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AMENDMENT 1
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**Electronic fee collection —
Compliance check communication for
autonomous systems**

AMENDMENT 1

*Perception du télépéage — Communication de contrôle de conformité
pour systèmes autonomes*
AMENDEMENT 1

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Amendment 1 to ISO 12813:2015 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

This amendment defines the electronic fee collection compliance check communication using the WAVE communication stack as defined in IEEE.

ISO 12813:2015/Amd 1:2017

<https://standards.iteh.ai/catalog/standards/iso/ea89646a-e8ab-4cfl-84d1-ce85aee966ee/iso-12813-2015-amd-1-2017>

Electronic fee collection — Compliance check communication for autonomous systems

AMENDMENT 1

Page 1

Replace:

- use of the CEN-DSRC stack as specified in EN 15509, or other equivalent DSRC stacks as described in Annexes C, D and E

with:

- use of the CEN-DSRC stack as specified in EN 15509, or other equivalent DSRC stacks as described in Annexes C, D, E and I

Page 6, 5.5.1, Table 1

Add the following row before the last row 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 I
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Page 7, 6.1.1

Replace:

Subclauses 6.1.2 to 6.1.7 define the functions for CEN-DSRC only. For other supported media, according to 5.5.1, equivalent functionality should 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:

6.1.2 to 6.1.7 define the functions for CEN-DSRC only. For other supported media, according to 5.5.1 equivalent functionality should 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 I for WAVE 5.9 GHz microwave DSRC.

Page 9, 6.2.2

Replace:

When using one of the other communication stacks described in Annex C, D or E, algorithms and the use of lower communication layer services shall be as specified in the corresponding annex.

with:

When using one of the other communication stacks described in Annex C, D, E or I, algorithms and the use of lower communication layer services shall be as specified in the corresponding annex.

Page 21, Table B.8 and page 24, Table B.19

Add the following row after item number 4 in Table B.8 and in Table B.19:

5	WAVE DSRC	Annex I	o	
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Insert new Annex I after Annex H.

Annex I

(informative)

Using the WAVE communication stack for CCC applications

I.1 General

This annex specifies the use of the WAVE system based on the standards IEEE 1609.4, IEEE 802.11-2016, IEEE 1609.0, IEEE 1609.3 and IEEE 1609.11-2010 (see full references in the Bibliography).

I.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 12813:2015, 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.

I.3 CCC functions

I.3.1 General

The CCC functions are defined in IEEE 1609.11-2010, Clause A3.1, Table 1. [Table I.1](#) shows the correspondences between the WAVE primitives, the DSRC layer 7 primitives and the EFC functions.

Table I.1 — CCC functions correspondence

CCC 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
Data retrieval	GET		WSM-WaveShortMessage.request,
n.a.	SET		WSM-WaveShortMessage.indica- tion
n.a.		GET_STAMPED	
n.a.		GET_INSTANCE	
Driver Notification		SET_MMI	
Test Communication		ECHO	
Secure data retrieval		GET_SECURE	
n.a.		SET_SECURE	
Terminate communication		RELEASE	WME-ProviderService.request

The WAVE communication stack provides a CCC function called “Secure data retrieval” as an alternative to “Authenticated data retrieval”.

I.3.2 Secure data retrieval

The function “Secure data retrieval” should be implemented by the EFC function GET_SECURE as specified in ISO 14906 and with additional specification in IEEE 1609.11-2010, A.3.2.