

**Intelligent Transport Systems (ITS);
Testing;
Conformance test specification for
Co-operative Awareness Messages (CAM);
Part 1: Test requirements and Protocol Implementation
Conformance Statement (PICS) proforma**



Reference

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Intelligent Transport System (ITS).

The present document is part 1 of a multi-part deliverable covering Conformance test specification for Co-operative Awareness Messages (CAM) as identified below:

- Part 1: "Test requirements and Protocol Implementation Conformance Statement (PICS) proforma";**
- Part 2: "Test Suite Structure and Test Purposes (TSS&TP)";
- Part 3: "Abstract Test Suite (ATS) and Protocol Implementation eXtra Information for Testing (PIXIT)".

1 Scope

The present document provides the Protocol Implementation Conformance Statement (PICS) proforma for Conformance test specification for Co-operative Awareness Messages (CAM) as defined in TS 102 637-2 [2] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4].

The supplier of an implementation which is claimed to conform to TS 102 637-2 [2] is required to complete a copy of the PICS proforma provided in the annex A of the present document.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- [1] ETSI TS 102 637-1: "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 1: Functional Requirements".
- [2] ETSI TS 102 637-2 (V1.2.1): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service".
- [3] ISO/IEC 9646-1 (1994): "Information technology -- Open Systems Interconnection -- Conformance testing methodology and framework -- Part 1: General concepts".
- [4] ISO/IEC 9646-7 (1995): "Information technology -- Open Systems Interconnection -- Conformance testing methodology and framework -- Part 7: Implementation".

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

- terms given in TS 102 637-2 [2];
- terms given in ISO/IEC 9646-1 [3] and in ISO/IEC 9646-7 [4].

In particular, the following terms given in ISO/IEC 9646-1 [3] apply:

Implementation Conformance Statement (ICS): statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented. The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, etc.

ICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS

Protocol ICS (PICS): PICS for an implementation or system claimed to conform to a given protocol specification

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CAM	Co-operative Awareness Message
CAN	Controller Area Network
ICS	Implementation Conformance Statement
ITS	Intelligent Transportation Systems
IUT	Implementation Under Test
PICS	Protocol Implementation Conformance Statement
SUT	System Under Test
V2I	Vehicle-to-Infrastructure
V2V	Vehicle-to-Vehicle

4 Conformance requirement concerning PICS

If it claims to conform to the present document, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in annex A, and shall preserve the numbering/naming and ordering of the proforma items.

An ICS which conforms to the present document shall be a conforming PICS proforma completed in accordance with the instructions for completion given in clause A.1.

Annex A (normative): CAM PICS Proforma

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the CAM PICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed CAM PICS.
--

A.1 Guidance for completing the ICS proforma

A.1.1 Purposes and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in TS 102 637-2 [2] may provide information about the implementation in a standardized manner.

The PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the ICS proforma;
- identification of the implementation;
- identification of the TS 102 637-2 [2];
- global statement of conformance;
- PICS proforma tables.

A.1.2 Abbreviations and conventions

The ICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [4].

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Status column

The following notations, defined in ISO/IEC 9646-7 [4], are used for the status column:

m	mandatory - the capability is required to be supported.
o	optional - the capability may be supported or not.
n/a	not applicable - in the given context, it is impossible to use the capability.
x	prohibited (excluded) - there is a requirement not to use this capability in the given context.
o.i	qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies an unique group of related optional items and the logic of their selection which is defined immediately following the table.
ci	conditional - the requirement on the capability ("m", "o", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying an unique conditional status expression which is defined immediately following the table.
i	irrelevant (out-of-scope) - capability outside the scope of the reference specification. No answer is requested from the supplier.

NOTE 1: This use of "i" status is not to be confused with the suffix "i" to the "o" and "c" statuses above.

Reference column

The reference column makes reference to TS 102 637-2 [2], except where explicitly stated otherwise.

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [4], are used for the support column:

Y or y	supported by the implementation.
N or n	not supported by the implementation.
N/A, n/a or -	no answer required (allowed only if the status is n/a, directly or after evaluation of a conditional status).

NOTE 2: As stated in ISO/IEC 9646-7 [4], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter on a PDU means that the semantics of that parameter are supported.

