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AMENDMENT 1
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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

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Amendment 1 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.

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Electronic fee collection — Localisation augmentation communication for autonomous systems

AMENDMENT 1

Page 1, fifth paragraph

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 document 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.

Page 6, 5.5.1, Table 1

Add the following row to the end of Table 1:

WAVE DSRC	IEEE 1609.11-2010 ISO 15628	IEEE 1609.3-2010 IEEE 1609.4-2016 IEEE 802.11	Implementation example in Annex H
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Page 7, 6.2.1

<https://standards.iteh.ai/catalog/standards/iso/e0d665eb-8fb0-4f01-9587-1937dafd956f/iso-13141-2015-amd-1-2017>

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.

Page 17, Table B.8 and Page 20, Table B.18

Add the following row after item number 4 in Table B.8 and in Table B.18:

5	WAVE DSRC	Annex H	o ^a	
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Insert new Annex H after Annex G.

Annex H
(informative)

Using the WAVE communication stack for LAC applications

H.1 General

This annex specifies the use of the WAVE system based on the standards IEEE 1609.3, IEEE 802.11-2016, IEEE 1609.0 and IEEE 1609.11-2010 (see full references in the Bibliography).

H.2 Communication requirements

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

The contents of the Beacon Service Table (BST), defined in ISO 13141:2015, 8.2.2, 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, A.3.1, 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,
Write Data	SET		WSM-WaveShortMessage.indica- tion
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 an LAC function called “Secure write data” as an alternative of “Write data”.

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, A.3.3. Only SSRrequest choice1: SSRq-NoMacRs or Choice 3: SSRq-NoMacRs-Instances should be used.