

DIN EN 16986:2023-02 (E)

Erscheinungsdatum: 2023-01-20

Electronic fee collection - Interoperable application profiles for information exchange between Service Provision and Toll Charging; English version prEN 16986:2023

Contents

Page

EUROPEAN FOREWORD.....	5
INTRODUCTION	6
1 SCOPE.....	7
2 NORMATIVE REFERENCES.....	7
3 TERMS AND DEFINITIONS.....	8
4 ABBREVIATED TERMS.....	12
5 CONFORMANCE	13
5.1 GENERAL.....	13
5.2 BASE STANDARD.....	13
5.3 MAIN CONTENTS OF THE IAPS IN THIS DOCUMENT.....	14
5.3.1 General requirements	14
5.3.2 Profiles	14
5.3.3 Interaction protocol	17
5.4 CONFORMANCE REQUIREMENTS.....	24
5.4.1 Relations between this document and the base standard.....	24
5.4.2 Conformance to profiles.....	25
5.5 CONFORMANCE STATEMENT	26
5.6 INTEROPERABILITY	26
6 GENERAL RESTRICTIONS.....	26
6.1 GENERAL.....	26
6.2 CODED VALUES AND RANGES.....	26
6.3 EXTENDED DATA TYPES.....	29
6.3.1 General.....	29
6.3.2 NominalVehicleParameters.....	29
6.3.3 UserParameterResponseDetails	31
6.4 INFOEXCHANGE APDU	33
6.4.1 Information sender and information originator.....	33
6.4.2 Restrictions in InfoExchangeContent data elements.....	33
6.4.3 InfoExchangeAuthenticator	34
6.5 ACKADU.....	35
6.5.1 General.....	35
6.5.2 Transaction protocol.....	35
6.5.3 Syntax and semantics.....	35
6.6 APDU TRANSFER MECHANISMS.....	36
6.6.1 ASN.1 encoding.....	36
6.6.2 Generic transfer mechanisms	36
6.6.3 Alternative transfer mechanisms for transaction type TRUSTOBJECTS	36
7 COMMON TRANSACTIONS	36
7.1 USERDETAILS - RETRIEVE AND PROVIDE USER DETAILS	36
7.1.1 Transaction sequence, triggers and timings.....	36
7.1.2 Syntax and semantics.....	38
7.2 LISTOFUSERS – PROVIDE A LIST OF USERS.....	40
7.2.1 Transaction sequence, triggers and timings.....	40
7.2.2 Syntax and semantics.....	41

