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**Road transport and traffic
telematics — Automatic vehicle
and equipment identification —
Numbering and data structure**

AMENDMENT 1

*Télématique du transport routier et de la circulation routière —
Identification automatique des véhicules et des équipements —
Codification et structure des données*

AMENDEMENT 1



Reference number
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This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

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Road transport and traffic telematics — Automatic vehicle and equipment identification — Numbering and data structure

AMENDMENT 1

Page v, Introduction

Delete

"...to read ANNEX C before reading the main body of this International Standard. Readers are also advised..."

in first paragraph after bullet list.

Page 1, Scope 1.1

Delete

", ISO/IEC 8825-1 and ISO/IEC 8825-2..."

in fourth paragraph.

Page 2, Normative references

Delete

ISO/IEC 8825-1, *Information technology — ASN.1 encoding rules — Part 1: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)*

Page 2, Normative references

Move

ISO/IEC 8825-2, *Information technology — ASN.1 encoding rules — Part 2: Specification of Packed Encoding Rules (PER)*

to Bibliography.

Page 4, 4.2

Delete

", ISO/IEC 8825-1, ISO/IEC 8825-2 and ISO/IEC 8825-3..."

in paragraph before last paragraph.

Page 4, 4.2

Delete last sentence in last paragraph.

"(See examples in Annex C.) "

Page 4, 4.3

Delete

", ISO/IEC 8825-1, ISO/IEC 8825-2 and ISO/IEC 8825-3..."

Page 4, 4.4

Replace first sentence in last paragraph

"The examples given in the remainder of this International Standard assume the use of ASN.1 PER."

by the sentence

"The examples given in the remainder of this document assume the use of ASN.1 PER unaligned."

Page 4, 4.4

Delete last sentence.

"See Annex C for implementation examples."

Page 5, 4.6

In the second sentence delete.

" ...and Annex C."

Page 5

Replace Table 2 by the following one.

Table 2 — Minimum size of data elements

CSI	Length	Coding Structure Data Field			
1	7 Octets / 56 bits	Country Code		Issuer Identifier	Service Number
		10		14	32
2	6 Octets / 48 bits	Manufacturer Identifier			Service Number
		16			32
3	22 Octets / 176 bits	Start Time	Stop Time	Geographic Limit	Application Limit
		80	80	8	8
4	Variable	Country Code		Alphabet Indicator	Licence Plate Number
		10		6	Not defined
5	17 Octets /	Vehicle Identification (Chassis) Number			fill

CSI	Length	Coding Structure Data Field		
	136 bits	127		9
6	0	Reserved for CEN/ISO		
		Not defined		
7	12 Octets / 96 bits	Freight Container Numbering		
		96		
8	N + 2 Octets	fill	Country Code	Tax Code
		6	10	N * 8

Page 6, NOTE 1

Add the following sentence at the end of NOTE 1.

"The symbol N refers to the number of characters in the abstract data structure, as defined by the application."

Page 6

Below NOTE 2 add the following NOTE 3.

NOTE 3 The term "fill" indicates bit fields used to achieve octet alignment. The bits are set to '0'b.

Page 6, 4.7.2.1

Delete the last paragraph.

"Operators who wish to provide additional data fields, of read only or read/write nature, can do so by adding additional ASN.1 identifier sets as described in Annex C."

Page 6, 4.7.2.2.2

Replace the last sentence

"For value assignment, please refer to: <https://www.itsstandards.eu/14816-register>."

by

"See Annex C for examples."

Page 7

Delete 4.8.2.1.

Page 7, 4.8.2.2.1

Replace content of 4.8.2.2.1 by

```
CS2 ::= SEQUENCE {  
    manufacturerIdentifier ManufacturerIdentifier,  
    serviceNumber          ServiceNumber  
}
```

Page 7

Change clause numbering

4.8.2.2 to 4.8.2.1

4.8.2.2.1 to 4.8.2.2

4.8.2.2.2 to 4.8.3

4.8.2.2.3 to 4.8.4

Page 8

Delete 4.9.2.1.

Page 8, 4.9.2.2.2.

Replace first and second line by

```
StartTime ::= AviEriDateTime  
AviEriDateTime ::= OCTET STRING (SIZE (10)) -- YYMMDDhhmm
```

The format is YYMMDDhhmm encoded according to ISO/IEC 8859-1.

Page 8, 4.9.2.3

Replace first and second line by

```
StopTime ::= AviEriDateTime
```

The format is YYMMDDhhmm.