Values allowed column

The values allowed column contains the type, the list, the range, or the length of values allowed. The following notations are used:

- range of values: example:	<min value> .. <max value> 5 .. 20
- list of values: example: example: example:	<value1>, <value2>, ..., <valueN> 2 ,4 ,6 ,8, 9 '1101'B, '1011'B, '1111'B '0A'H, '34'H, '2F'H
- list of named values: example:	<name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>) reject(1), accept(2)
- length: example:	size (<min size> .. <max size>) size (1 .. 8)

Values supported column

The values supported column shall be filled in by the supplier of the implementation. In this column, the values or the ranges of values supported by the implementation shall be indicated.

References to items

For each possible item answer (answer in the support column) within the ICS proforma a unique reference exists, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.), respectively.

EXAMPLE 1: A.5/4 is the reference to the answer of item 4 in table 5 of annex A.

EXAMPLE 2: A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table 6 of annex A.

Prerequisite line

A prerequisite line takes the form: Prerequisite: <predicate>.

A prerequisite line after a clause or table title indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

A.1.3 Instructions for completing the ICS proforma

The supplier of the implementation shall complete the ICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in clause A.1.2.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

More detailed instructions are given at the beginning of the different clauses of the ICS proforma.

A.2 Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the ICS should be named as the contact person.

A.2.1 Date of the statement

.....

A.2.2 Implementation Under Test (IUT) identification

IUT name:

.....

.....

IUT version:

.....

A.2.3 System Under Test (SUT) identification

SUT name:

.....
.....

Hardware configuration:

.....
.....
.....

Operating system:

.....

A.2.4 Product supplier

Name:

.....

Address:

.....
.....
.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....
.....
.....

A.2.5 Client (if different from product supplier)

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

A.2.6 ICS contact person

(A person to contact if there are any queries concerning the content of the ICS)

Name:

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

A.3 Identification of the protocol

This ICS proforma applies to the following standard:

TS 102 637-2 [2] (V1.2.1): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 2: Specification of Cooperative Awareness Basic Service".

A.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)

NOTE: Answering "No" to this question indicates non-conformance to the CAM standard specification. Non-supported mandatory capabilities are to be identified in the ICS, with an explanation of why the implementation is non-conforming, on pages attached to the ICS proforma.

A.5 Tables

A.5.1 ITS Station type

The supplier of the implementation shall state the support of type of the implementation according to the following station type, in table A.1.

Table A.1: ITS Station type

Item	Type	Reference	Status	Support
1	Central ITS station	6.1 [1]	n/a	
2	Road side ITS station	6.1 [1]	o.101	
3	Vehicle ITS station	6.1 [1]	o.101	
o.101: It is mandatory to support only one of these type.				

A.5.2 CAM vehicle profiles

The supplier of the implementation shall state the support of the implementation for each of the following vehicle type, in table A.2.

Table A.2: CAM vehicle profiles supported

Prerequisite: A.1/3				
Item	CAM vehicle profile	Reference	Status	Support
1	BasicVehicle	7.2	o.201	
2	EmergencyVehicle	7.2	o.201	
3	PublicTransportVehicle	7.2	o.201	
o.201: It is mandatory to support only one of these type.				

A.5.3 CAM road side station profile

The supplier of the implementation shall state the support of the implementation for each of the following road side station profile, in table A.3.

Table A.3: CAM road side station profile supported

Prerequisite: A.1/2				
Item	CAM road side station profile	Reference	Status	Support
1	BasicIRS	7.2	m	

A.5.4 CAM Basic Functionality

The supplier of the implementation shall state the support of the implementation for each of the following functionalities, in table A.4.

Table A.4: CAM Basic Functionality supported

Item	Vehicle Type	Reference	Status	Support
1	Generation of CAM Messages	4.1	m	
2	Transmission of CAM Messages	4.1	m	
3	Reception of CAM Messages	4.1	m	

A.5.5 CAM Interfaces to data provisioning services

The supplier of the implementation shall state the support of the implementation for each of the following interfaces to data provisioning services, in table A.5.

Table A.5: CAM Interfaces supported

Item	Vehicle Type	Reference	Status	Support
1	Station State Monitoring	6.2	o	
2	Mobile Station Dynamic Monitoring	6.2	o	
3	Time Management	6.2	o	
4	LDM Management	6.2	o	

A.5.6 CAM Message

Table A.6: Fields of CAM message supported

It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ProtocolVersion	7	m		0..255	
2	MessageID	7	m		0..255	
3	GenerationTime	7	m		0.. 281474976710655	
4	Stationed	7	m		0..4294967295	
5	ReferencePosition	7	m		referencePosition	
6	StationCharacteristics	7	m		stationCharacteristics	
7	TaggedList	7	m		taggedList	

