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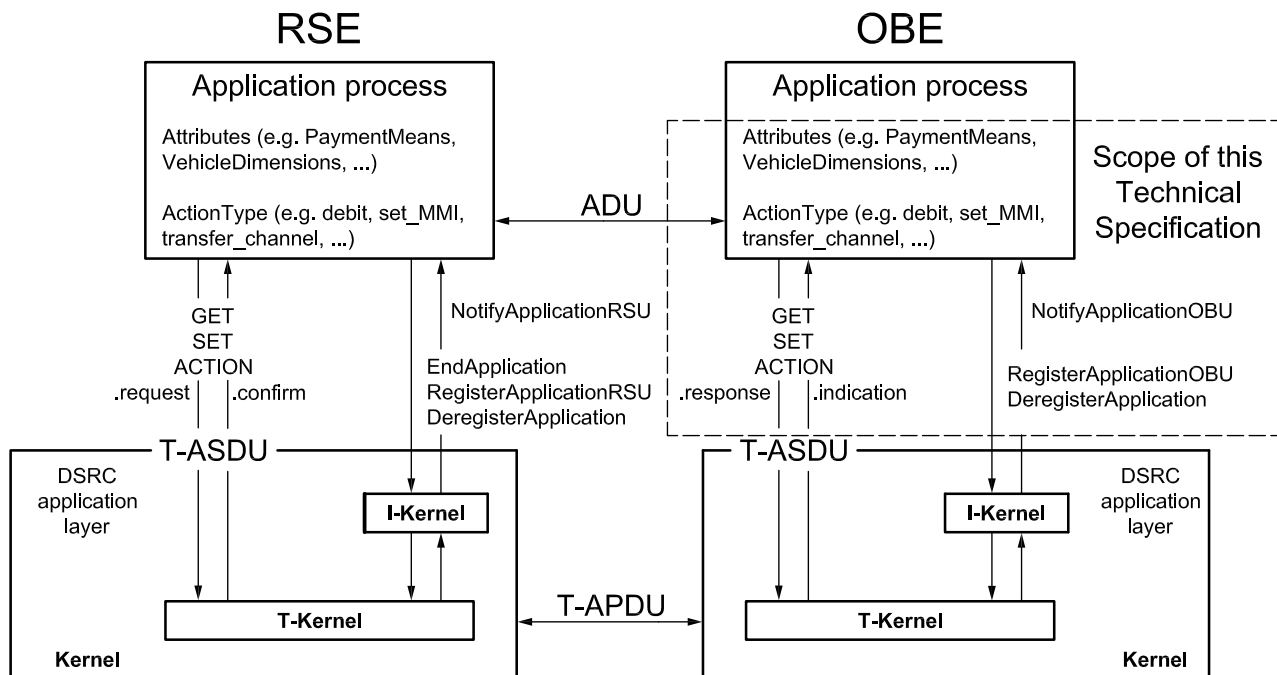


Figure 1 — The EFC application interface

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The purpose of this part of ISO/TS 14907 is to define tests that

- assess OBU capabilities,
- assess OBU behaviour,
- serve as a guide for OBU conformance evaluation and type approval,
- achieve comparability between the results of the corresponding tests applied in different places at different times, and
- facilitate communications between parties.

Whereas this part of ISO/TS 14907 defines examples of test cases for DSRC and EFC functionality in Annex C, it does not intend to specify a complete test suite for a certain implementation. To compose a test suite for a specific EFC implementation, the test cases may have to be modified and new test cases may have to be defined and added in order for the conformance test to be complete. It can be useful to take into account the following considerations when defining a complete test suite

- small range: “exhaustive testing” of critical interoperability/compatibility features,
- large range: testing of boundaries and random values, and
- composite types: testing of individual items in sequence or parallel.

Figure 2 shows the overall procedure of conformance testing.

