ICS 45.060 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2017

STN	**Elektronické železničné zariadenia. Vlaková komunikačná sieť (TCN). Časť 2-3: Komunikačný profil TCN. Oprava AC2**	**STN EN 61375-2-3/AC2** 34 2675

Electronic railway equipment - Train communication network (TCN) - Part 2-3: TCN communication profile

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/17

Obsahuje: EN 61375-2-3:2015/AC Nov.:2016, IEC 61375-2-3:2015/COR2:2016

124477

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61375-2-3:2015/AC:2016-11

November 2016

ICS 45.060

English Version

Electronic railway equipment - Train communication network (TCN) - Part 2-3: TCN communication profile (IEC 61375-2-3:2015/COR2:2016)

Matériel électronique ferroviaire - Réseau embarqué de train (TCN) - Partie 2-3: Profil de communication TCN (IEC 61375-2-3:2015/COR2:2016)

Elektronische Betriebsmittel für Bahnen - Zug-Kommunikations-Netzwerk (TCN) - Teil 2-3: TCN-Kommunikationsprofil (IEC 61375-2-3:2015/COR2:2016)

This corrigendum becomes effective on 4 November 2016 for incorporation in the English language version of the EN.

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Endorsement notice

The text of the corrigendum IEC 61375-2-3:2015/COR2:2016 was approved by CENELEC as EN 61375-2-3:2015/AC:2016-11 without any modification.