A.5.6.1 stationCharacteristics element

Table A.7: stationCharacteristics

Prerequisite: A.6/6						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Mobile	7	m		Boolean	
2	Private	7	m		Boolean	
3	PhysicalRelevant	7	m		Boolean	

A.5.6.2 referencePosition element

Table A.8: referencePosition

Prerequisite: A.6/5										
Column Prerequisite			A.2/1		A.2/2		A.2/3		A.3/1	
It.	Name of field	Ref.	Status	Sp.	Status	Sp.	Status	Sp.	Status	Sp.
1	Longitude	7.2	m		m		m		m	
2	Latitude	7.2	m		m		m		m	
3	Elevation	7.2	m		m		m		m	
4	Heading	7.2	o		o		o		x	
5	StreetName	7.2	o		o		o		o	
6	PositionConfidence	7.2	c.801		c.801		c.801		x	
7	ElevationConfidence	7.2	c.801		c.801		c.801		x	
8	RoadSegmentID	7.2	o		o		o		o	

c.801: IF value of A.7/1 is TRUE THEN m ELSE o.

A.5.6.2.1 referencePosition sub-elements

Table A.9: Longitude

Prerequisite: A.8/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	isEast	Annex A	m		Boolean	
2	Degree	Annex A	m		0..1800000000	

Table A.10: Latitude

Prerequisite: A.8/2						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	isSouth	Annex A	m		Boolean	
2	Degree	Annex A	m		0..900000000	

Table A.11: Elevation

Prerequisite: A.8/3						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Elevation	Annex A	m		-10000..16767215	

Table A.12: Heading

Prerequisite: A.8/4						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Heading	Annex A	m		Direction	

Table A.13: StreetName

Prerequisite: A.8/5						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	StreetName	Annex A	m		32 characters max 1 character min	

Table A.14: ElevationConfidence

Prerequisite: A.8/7						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ElevationConfidence	7.2	m		Confidence	

Table A.15: RoadSegmentID

Prerequisite: A.8/8						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	RoadSegmentID	Annex A	m		0..99999999	

A.5.6.3 taggedList element

Table A.16: taggedList

Prerequisite: A.6/7										
Column Prerequisite			A.2/1		A.2/2		A.2/3		A.3/1	
It.	Name of field	Ref.	Status	Sp.	Status	Sp.	Status	Sp.	Status	Sp.
1	VehicleType	Annex A	m		m		m		x	
2	PublicVehicleType	Annex A	x		x		m		x	
3	LightBarInUse	Annex A	x		o		x		x	
4	SireneInUse	Annex A	x		o		x		x	
5	EmergencyResponseType	Annex A	x		m		x		x	
6	StationLength	Annex A	m		m		m		x	
7	StationLengthConfidence	7.2	m, see note		m, see note		m, see note		x	
8	StationWidth	Annex A	m		m		m		x	
9	StationWidthConfidence	7.2	m, see note		m, see note		m, see note		x	
10	VehicleSpeed	Annex A	m		m		m		x	
11	VehicleSpeedConfidence	7.2	m		m		m		x	
12	LongAcceleration	Annex A	m		m		m		x	
13	LongAccelerationConfidence	7.2	m		m		m		x	
14	YawRate	Annex A	m		m		m		x	
15	YawRateConfidence	7.2	m		m		m		x	
16	AccelerationControl	Annex A	m		m		m		x	
17	ExteriorLights	Annex A	m		m		m		x	
18	CauseCode	Annex A	x		x		x		x	
19	AmbientAirTemperature	Annex A	x		x		x		x	
20	Speed	Annex A	x		x		x		x	
21										
22	PTLineDescription	Annex A	x		x		o		x	
23	TurnAdvice	Annex A	o		o		o		x	
24	DistanceToStopLine	Annex A	o		o		o		x	
25	DistanceToStopLineConfidence	7.2	o		o		o		x	
26	Occupancy	Annex A	o		o		o		x	
27	ScheduleDeviation	Annex A	x		x		o		x	
28	TrafficLightPriority	Annex A	x		x		o		x	
29	DoorOpen	Annex A	o		o		m		x	
30	DataReference	Annex A	x		x		x		x	
31	PosConfidenceEllipse	Annex A	m		m		m		x	
32	Curvature	Annex A	m		m		m		x	
33	CurvatureChange	Annex A	o		o		o		x	
34	CurvatureConfidence	7.2	m		m		m		x	
35	WiperSystemFront	Annex A	x		x		x		x	
36	CrashStatus	Annex A	m, see note		m, see note		m, see note		x	
37	HeadingConfidence	7.2	m		m		m		x	
38	DangerousGoods	Annex A	m, see note		m, see note		m, see note		x	

NOTE: Support of the following features is mandatory: StationLengthConfidence, StationWidthConfidence, DoorOpen, CrashStatus, DangerousGoods. Presence of the fields in the message depends on the situation.

