

SLOVENSKI STANDARD
SIST EN ISO 13141:2016/oprA1:2016
01-junij-2016

Elektronsko pobiranje pristojbin - Lokalizacija povečane gostote komunikacije za avtonomne sisteme - Dodatek 1 (ISO 13141:2015/DAmD 1:2016)

Electronic fee collection - Localisation augmentation communication for autonomous systems - Amendment 1 (ISO 13141:2015/DAmD 1:2016)

Elektronische Gebührenerfassung - Genauere Ortsbestimmung für autonome Systeme - Ergänzung 1 (ISO 13141:2015/DAmD 1:2016)

Perception de télépéage - Communications d'augmentation de localisations pour systèmes autonomes - Amendement 1 (ISO 13141:2015/DAmD 1:2016)

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ICS:

03.220.20	Cestni transport	Road transport
35.240.60	Uporabniške rešitve IT v prometu	IT applications in transport

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DRAFT AMENDMENT

ISO 13141:2015/DAM 1

ISO/TC 204

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Electronic fee collection — Localisation augmentation communication for autonomous systems

AMENDMENT 1

Perception de télépéage — Communications d'augmentation de localisations pour systèmes autonomes
AMENDEMENT 1

ICS: 03.220.20; 35.240.60

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ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel three month enquiry.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.



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Contents

Page

Foreword	iv
1 Amendments to clause 1	1
2 Amendments to clause 5.5.1	1
3 Amendments to clause 6.2.1	1
4 Amendment to Annex B.4.1 and Annex B.5.3	1
5 Insert new Annex H	2
6 Amendment to Bibliography	6

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ISO 13141:2015/DAM 1:2016(E)**Foreword**

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This amendment to ISO 13141:2015 was prepared by Technical Committee ISO/TC 204, *Intelligent Transport Systems*.

This amendment defines the Electronic fee collection localisation augmentation communication using the WAVE communication stack as defined in IEEE.

Electronic fee collection — Localisation augmentation communication for autonomous systems

1 Amendments to clause 1

Page 1, replace:

This International Standard gives specific definitions regarding the CEN DSRC stack as specified in EN 15509, and Annexes C, D and E give the use of the Italian DSRC as specified in ETSI/ES 200 674 -1, ISO CALM IR, and ARIB DSRC.

With:

This International Standard gives specific definitions regarding the CEN DSRC stack as specified in EN 15509, and Annexes C, D and E give the use of the Italian DSRC as specified in ETSI/ES 200 674 -1, ISO CALM IR, ARIB DSRC and WAVE DSRC.

2 Amendments to clause 5.5.1

Page 6, add the following row to the end of table 1:

WAVE DSRC	IEEE 1609.11-2010 ISO 15628	IEEE 1609.3-2010 IEEE 1609.4-2010 IEEE 802.11	Implementation example in Annex H
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3 Amendments to clause 6.2.1

Page 7, replace:

Only the functions for CEN DSRC are defined in 6.2.2 to 6.2.4. For other supported media according to 5.5.1, equivalent functionality shall be provided; see Annex C for ETSI ES 200 674-1 5.8 GHz microwave DSRC, Annex D for CALM infrared DSRC and Annex E for ARIB microwave DSRC.

With:

Only the functions for CEN DSRC are defined in 6.2.2 to 6.2.4. For other supported media according to 5.5.1, equivalent functionality shall be provided; see Annex C for ETSI ES 200 674-1 5.8 GHz microwave DSRC, Annex D for CALM infrared DSRC, Annex E for ARIB microwave DSRC and Annex H for WAVE DSRC.

4 Amendment to Annex B.4.1 and Annex B.5.3

Page 23, add the following row after item number 4 in Table B.8 and in Table B.18:

ISO 13141:2015/DAM 1:2016(E)

5	WAVE DSRC	Annex H	o ^a	
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5 Insert new Annex H

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Annex H (informative)

Using the WAVE communication stack for CCC applications

H.1 General

This annex specifies the use of the WAVE system based on the standards IEEE Std 1609.3, IEEE 1609.11-2010, IEEE 1609.0 and IEEE 802.11-2012 (see full references in the Bibliography).

H.2 Communication requirements

The communication requirements are defined in IEEE 1609.11-2010, clause A.2.

The contents of the Beacon Service Table (BST), defined in clause 8.2.2 in ISO 13141:2015, along with optional application-specific information, should be transmitted as the Provider Service Context (PSC) of a WAVE service advertisement (WSA) message, as defined in IEEE 1609.11-2010.

H.3 LAC functions

H.3.1 General

The LAC functions are defined in IEEE 1609.11-2010, clause A3.1, Table 1. Table H.1 shows the correspondences between the WAVE primitives, the DSRC layer 7 primitives and the EFC functions:

Table H.1 — LAC functions correspondence

LAC function	DSRC Layer 7 primitive (ISO 15628)	EFC function (ISO 14906)	WAVE primitive(s) (IEEE 1609.3-2010)
Initialise communication	INITIALISATION		WME-ProviderService.request, WME-UserService.request
n.a.	GET		WSM-WaveShortMessage.request, WSM-WaveShortMessage.indication
Write Data	SET		
n.a.		GET_STAMPED	
n.a.		GET_INSTANCE	
n.a.		SET_MMI	
n.a.		ECHO	
n.a.		GET_SECURE	
Secure write data		SET_SECURE	
Terminate communication		RELEASE	WME-ProviderService.request

The WAVE communication stack provides a LAC function called "Secure write data" as an alternative of "Write data".

ISO 13141:2015/DAM 1:2016(E)

H.3.2 Secure write data

The function “Secure write data” should be implemented by the EFC function SET_SECURE as specified in ISO 14906 and with additional specification in IEEE 1609.11-2010, clause A.3.3. Only SSRRequest choice1: SSRq-NoMacRs or Choice 3: SSRq-NoMacRs-Instances should be used.

SET_SECURE should not carry access credentials.

NOTE SET_SECURE according to IEEE 1609.11-2010 carries encrypted application data in the form of an encrypted AttributeList and an authenticator calculated by the sender over the requested data.

H.4 Data requirements

The addressing of the LAC system and application data implemented by the OBE and RSE should conform to the rules defined in section 5.3 in ISO 14906:2011. For LAC application data, EID should always be used.

The OBE should implement the LAC attributes defined in Clause 7.

The RSE should support any OBE that is compliant.

H.5 Security requirements

H.5.1 General

This Annex provides for an authentication service that may serve to prove the identity of the data source and control the writing access to LAC attributes and to check the integrity of the data.

It provides for an encryption service that provides confidentiality of written data.

H.5.2 Authentication/non-repudiation

Authenticated writing of data is provided by the function “Secure write data”. Authenticators are defined as being of ASN.1 type OCTET STRING. When using the WAVE communication stack:

- the OBE should be able to check authenticators according to IEEE 1609.11-2010, clause A.5.
- the RSE should be able to calculate authenticators according to IEEE 1609.11-2010, clause A.5.

H.5.3 Encryption

Encryption is mandatory for all attributes defined in this International Standard.

The RSE should support encryption as defined in IEEE 1609.11-2010, clause A.5.

The OBE should support decryption as defined in IEEE 1609.11-2010, clause A.5.

H.6 Transaction requirements

H.6.1 General

The EFC transaction model complies with ISO 14906:2011, Clause 6, and IEEE 1609.11-2010 clause A.5, with the restrictions and amendments given in H.6.2 to H.6.3.