IEC 61375-2-3:2015/COR2:2016 – 1 –

INTERNATIONAL ELECTROTECHNICAL COMMISSION

IEC 61375-2-3
Edition 1.0 2015-07

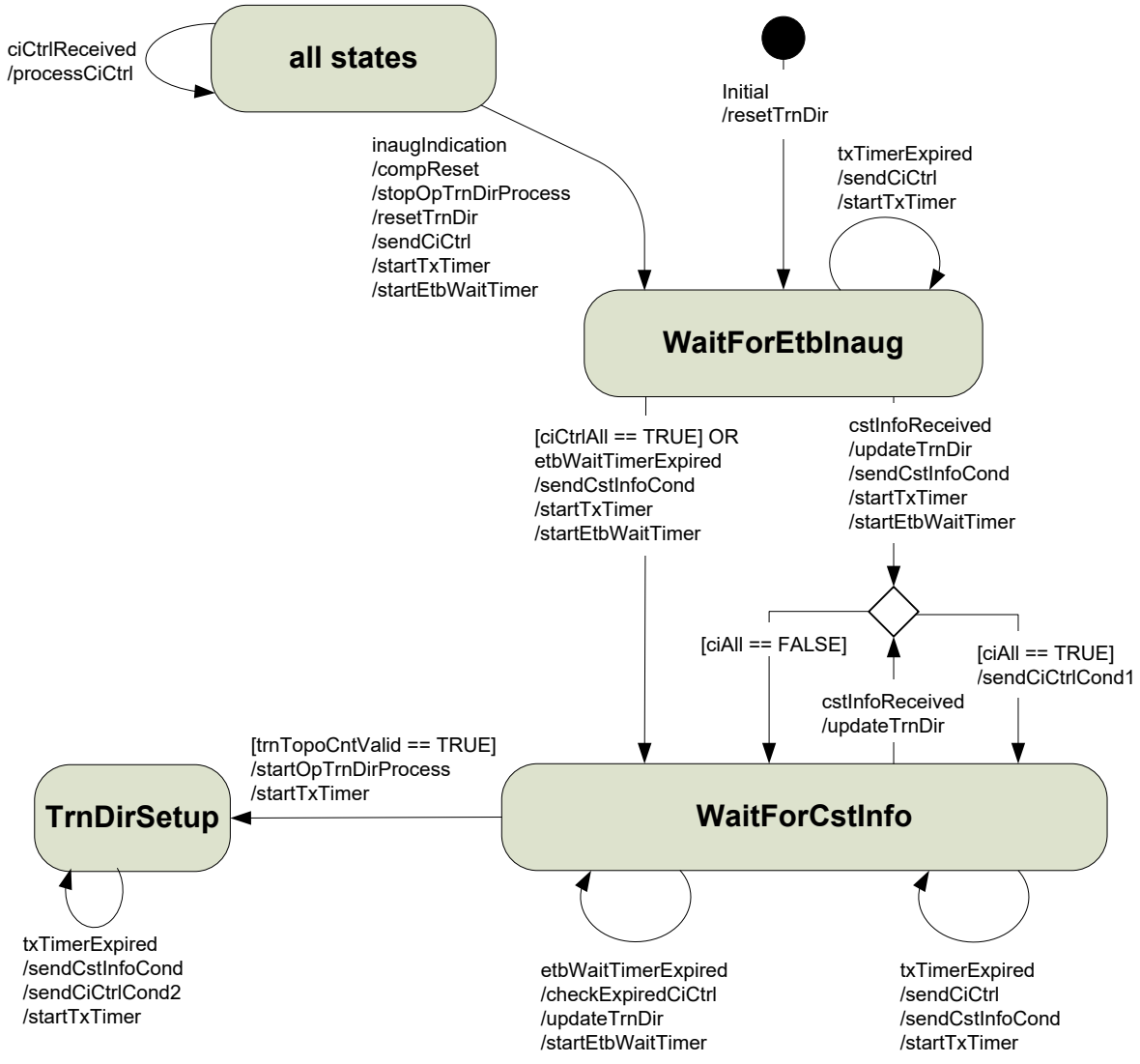
ELECTRONIC RAILWAY EQUIPMENT – TRAIN COMMUNICATION NETWORK (TCN) –

Part 2-3: TCN communication profile

CORRIGENDUM 2

5.3.2.3

Replace existing Figure 15 by the following new Figure.



IEC

Table 5

Add the following entry at the end of the table.

Action	Description
compReset	Reset the composition by triggering the event ‘compReset’ in the leading function state machine (see 6.5.3.2) and the confirmation/correction state machine (see 6.6.4).

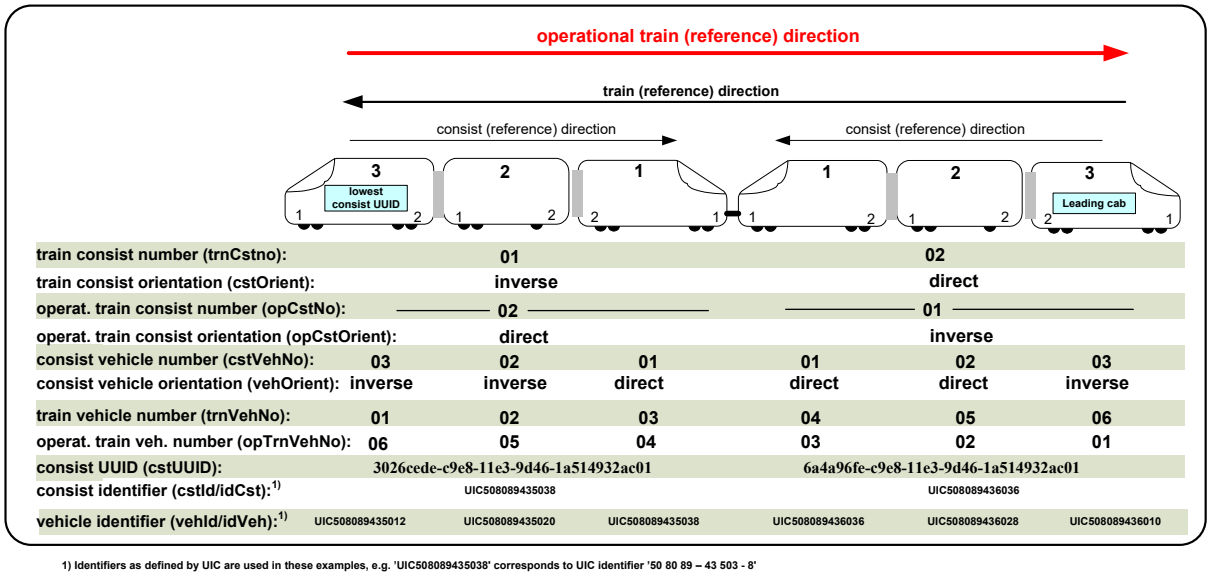
5.3.3.2.16, item d)

Replace existing item d) by the following new text.

d) Setting the topography counter to a value of 0 declares the topography counter to be invalid.

5.4.4.6.1

Replace existing Figure 20 by the following new figure.



IEC

5.4.5.2, second paragraph following note 1

Replace the existing text by the following new text.

The decomposition for ETB-related groups is defined as:
11101111.11000001.bbgggggg.gggggggg

5.4.5.2, second paragraph following Table 20

Replace the existing text by the following new text.