A.5.6.3.1 taggedList sub-elements

Table A.17: AccelerationControl

Prerequisite: A.16/16						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	BrakePedal	Annex A	m		Boolean	
2	ThrottlePedal	Annex A	m		Boolean	
3	CruiseControl	Annex A	m		Boolean	
4	Acc	Annex A	m		Boolean	
5	Limiter	Annex A	m		Boolean	
6	BrakeAssist	Annex A	m		Boolean	

Table A.18: AmbientAirTemperature

Prerequisite: A.16/19						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	AmbientAirTemperature	Annex A	m		Temperature	

Table A.19: CauseCode

Prerequisite: A.16/18						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	CauseCode	Annex A	m		0..100	

Table A.20: CrashStatus

Prerequisite: A.16/36						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	CrashStatus	Annex A	m		Boolean	

Table A.21: Curvature

Prerequisite: A.16/32						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Curvature	Annex A	m		-32765..32765	

Table A.22: CurvatureChange

Prerequisite: A.16/33						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	CurvatureChange	Annex A	m		-1023..1023	

Table A.23: CurvatureConfidence

Prerequisite: A.16/34						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	CurvatureConfidence	Annex A	m		Confidence	

Table A.24: DataReference

Prerequisite: A.16/30						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	DataReference	Annex A	m		128 characters max 1 character min	

Table A.25: DangerousGoods

Prerequisite: A.16/38						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	DangerousGoods	Annex A	m		0..8191	

Table A.26: DistanceToStopLine

Prerequisite: A.16/24						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	DistanceToStopLine	Annex A	m		Distance	

Table A.27: DistanceToStopLineConfidence

Prerequisite: A.16/25						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	DistanceToStopLineConfidence	Annex A	m		Confidence	

Table A.28: DoorOpen

Prerequisite: A.16/29						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Driver	Annex A	m		Boolean	
2	Passenger	Annex A	m		Boolean	
3	Maintenance	Annex A	m		Boolean	
4	Luggage	Annex A	m		Boolean	

Table A.29: EmergencyResponseType

Prerequisite: A.16/4						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	EmergencyResponseType	Annex A	m		0..3	

Table A.30: ExteriorLights

Prerequisite: A.16/17						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	LowBeamHeadlightsOn	Annex A	m		Boolean	
2	HighBeamHeadlightsOn	Annex A	m		Boolean	
3	LeftTurnSignalOn	Annex A	m		Boolean	
4	RightTurnSignalOn	Annex A	m		Boolean	
5	AutomaticLightControlOn	Annex A	m		Boolean	
6	DaytimeRunningLightsOn	Annex A	m		Boolean	
7	FogLightOn	Annex A	m		Boolean	
8	ParkingLightsOn	Annex A	m		Boolean	

Table A.31: HeadingConfidence

Prerequisite: A.16/37						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	HeadingConfidence	Annex A	m		Confidence	

Table A.32: LightBarInUse

Prerequisite: A.16/3						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	LightBarInUse	Annex A	m		SimpleSystemState	

Table A.33: LongAcceleration

Prerequisite: A.16/12						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	LongAcceleration	Annex A	m		-2000..2000	

Table A.34: LongAccelerationConfidence

Prerequisite: A.16/13						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	LongAccelerationConfidence	Annex A	m		Confidence	

Table A.35: Occupancy

Prerequisite: A.16/26						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Occupancy	Annex A	m		0..255	

Table A.36: PosConfidenceEllipse

Prerequisite: A.16/31						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	SemiMajorConfidence	Annex A	m		PositionConfidence	
2	SemiMinorConfidence	Annex A	m		PositionConfidence	
3	SemiMajorOrientation	Annex A	m		Direction	

Table A.37: PTLineDescription

Prerequisite: A.16/22						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	CourseOfJourney	Annex A	m		CourseOfJourney	
2	LineRef	Annex A	m		LineRef	
3	RouteRef	Annex A	m		RouteRef	

Table A.38: PublicVehicleType

Prerequisite: A.16/2						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	PublicVehicleType	Annex A	m		0..255	

Table A.39: ScheduleDeviation

Prerequisite: A.16/27						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	ScheduleDeviation	Annex A	m		-900..3600	

Table A.40: SirenInUse

Prerequisite: A.16/4						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	SirenInUse	Annex A	m		SimpleSystemState	