Page 8

Change clause numbering

4.9.2.1.1 to 4.9.2.1

4.9.2.2.2 to 4.9.2.2

Page 9, 4.9.2.3.1

Replace definition of GeoGraphicalLimit

by:

```

GeoGraphicalLimit ::= BIT STRING {
    globalRestriction          (0),
    regionalRestriction        (1),
    nationalRestriction        (2),
    district                    (3),
    issuerCoverageRestriction  (4),
    reservedForCEN1            (5),
    reservedForCEN2            (6),
    issuerSpecificRestriction  (7)
} (SIZE(8))

```

Page 9, 4.9.2.3.2

Replace definition of ServiceApplicationLimit

by:

```

ServiceApplicationLimit ::= BIT STRING {
    notForPostpayment          (0),
    notForPrepayment           (1),
    notForVehicleaccess        (2),
    notForFleetcontrol         (3),
    issuerSpecificRestriction1  (4),
    issuerSpecificRestriction2  (5),
    issuerSpecificRestriction3  (6),
    issuerSpecificRestriction4  (7)
} (SIZE(8))

```

Page 9, 4.9.2.3.2

Delete the NOTE.

Page 9

Change clause numbering

4.9.2.3.1 to 4.9.2.4

4.9.2.3.2 to 4.9.2.5

Page 10

Delete 4.10.2.1.

Page 10, 4.10.2.2.1

Replace definition of CS4 by

```
CS4 ::= SEQUENCE {  
    countryCode          CountryCode,  
    alphabetIndicator    AlphabetIndicator,  
    licPlateNumber       LicPlateNumber  
}
```

Page 10

Delete heading 4.10.2.2.

Page 10

Change clause numbering

4.10.2.2.1 to 4.10.2.1

4.10.2.2.2 to 4.10.2.2

4.10.2.2.3 to 4.10.2.3

Page 10

Change clause numbering

4.10.2.2.4 to 4.10.2.4.

Page 11

Delete clause 4.11.2.1.

Page 12

Replace definition of CS5 by

```
CS5 ::= SEQUENCE{  
    vin VisibleString, -- 17 characters VIN  
    fill BIT STRING (SIZE(9)) -- set to '000000000'  
}
```

Page 12

Delete heading 4.11.2.2 and heading 4.11.2.

Page 12

Change clause numbering

4.11.2.2.1 to 4.11.3

Page 12

Delete clause 4.13.2.1.

Page 12

Delete headline 4.13.2.2.

Page 12

Change clause numbering

4.13.2.2.1 to 4.13.2.1.

Page 13, 4.13.2.2.2

Replace definition of FreightContainerData by

```
FreightContainerData ::= SEQUENCE {
    OwnerCode          BIT STRING(SIZE(19)),      -- 19bits
    serialNumber        INTEGER(0 .. 1000000),     -- 20bits
    checkDigit         INTEGER(0 .. 10),          -- 4bits
    length              INTEGER(1 .. 2000),        -- 11bits
    height              INTEGER(1 .. 500),         -- 9bits
    width               INTEGER(200 .. 300),        -- 7bits
    containerTypeCode   INTEGER(0 .. 127),         -- 7bits
    maximumGrossMass    INTEGER(19 .. 500),        -- 9bits
    tareMass            INTEGER(0 .. 99),          -- 7bits
    fill                BIT STRING(SIZE(3))        -- set to '000'
}
```

Page 13

Change clause numbering

4.13.2.2.2 to 4.13.2.2.

Page 13

Delete clause 4.14.2.1.

Page 13, 4.14.2.2.1

Replace definition of CS8 by

```
CS8 ::= SEQUENCE {  
    fill          BIT STRING (SIZE(6)), -- set to '000000'  
    countryCode   CountryCode,  
    taxCode       TaxCode  
}
```

Page 13

Delete heading 4.14.2.

Page 13

Change clause numbering

4.14.2.2 to 4.14.2

4.14.2.2.1 to 4.14.2.1

4.14.2.2.2 to 4.14.2.2

4.14.2.2.3 to 4.14.2.3

Page 21, A.3.1.5

Replace definition of TaxVignette by

```
TaxVignette ::= SEQUENCE {  
    cs8          CS8,  
    cs3          CS3  
}
```

Page 24, Annex B

Replace the whole annex by the following one.

Annex B (normative)

A summary of CS definitions

B.1 Overview

This annex contains the following ASN.1 module:

— **AVIAEINumberingAndDataStructures** {iso(1) standard(0) iso14816(14816) Am B.2.