The decomposition for ETB-related groups is defined as:
11101111.11000010.bbgggggg.gggggggg

5.5.3 Examples, last bullet item preceding Figure 21

Replace the existing text by the following new text.

- group doorCTRL@fctDoor.anyVeh.cst03.anyClTrn.lTrn in consist ‘E’

5.5.3, Example 3, first two sentences

Replace the existing text by the following new text.

The following example shows how a TCN-URI can be resolved to a train wide multicast group address. Here it is assumed that the IP MC group ‘fctDoor’ has been defined as a train wide group with a group Id = 50.

5.5.3, Example 4, text preceding Table 26

Replace the existing text by the following new text.

The following example shows how a TCN-URI can be resolved to a consist-limited multicast group address. Here it is assumed that the two door controllers in consist E form a multicast group with group Id = 50. For resolving the TCN-URI ‘doorCTRL@fctDoor.anyVeh.cst03.anyClTrn.lTrn” the ETB0 DNS server has to execute the steps as listed in Table 26:

Table 26, step 1, last column

Replace the existing text by the following new text.

= “fctDoor.anyVeh.cst03

Table 26, step 2, second column

Replace the existing text by the following new text.

Lookup ‘cstUUID’ of label ‘cstNo’ = 3 in the train directory of the local TTDB

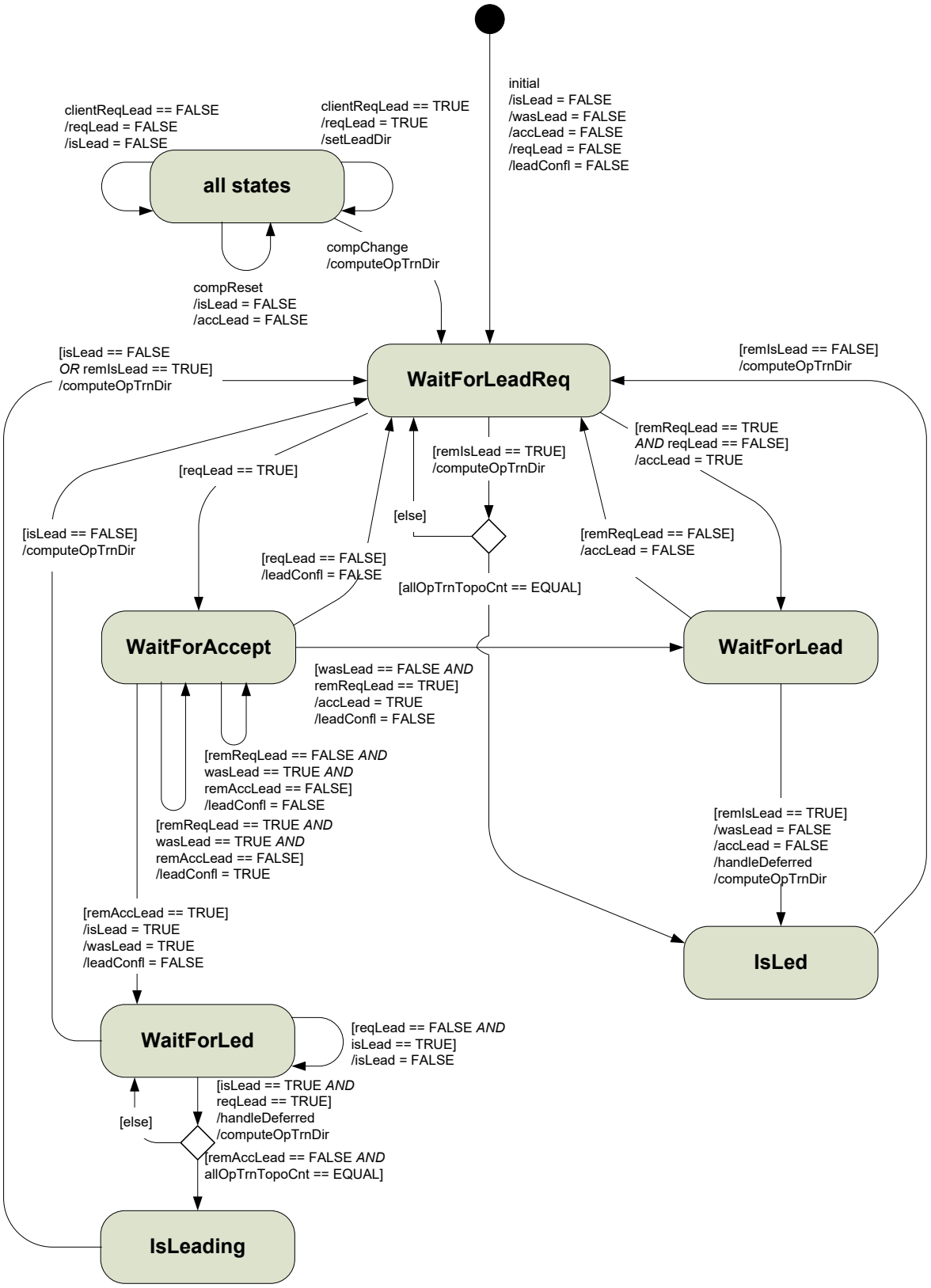
6.4.5.2, Table 28, 2nd column, 2nd box

Replace the existing text by the following new text.

Stop processing of the operational train directory, triggered by the train
directory computation state machine, see .5.3.2.