Table A.41: Speed

Prerequisite: A.16/20 or A.48/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Speed	Annex A	m		-32765..32765	

Table A.42: StationLength

Prerequisite: A.16/6						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	StationLength	Annex A	m		Dimension	

Table A.43: StationLengthConfidence

Prerequisite: A.16/7						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	StationLengthConfidence	Annex A	m		Confidence	

Table A.44: StationWidth

Prerequisite: A.16/8						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	StationWidth	Annex A	m		Dimension	

Table A.45: StationWidthConfidence

Prerequisite: A.16/9						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	StationWidthConfidence	Annex A	m		Confidence	

Table A.46: TrafficLightPriority

Prerequisite: A.16/28						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	TrafficLightPriority	Annex A	m		Priority	

Table A.47: TurnAdvice

Prerequisite: A.16/23						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	direction	Annex A	m		TurnDirection	
2	distance	Annex A	m		Distance	

Table A.48: VehicleSpeed

Prerequisite: A.16/10						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	VehicleSpeed	Annex A	m		Speed	

Table A.49: VehicleSpeedConfidence

Prerequisite: A.16/11						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	VehicleSpeedConfidence	Annex A	m		Confidence	

Table A.50: VehicleType

Prerequisite: A.16/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	VehicleType	Annex A	m		0..255	

Table A.51: WiperSystemFront

Prerequisite: A.16/35						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	WiperSystemFront	Annex A	m		0..4	

Table A.52: YawRate

Prerequisite: A.16/14						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	YawRate	Annex A	m		-32765..32765	

A Table A.53: YawRateConfidence

Prerequisite: A.16/15						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	YawRateConfidence	Annex A	m		Confidence	

A.5.6.3.2 PTLineDescription sub-elements

Table A.54: CourseOfJourney

Prerequisite: A.37/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	CourseOfJourney	Annex A	m		32 characters max	

Table A.55: LineRef

Prerequisite: A.37/2						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	LineRef	Annex A	m		32 characters max	

Table A.56: RouteRef

Prerequisite: A.37/3						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	RouteRef	Annex A	m		32 characters max	

A.5.6.4 common sub-elements

Table A.57: Confidence

Prerequisite: A.14/1 or A.23/1 or A.27/1 or A.31/1 or A.34/1 or A.43/1 or A.45/1 or A.49/1 or A.53/1 or A.61/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Confidence	Annex A	m		0..15	

Table A.58: Dimension

Prerequisite: A.42/1 or A.44/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Dimension	Annex A	m		0..16383	

Table A.59: Direction

Prerequisite: A.12/1 or A.36/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Direction	Annex A	m		0..28800	

Table A.60: Distance

Prerequisite: A.26/1 or A.47/2						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Distance	Annex A	m		0..65535	

Table A.61: PositionConfidence

Prerequisite: A.8/6 or A.36/1 or A.36/2						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	PositionConfidence	Annex A	m		Confidence	

Table A.62: Priority

Prerequisite: A.46/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Priority	Annex A	m		0..7	

Table A.63: SimpleSystemState

Prerequisite: A.32/1 or A.40/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	SimpleSystemState	Annex A	m		0..3	

Table A.64: Temperature

Prerequisite: A.18/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Temperature	Annex A	m		-40..215	

Table A.65: TurnDirection

Prerequisite: A.47/1						
It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	TurnDirection	Annex A	m		0..7	

A.5.7 Protocol parameters

A.5.7.1 Timing requirements

The supplier of the implementation shall provide information about the timing requirements.

Table A.66: Timing requirements

It.	Name of field	Ref.	Status	Sp.	Value allowed	Value sp.
1	Maximum interval of CAM generations	5.1	m		1 s if no Use Case has been selected	
2	Minimum interval of CAM generations	5.1	m		0,1 s	
3	Max processing time of CAM construction	5.1	m		50 ms	
4	Time to check generation rules	Annex A	o		100 ms	
5	Duration of doors closure for situational mandatory TaggedValue	Annex A	c.6601		30 s	
c.6601: IF A.2/3 and A.16/29 THEN m ELSE n/a.						

Annex B (informative): Bibliography

- ETSI TS 102 637-3 (V1.1.1): "Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Part 3: Specifications of Decentralized Environmental Notification Basic Service".
- ETSI TS 102 637-4: "Intelligent Transport Systems (ITS); Vehicular Communications; Basic set of applications; Part 4: Operational Requirements.".
- ETSI ETS 300 406 (1995): "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

History

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