7.3	EXCEPTIONLIST - MANAGING EXCEPTION LISTS	42
7.3.1	Transaction sequence, triggers and timings.....	42
7.3.2	Syntax and semantics.....	44
7.4	TRUSTOBJECTS - EXCHANGE TRUST OBJECTS.....	51
7.4.1	APDU transfer mechanisms	51
7.4.2	Transaction sequence, triggers and timings.....	51
7.4.3	Syntax and semantics.....	54
7.5	CONTRACTISSUERLIST – TRANSFER OBE CONTRACTUAL INFORMATION	55
7.5.1	Transaction sequence, triggers and timings.....	55
7.5.2	Syntax and semantics.....	56
7.6	EFCCONTEXTDATA – TRANSFER TOLL CONTEXT DATA INFORMATION	57
7.6.1	Transaction sequence, triggers and timings.....	57
7.6.2	Syntax and semantics.....	58
7.7	BILLINGDETAILS_TC – TRANSFER BILLING DETAILS FROM TC	58
7.7.1	Transaction sequence, triggers and timings.....	58
7.7.2	Syntax and semantics.....	60
7.8	BILLINGDETAILS_TSP	61
7.8.1	Transaction sequence, triggers and timings.....	61
7.8.2	Syntax and semantics.....	63
7.9	PAYMENTCLAIM – ISSUE A PAYMENT CLAIM	64
7.9.1	Transaction sequence, triggers and timings.....	64
7.9.2	Syntax and semantics.....	66
7.10	REPORTABNORMALOBE – REPORT DETECTION OF OBE MISBEHAVIOUR	67
7.10.1	Transaction sequence, triggers and timings.....	67
7.10.2	Syntax and semantics.....	68
7.11	USERCOMPLAINT – REPORT A USER COMPLAINT	69
7.11.1	Transaction sequence, triggers and timings.....	69
7.11.2	Syntax and semantics.....	71
7.12	QAINFO – EXCHANGE OF QUALITY RELATED INFORMATION	72
7.12.1	Transaction sequence, triggers and timings.....	72
7.12.2	Syntax and semantics.....	74
8	SECTIONDISCRETE PROFILE.....	75
8.1	DESCRIPTION	75
8.2	COMMON TRANSACTIONS USED BY THE PROFILE.....	75
8.3	ADDITIONAL PROFILE RESTRICTIONS	76
8.3.1	Apci restrictions.....	76
8.3.2	EXCEPTIONLIST restrictions.....	76
8.3.3	TRUSTOBJECTS restrictions.....	76
8.3.4	EFCCONTEXTDATA restrictions.....	77
8.3.5	BILLINGDETAILS_TC restrictions.....	84
8.3.6	PAYMENTCLAIM restrictions.....	86
8.4	SPECIFIC PROFILE TRANSACTIONS	87
	SECTIONAUTONOMOUS PROFILE	87
9.1	DESCRIPTION	87
9.2	COMMON TRANSACTIONS USED BY THE PROFILE.....	87
9.3	FURTHER PROFILE RESTRICTIONS ON USED TRANSACTIONS	88
9.3.1	EXCEPTIONLIST restrictions.....	88
9.3.2	BILLINGDETAILS transactions restrictions.....	88
9.3.3	EFCCONTEXTDATA restrictions.....	89
9.4	SPECIFIC PROFILE TRANSACTIONS	89
9.4.1	TOLLDECLARATIONS_SECT.....	90
9.4.2	PAYMENTANNOUNCEMENT transaction	94

10	MESHEDDISCRETE PROFILE	97
10.1	DESCRIPTION	97
10.2	COMMON TRANSACTIONS USED BY THE PROFILE	97
10.3	FURTHER PROFILE RESTRICTIONS ON USED TRANSACTIONS	98
10.3.1	<i>EXCEPTIONLIST</i> restrictions	98
10.3.2	<i>TRUSTOBJECTS</i> restrictions	98
10.3.3	<i>EFCCONTEXTDATA</i> restrictions	98
10.3.4	<i>BILLINGDETAILS_TC</i> restrictions	102
10.3.5	<i>BILLINGDETAILS_TSP</i> restrictions	103
10.4	SPECIFIC PROFILE TRANSACTIONS	104
11	AREADISTANCEAUTONOMOUS PROFILE	104
11.1	DESCRIPTION	104
11.2	COMMON TRANSACTIONS USED BY THE PROFILE	104
11.3	FURTHER PROFILE RESTRICTIONS ON USED TRANSACTIONS	104
11.3.1	<i>EXCEPTIONLIST</i> restrictions	104
11.3.2	<i>EFCCONTEXTDATA</i> restrictions	104
11.3.3	<i>BILLINGDETAILS_TSP</i> restrictions	105
11.3.4	<i>REPORTABNORMALLOBE</i> restrictions	106
11.4	SPECIFIC PROFILE TRANSACTIONS	106
11.4.1	<i>TOLLDECLARATIONS_AREA</i>	106
	ANNEX A (NORMATIVE) FORMAL RESTRICTIONS ON DATA TYPES	112
	ANNEX B (NORMATIVE) ICS PROFORMA	114
	ANNEX C (NORMATIVE) INTEROPERABILITY STATEMENT PROFORMA	193
	ANNEX D (NORMATIVE) WEB SERVICE DEFINITION (WSDL)	201
	ANNEX E (NORMATIVE) USE OF THIS DOCUMENT FOR THE EETS	202
	BIBLIOGRAPHY	204