If the transmission of ETBCTRL telegram continues, telegram parameter ‘trnTopoCnt’ shall be set to 0 until processing of the operational train directory is restarted (trigger ‘startOpTrnDirProcess’)

6.5.3.2, Figure 30

Replace existing Figure 30 by the following new figure.


initial
/isLead = FALSE
/wasLead = FALSE
/accLead = FALSE
/reqLead = FALSE
/leadConfl = FALSE
clientReqLead == FALSE
/reqLead = FALSE
/isLead = FALSE
clientReqLead == TRUE
/reqLead = TRUE
/setLeadDir
all states
compChange
/computeOpTrnDir
compReset
/isLead = FALSE
/accLead = FALSE
[isLead == FALSE
OR remIsLead == TRUE]
/computeOpTrnDir
WaitForLeadReq
[remIsLead == FALSE]
/computeOpTrnDir
[remReqLead == TRUE
AND reqLead == FALSE]
/accLead = TRUE
[reqLead == TRUE]
[remIsLead == TRUE]
/computeOpTrnDir
[else]
[isLead == FALSE]
/computeOpTrnDir
[remReqLead == FALSE]
/accLead = FALSE
[reqLead == FALSE]
/leadConfl = FALSE
[allOpTrnTopoCnt == EQUAL]
WaitForAccept
WaitForLead
[wasLead == FALSE AND
remReqLead == TRUE]
/accLead = TRUE
/leadConfl = FALSE
[remReqLead == FALSE AND
wasLead == TRUE AND
remAccLead == FALSE]
/leadConfl = FALSE
[remReqLead == TRUE AND
wasLead == TRUE AND
remAccLead == FALSE]
/leadConfl = TRUE
[remIsLead == TRUE]
/wasLead = FALSE
/accLead = FALSE
/handleDeferred
/computeOpTrnDir
[remAccLead == TRUE]
/isLead = TRUE
/wasLead = TRUE
/leadConfl = FALSE
IsLed
WaitForLed
[reqLead == FALSE AND
isLead == TRUE]
/isLead = FALSE
[isLead == TRUE AND
reqLead == TRUE]
/handleDeferred
/computeOpTrnDir
[else]
[remAccLead == FALSE AND
allOpTrnTopoCnt == EQUAL]
IsLeading