In case the ASN.1 specifications given in this Annex are not compliant with illustrations or specifications provided elsewhere in this International standard, the specifications given in this Annex shall prevail.

The ASN.1 modules contained in this Annex will be published on <http://standards.iso.org/iso/14816>.

B.2 Module AVIAEINumberingAndDataStructure

This module specifies ASN.1 type definitions together with useful ASN.1 value definitions.

In all definitions

fill BIT STRING (SIZE(x))

each bit of the BIT STRING shall be set to the value '0'b.

```
AVIAEINumberingAndDataStructures {iso(1) standard(0) iso14816(14816) asnm1(1) version1(1)}
DEFINITIONS AUTOMATIC TAGS ::= BEGIN
```

```
CS1 ::= SEQUENCE {
    countryCode           CountryCode,
    issuerIdentifier      IssuerIdentifier,
    serviceNumber        ServiceNumber
}

CS2 ::= SEQUENCE {
    manufacturerIdentifier ManufacturerIdentifier,
    serviceNumber        ServiceNumber
}

CS3 ::= SEQUENCE {
    startTime             StartTime,
    stopTime             StopTime,
    geoGraphLimit        GeoGraphicalLimit,
    serviceAppLimit      ServiceApplicationLimit
}

CS4 ::= SEQUENCE {
    countryCode           CountryCode,
    alphabetIndicator     AlphabetIndicator,
    licPlateNumber       LicPlateNumber
}

CS5 ::= SEQUENCE {
    vin                  VisibleString, -- 17 characters VIN
    fill                BIT STRING (SIZE(9)) -- set to '000000000'
}
```

```
CS7 ::= FreightContainerData
```

```

FreightContainerData ::= SEQUENCE {
-- octet aligned by means of 3 fill bits at the end
    ownerCode          BIT STRING(SIZE(19)), -- 19bits
    serialNumber        INTEGER(0 .. 1000000), -- 20bits
    checkDigit          INTEGER(0 .. 10), -- 4bits
    length              INTEGER(1 .. 2000), -- 11bits
    height              INTEGER(1 .. 500), -- 9bits
    width               INTEGER(200 .. 300), -- 7bits
    containerTypeCode    INTEGER(0 .. 127), -- 7bits
    maximumGrossMass     INTEGER(19 .. 500), -- 9bits
    tareMass            INTEGER(0 .. 99), -- 7bits
    fill                BIT STRING (SIZE(3)) -- set to '000'
} -- 12 octets

CS8 ::= SEQUENCE {
-- octet aligned by means of 6 fill bits at the beginning
    fill                BIT STRING (SIZE(6)), -- set to '000000'
    countryCode          CountryCode,
    taxCode              TaxCode
}

CountryCode ::= BIT STRING(SIZE(10))

IssuerIdentifier ::= INTEGER(0 .. 16383)

ManufacturerIdentifier ::= INTEGER(0 .. 65535)

LicPlateNumber ::= OCTET STRING

ServiceNumber ::= BIT STRING(SIZE(32))

TaxCode ::= OCTET STRING

AlphabetIndicator ::= INTEGER {
    latinAlphabetNo1      (0), -- encoded as 00 00 00'B
    latinAlphabetNo2      (1), -- encoded as 00 00 01'B etc
    latinAlphabetNo3      (2),
    latinAlphabetNo4      (3),
    latinCyrillicAlphabet (4),
    latinArabicAlphabet   (5),
    latinGreekAlphabet    (6),
    latinHebrewAlphabet   (7),
    latinAlphabetNo5      (8),
    latinAlphabetNo6      (9),
    twoOctetBMP           (10),
    fourOctetCanonical    (11)
} (0..63) -- 6 bits, latinAlphabetNo1 recommended

AviEriDateTime ::= OCTET STRING (SIZE(10)) -- YYMMDDhhmm

StartTime ::= AviEriDateTime

StopTime ::= AviEriDateTime

GeoGraphicalLimit ::= BIT STRING {
    globalRestriction      (0),
    regionalRestriction    (1),
    nationalRestriction    (2),
    district               (3),
    issuerCoverageRestriction (4),
    reservedForCEN1        (5),
    reservedForCEN2        (6),
    issuerSpecificRestriction (7)
} (SIZE(8))

ServiceApplicationLimit ::= BIT STRING {
    notForPostpayment      (0),
    notForPrepayment       (1),
    notForVehicleaccess    (2),
    notForFleetcontrol     (3),
    issuerSpecificRestriction1 (4),

```