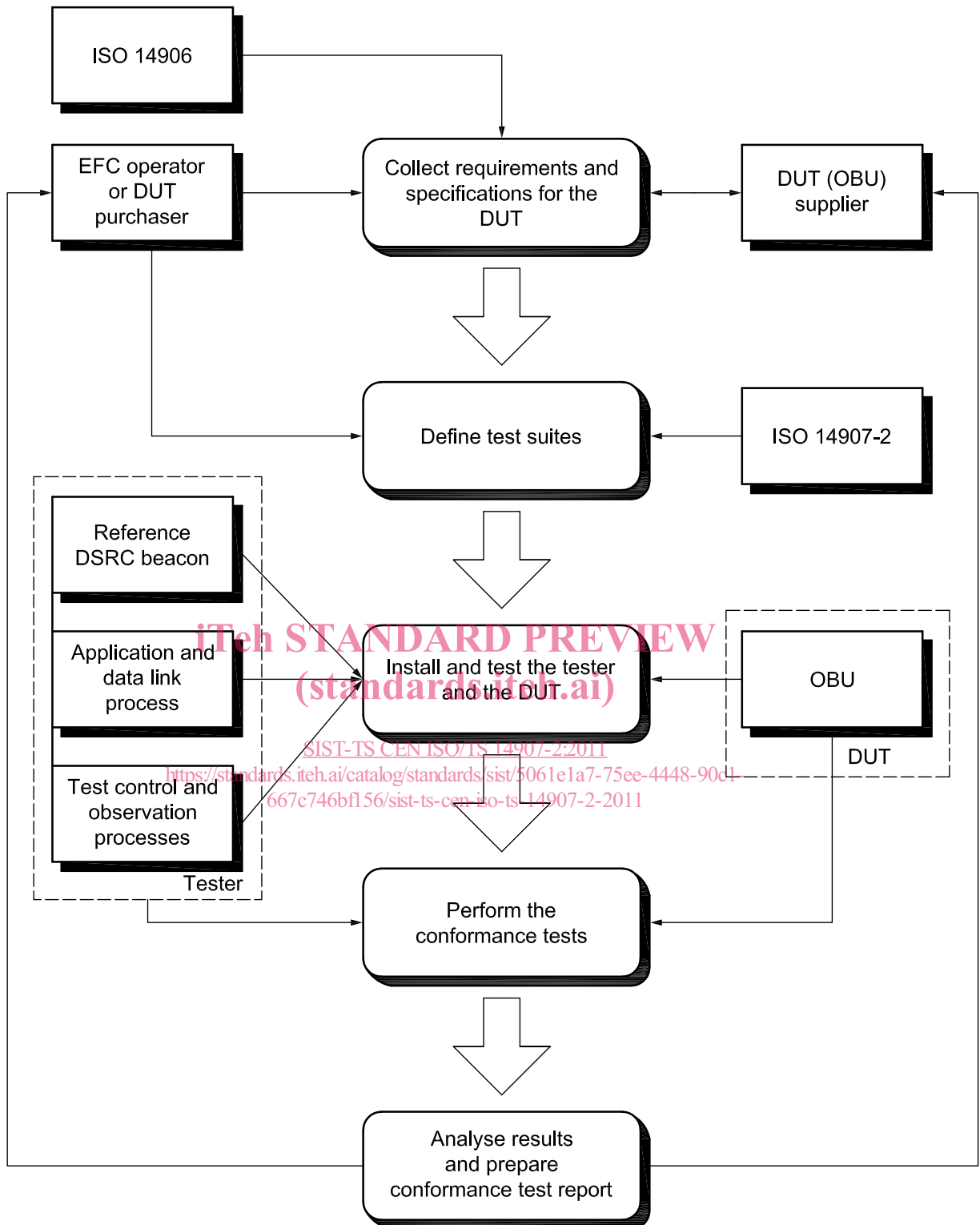


Figure 2 — Conformance testing process