IEC

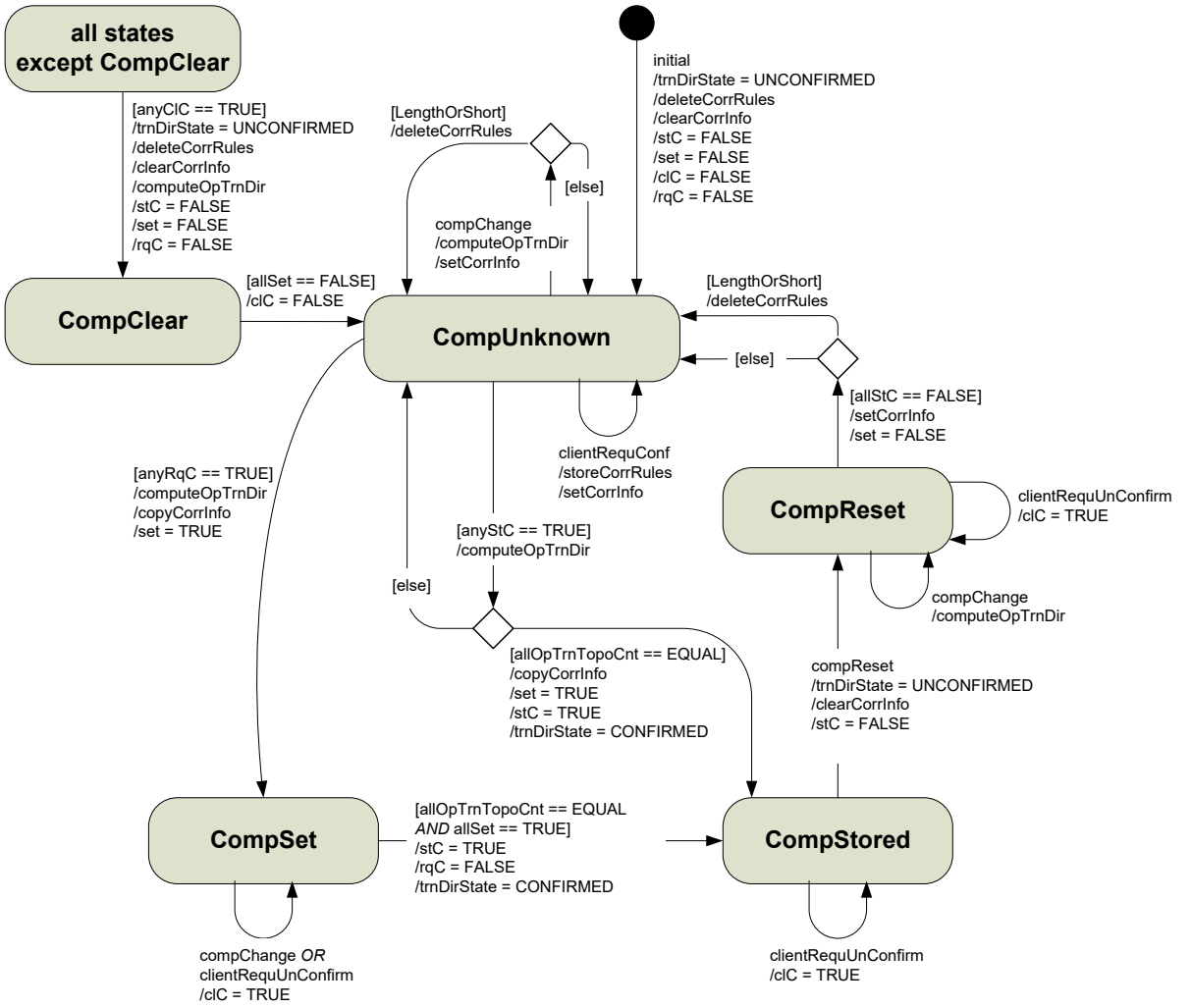
Table 35

Add the following entry to Table 35.

Trigger	Description
compReset	composition reset

6.6.4, Figure 35

Replace existing Figure 35 by the following new figure.



IEC

Table 42

Add the following entry to Table 42.

Trigger	Description
compReset	Confirmed composition reset

Table 43

Replace the existing 3rd and 4th entries by the following.

allStC == FALSE	Logical OR over the 'stC' control flags in all ETBCTRL telegrams equals FALSE
allSet == FALSE	Logical OR over the 'set' control flags in all ETBCTRL telegrams equals FALSE for a time of at least 3 ETBCTRL cycles. NOTE This time condition shall ensure that also reinserted ECSP properly enter state CompUnknown.

6.7.3.2, Table 48, 1st column, 1st box

Replace the existing text by the following new text.

determineOpTrainDirection

Clause A.5, 2nd paragraph

Replace the existing text by the following new text

The ComId forms, together with source IP address and destination IP address, a unique identifier of the PDU within the train.

A.6.6.3, 6th paragrah

Replace the existing text by the following new text.

Topography counters of an incoming request telegram shall be checked in accordance to A.6.7.

A.6.8.2, Table A.10

Replace existing Table A.10 by the following new table.

Table A.10 – PD publisher state diagram – guards

Guards	Description
checkTopoCounts	Check the topography counters submitted with the request against the actual topography counters. At least one of the cases listed in Table A.5 for the topography counters shall be fulfilled.

