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Electronic Fee Collection - Interoperable application
profiles for information exchange between Service
Provision and Toll Charging

Perception de télépéage - Profil d'application
interopérabilité pour échange d'informations entre la
prestation de service et la perception du péage

Elektronische Gebührenerhebung - Interoperable
Anwendungsprofile für den Informationsaustausch
zwischen den Dienste-Versorgern und Mauterhebern

This Technical Specification (CEN/TS) was approved by CEN on 13 July 2016 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.

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

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Contents

Page

European foreword.....	6
Introduction	7
1 Scope.....	8
2 Normative references.....	8
3 Terms and definitions	9
4 Abbreviations	13
5 Conformance.....	14
5.1 General.....	14
5.2 Base standard	14
5.3 Main contents of an 12855-IAP	14
5.4 Conformance requirements	15
5.4.1 General requirements	15
5.4.2 Transaction requirements.....	15
5.4.3 Data requirements.....	16
5.4.4 Transaction requirements.....	17
5.5 Conformation notification	20
5.6 Interoperability	21
6 Requirements on common transactions.....	21
6.1 General.....	21
6.2 InfoExchange.....	21
6.2.1 InfoExchangeContent.....	21
6.2.2 InfoExchangeAuthenticator	23
6.3 AckADU	23
6.3.1 General.....	23
6.3.2 Syntax and semantics.....	23
6.4 USERDETAILS - Exchange Enforcement Data - Retrieve and Provide User Details	26
6.4.1 Transaction sequence, triggers and timings	26
6.4.2 Syntax and semantics.....	28
6.5 LISTOFUSERS - List of Users	30
6.5.1 Transaction sequence, triggers and timings	30
6.5.2 Syntax and semantics.....	31
6.6 EXCEPTIONLIST - Managing Exception Lists	32
6.6.1 Transaction sequence, triggers and timings	32
6.6.2 Syntax and semantics.....	33
6.7 TRUSTOBJECTS - Exchange trust objects	37
6.7.1 APDU transfer mechanisms.....	37
6.7.2 Transaction sequence, triggers and timings	37
6.7.3 Syntax and semantics.....	38
6.8 PAYMENTCLAIM - Payment Claim	40
6.8.1 Transaction sequence, triggers and timings	40
6.8.2 Syntax and semantics.....	42
7 DSRC profile specific transactions	44
7.1 DSRC.CONTRACTISSUERLIST – ContractIssuerList	44
7.1.1 Transaction sequence, triggers and timings	44
7.1.2 Syntax and semantics - ContractIssuerListADU	45

7.2	DSRC.EFCCONTEXTDATA - Provide and Request EFC Context Data	45
7.2.1	Transaction sequence, triggers and timings.....	45
7.2.2	Syntax and semantics - EfcContextDataADU	47
7.3	DSRC.BILLINGDETAILS - Report billing details.....	48
7.3.1	Transaction sequence, triggers and timings.....	48
7.3.2	Syntax and semantics	50
7.4	DSRC.REPORTABNORMALOBE.....	62
7.4.1	Transaction sequence, triggers and timings.....	62
7.4.2	Syntax and semantics - ReportAbnormalOBEADU	64
8	GNSS profile specific transactions	64
8.1	GNSS.TOLLDECLARATIONS - Report toll declarations.....	64
8.1.1	Transaction sequence, triggers and timings.....	64
8.1.2	Syntax and semantics - TollDeclarationADU	66
8.2	Report billing details.....	73
8.2.1	General	73
8.2.2	GNSS.BILLINGDETAILS.TSP - Transaction sequence, triggers and timings	73
8.2.3	GNSS.BILLINGDETAILS.TC - Transaction sequence, triggers and timing.....	75
8.2.4	Syntax and semantics of GNSS.BILLINGDETAILS.TSP and GNSS.BILLINGDETAILS.TC - BillingDetailsADU	76
8.3	GNSS.PAYMENTANNOUNCEMENT	80
8.3.1	Transaction sequence, triggers and timings.....	80
8.3.2	Syntax and semantics - PaymentAnnouncementADU	81
9	APDU Transfer mechanisms	83
9.1	ASN.1 encoding	83
9.2	Generic transfer mechanisms	83
9.3	Alternative transfer mechanisms for transaction type TRUSTOBJECTS	83
Annex A (normative) ICS Proforma	84	
A.1	Guidance for completing the PICS proforma	84
A.1.1	Purposes and structure	84
A.1.2	Abbreviations and conventions.....	84
A.1.3	Instructions for completing the PICS proforma.....	86
A.2	Identification of the implementation	86
A.2.1	General	86
A.2.2	Date of the statement	86
A.2.3	Implementation Under Test (IUT) identification.....	86
A.2.4	System Under Test (SUT) identification	86
A.2.5	Product supplier	87
A.2.6	Applicant (if different from product supplier)	87
A.2.7	PICS contact person	87
A.3	Identification of the protocol	88
A.4	Global statement of conformance.....	88
A.5	Roles	88
A.6	Profiles.....	88
A.7	InfoExchange	89

