

English Version

**Electronic fee collection - Evaluation of equipment for conformity
to ISO/TS 17575-1 - Part 2: Abstract test suite (ISO 16407-
2:2012)**

Perception de télépéage - Evaluation de conformité de
l'équipement à l'ISO/TS 17575-1 - Partie 2: Suite de test
abstraite (ISO 16407-2:2012)

Elektronische Gebührenerhebung -
Konformitätsevaluierung von Einrichtungen nach CEN
ISO/TS 17575-1 - Teil 2: Abstrakte Prüfreihe (ISO 16407-
2:2012)

This Technical Specification (CEN/TS) was approved by CEN on 30 January 2012 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (CEN ISO/TS 16407-2:2012) 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.

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, Turkey and the United Kingdom.

Contents

Page

Foreword	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviations	2
5 Abstract Test Method (ATM)	2
5.1 Implementations Under Tests	2
5.2 Test architecture.....	2
5.3 Protocol Implementation Extra Information for Testing (PIXIT)	3
6 Untestable Test Purposes (TP)	3
7 ATS data structures	3
7.1 ASN.1 description.....	3
8 External functions	4
8.1 Functions for communications.....	4
8.2 Functions for timing.....	4
9 Message filtering	5
10 ATS naming conventions	5
10.1 Definition naming conventions.....	5
10.2 Test Case identifier	7
10.3 TTCN-3 modules identifier.....	7
Annex A (normative) TTCN-3 Library modules for FE and BE	8
Annex B (informative) PIXIT Proforma for FE and BE	9
Bibliography.....	11

Introduction

This part of ISO/IEC 16407 is part of a set of standards that supports interoperability of autonomous EFC-systems, which includes ISO/TS 17575 parts 1 to 4 that define the EFC context data, their charge reports and their use of communication infrastructure.

Within the suite of EFC standards, this conformance evaluation procedure defines the process and tests for conformity evaluation of Front End and Back End that comply with the requirements in ISO/TS 17575-1.

This part of ISO/IEC 16407 is intended to

- assess Front End and Back End capabilities,
- assess Front End and Back End behaviour,
- serve as a guide for Front End and Back End 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.

This part of ISO/IEC 16407 is based on

- ISO/TS 17575-1, and
- the ISO/IEC 9646 family of standards on conformance test methodology.

Electronic fee collection — Evaluation of equipment for conformity to ISO/TS 17575-1 —

Part 2: Abstract test suite

1 Scope

This part of ISO/IEC 16407 specifies the Abstract Test Suite (ATS) to evaluate the conformity of Front End and Back End to ISO/TS 17575-1.

The objective of this part of ISO/IEC 16407 is to provide a basis for conformance tests for the Front End and the Back End in Electronic Fee Collection to enable interoperability between different equipment supplied by different manufacturers.

The present abstract test suite is directly derived from ISO/TS 17575-1.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO/TS 17575-1, *Electronic fee collection — Application interface definition for autonomous systems — Part 1: Charging*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

conformance testing

testing the extent to which an IUT is a conforming implementation

[ISO/IEC 9646-1:1994, definition 3.3.23]

3.2

implementation under test

an implementation of one or more OS1 protocols in an adjacent user/provider relationship, being that part of a real open system which is to be studied by testing

[ISO/IEC 9646-1:1994, definition 3.3.43]

3.3

system under test

the real open system in which the IUT resides

[ISO/IEC 9646-1:1994, definition 3.3.103]