A.6.8.3, Table A.15

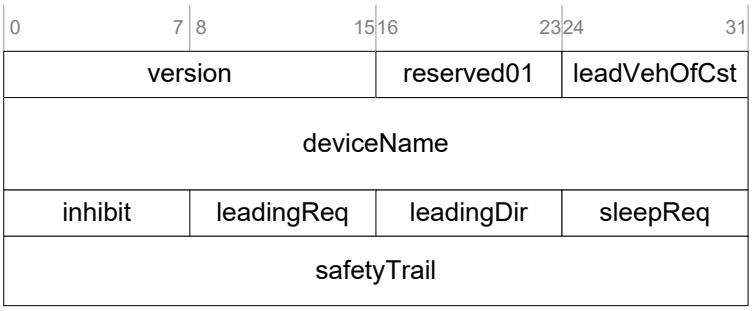
Replace existing Table A.15 by the following new table.

Table A.15 – PD subscriber state diagram – guards

Guards	Description
pattern	configured communication pattern for the PD-PDU exchange Values: PUSH PULL
checkTopoCounts	Check the topography counters of the received telegram against the topography counters submitted with the subscription. At least one of the cases listed in Table A.5 for the topography counters shall be fulfilled.

E.3.2, Figure E.3

Replace existing Figure E.3 by the following new figure.



Introduce the related corrected record definition with additional entry ('leadVehOfCst') as follows:

```
ECSP_CTRL::= RECORD
  {
  version      UINT16    -- telegram version information
                            (vvrr, v-version, r-release)
                           version = 1
                           release = 0
  reserved01   UINT8       -- reserved (= 0)
  leadVehOfCstUINT8        -- position of leading vehicle in consist
                           value range 0..32
                           0 = not defined
                           (1 = first vehicle in consist in
                           Direction 1, 2 = second vehicle, etc.)
  deviceName   LABEL       -- function device of ECSC which sends
                           the telegram
```

•

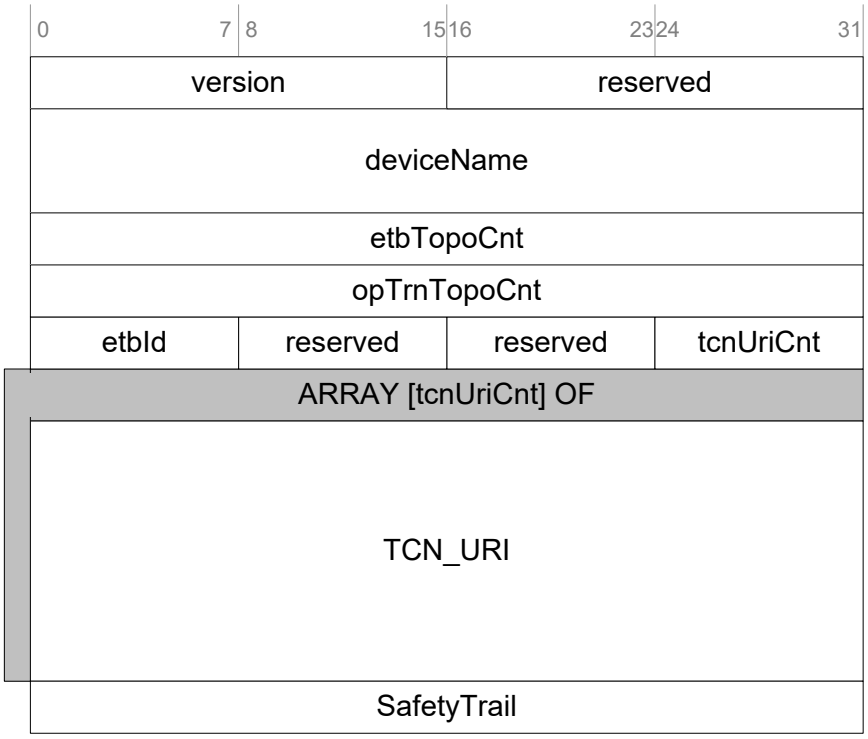
E.5.2.2, penultimate paragraph

Replace the existing text by the following new text.

```
TCN_URI ::= RECORD
  {
  tcnUriStr        CHAR[80]      -- Host part of TCN-URI, terminated with
                                 ASCII character NUL
  reserved01   INT16             -- reserved (= 0)
  resolvState  INT16             -- request message: reserved (= 0)
                                 reply message:
                                 0 = OK
                                 -1 = unknown TCN-URI
  tcnUriIpAddrUINT32         -- IP address related to query
                                 unicast address (source and destination
                                 scope, address range) or
                                 MC group address (destination scope)
                                 value = 0 if 'resolvState' < 0
  tcnUriIpAddr2    UINT32        -- 2nd IP address in case the query
                                 produces an IP address range
                                 (see 5.4.4.6.2).
                                 Defines the higher IP address of the
                                 range.
                                 To be set to 0 if not resolved to an
                                 IP address range
  }
```

E.5.2.3, Figure E.9

Replace existing Figure E.9 by the following new figure.



