

DIN CEN/TS 16986:2016-12 (E)

Electronic Fee Collection - Interoperable application profiles for information exchange between Service Provision and Toll Charging; English version CEN/TS 16986:2016

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