A.7.1	InfoExchange protocol procedures.....	89
A.7.2	InfoExchange parameters	89
A.8	Common AckADU support.....	90
A.8.1	AckADU fields	90
A.9	Common Transactions support.....	90
A.9.1	General.....	90
A.9.2	USERDETAILS support.....	91
A.9.3	LISTOFUSERS support	92
A.9.4	EXCEPTIONLIST support.....	94
A.9.5	TRUSTOBJECTS support.....	96
A.9.6	PAYMENTCLAIM support.....	97
A.10	DSRC Specific Transactions Support	99
A.10.1	Prerequisites	99
A.10.2	DSRC transactions support	99
A.10.3	DSRC.CONTRACTISSUERLIST support	99
A.10.4	DSRC.EFCCONTEXTDATA support.....	100
A.10.5	DSRC.BILLINGDETAILS support	102
A.10.6	DSRC.REPORTABNORMALLOBE support	108
A.11	GNSS Specific Transactions Support.....	109
A.11.1	General.....	109
A.11.2	Common GNSS.BILLINGDETAILS support.....	110
A.11.3	GNSS.BILLINGDETAILS.TSP support.....	113
A.11.4	GNSS.BILLINGDETAILS.TC support	114
A.11.5	GNSS.TOLLDECLARATION support	115
A.11.6	GNSS.PAYMENTANNOUNCEMENT support.....	118
A.12	Transfer mechanisms	119
	Annex B (normative) Interoperability Statement Proforma.....	120
B.1	Guidance for completing the Interoperability Statement proforma.....	120
B.2	Interoperability Statement for transaction support.....	120
B.3	Interoperability Statement for the USERDETAILS transaction type.....	121
B.4	Interoperability Statement for the LISTOFUSERS transaction type	121
B.5	Interoperability Statement for the EXCEPTIONLIST transaction type	122
B.6	Interoperability Statement for the TRUSTOBJECTS transaction type	123
B.7	Interoperability Statement for the PAYMENTCLAIM transaction type	124
B.8	Interoperability Statement for the DSRC.CONTRACTISSUERLIST transaction type	124
B.9	Interoperability Statement for the DSRC.EFCCONTEXTDATA transaction type.....	124
B.10	Interoperability Statement for the DSRC.BILLINGDETAILS transaction type	125

B.11	Interoperability Statement for the DSRC.REPORTABNORMALLOBE transaction type.....	125
B.12	Interoperability Statement for the GNSS.TOLLDECLARATIONS transaction type.....	125
B.13	Interoperability Statement for the GNSS.BILLINGDETAILS.TSP transaction type	126
B.14	Interoperability Statement for the GNSS.BILLINGDETAILS.TC transaction type.....	126
B.15	Interoperability Statement for the GNSS.PAYMENTANNOUNCEMENT transaction type.	127
	Annex C (normative) Web service definition (WSDL)	128
	Annex D (informative) Use of this Technical Specification for the EETS	129
D.1	General	129
D.2	Overall relationship between European standardization and the EETS	129
D.3	European standardization work supporting the EETS	129
D.4	Correspondence between this Technical Specification and the EETS	130
	Annex E (informative) How to read UML class diagrams in this Technical Specification	131
E.1	General	131
E.2	Relation of ASN.1 code and UML class diagrams	131
E.3	Relation of UML class diagrams for the base standard and the profile.....	133
	Bibliography	135

European foreword

This document (CEN/TS 16986:2016) has been prepared by Technical Committee CEN/TC 278 "Intelligent transport systems", the secretariat of which is held by NEN.

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

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Introduction

The Standard on information exchange between service provision and toll charging (i.e. EN ISO 12855:2015) is a so-called toolbox standard. That means that it provides a large number of options that can be used to support various needs of toll chargers and toll service providers. As such, it provides useful but not sufficient support to ensure technical interoperability.

The aim of this Technical Specification is to produce a profile specification that provides technical interoperability to support the EFC information exchange between toll service providers (TSPs) and toll chargers (TCs):

- based on DSRC;
- based on GNSS/CN – autonomous systems.

This Technical Specification covers the definition of interoperable application profiles (IAP) applicable for the use of EN ISO 12855:2015. These profiles define a specific coherent set of transactions, triggers, conditions, data elements, transfer mechanisms and supporting functions for an interoperable exchange of data between the central equipment of TCs and TSPs (in Europe).

This IAP defines profiles using the concept of “International Standardised Profiles (ISP)”, as defined in ISO/IEC TR 10000-1. The ISP-concept is specifically suited for defining interoperability specifications where a set of base standards can be used in different ways. This is exactly the case for EN ISO 12855:2015, where the base standard allows for different choices that are not interoperable.

The principles of the ISP-concept can be summarized as follows:

- an ISP will make references only to base standards or other ISPs;
- the profile will restrict the choice of base standard options to the extent necessary to maximize the probability of interoperability (e.g. chosen classes, conforming subsets, options and parameter values of base standards);
- the ISP will not copy content of the base standards (in order to avoid consistency problems with the base standards);
- the profile will not specify any requirements that would contradict or cause non-conformance to the base standards;
- the profile may contain conformance requirements that are more specific and limited in scope than those of the base standards;
- conformance to a profile implies by definition conformance to a set of base standards, whereas conformance to that set of base standards does not necessarily imply conformance to the profile.

This Technical Specification is consistent with and is intended to provide support for the technical specification of the EETS laid down in the European Directive 2004/52/EC and in the subsequent European Commission Decision 2009/750/EC.

A suite of test specifications is currently being developed to support assessment of an implementation for compliance with this Technical Specification.