Introduce the related corrected record with additional entry ('etbTopoCnt').

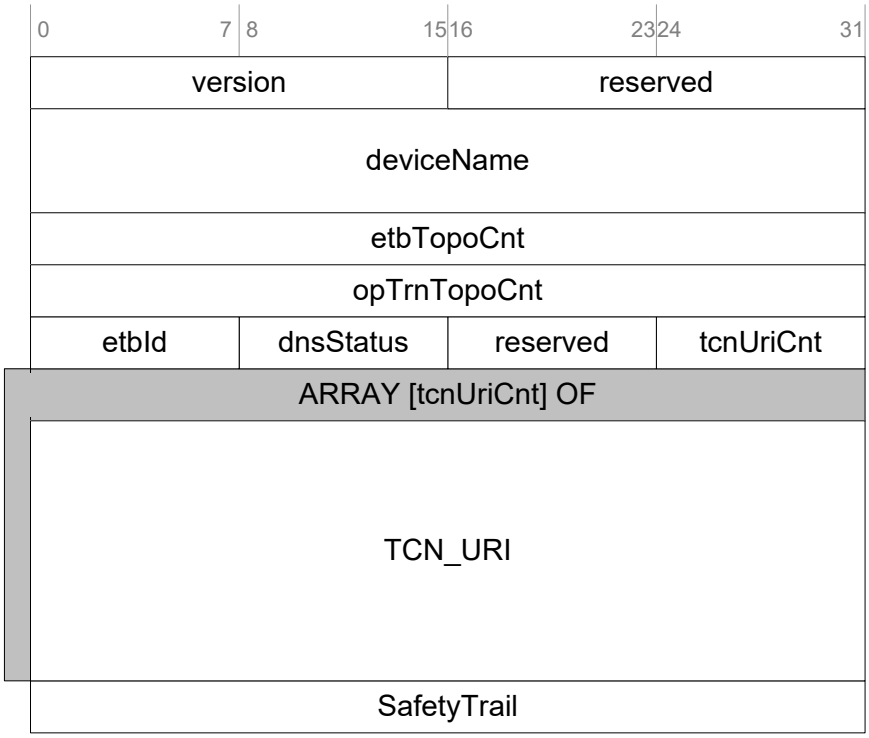
```
DNS_REQUEST::= RECORD
  {
  version          VERSION       -- telegram version information
                                    mainVersion = 1
                                    subVersion = 0
  reserved01       INT16         -- reserved (= 0)
  deviceName       LABEL         -- function device of ED which sends
                                    the telegram
  etbTopoCnt       UINT32        -- ETB topography counter
  opTrnTopoCnt     UINT32        -- operational train topography counter
                                    needed for TCN-URIs related to the
                                    operational train view
                                    = 0 if not used
```

•

•

E.5.2.3, Figure E.10

Replace existing Figure E.10 by the following new figure.



Introduce the related corrected record with additional or corrected entry ('etbTopoCnt', 'dnsStatus')).

```
DNS_REPLY::= RECORD
  {
  version          VERSION       -- telegram version information
                                    mainVersion = 1
                                    subVersion = 0
  reserved01       UINT16        -- reserved (= 0)
  deviceName       LABEL           -- function device of DNS which sends
                                    the telegram
  etbTopoCnt       UINT32        -- ETB topography counter
  opTrnTopoCnt     UINT32        -- operational train topography counter
                                    = 0 if not known
  etbId            UINT8           -- identification of the related ETB
                                    0 = ETB0 (operational network)
                                    1 = ETB1 (multimedia network)
                                    2 = ETB2 (other network)
                                    3 = ETB3 (other network)
  dnsStatus             INT8       -- status of reply:
                                    0 = OK
                                    -1 = DNS Server not ready
                                    -2 = Inauguration in progress
```