INTERNATIONAL STANDARD

**ISO 24102-1**

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**AMENDMENT 1**
2017-04



# Intelligent transport systems — Communications access for land mobiles (CALM) — ITS station management —

## Part 1: Local management

## AMENDMENT 1

*Systèmes intelligents de transport — Accès aux communications des services mobiles terrestres (CALM) — Gestion des stations ITS —*

*Partie 1: Gestion locale*

*AMENDEMENT 1*

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Amendment 1 to ISO 24102-1:2013 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

A list of all parts in the ISO 24102 series can be found on the ISO website.

# Intelligent transport systems — Communications access for land mobiles (CALM) — ITS station management —

# Part 1: Local management

# AMENDMENT 1

*Page 20, Annex A*

Replace the entire Annex A with the following:

**Annex A**
(normative)
**ASN.1 modules**

## A.1 Overview

The following ASN.1 module is specified in this annex:

— CALMmanagement {ISO (1) standard (0) calm-management (24102) local (1) asnm-1 (1)}.

## A.2 Module CALMmanagement

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

Unaligned packed encoding rules (PER) as specified in ISO/IEC 8825-2 shall be applied for this ASN.1 module.

```
CALMmanagement {iso (1) standard (0) calm-management (24102) local (1) asnm-1 (1)}

DEFINITIONS AUTOMATIC TAGS::=BEGIN

IMPORTS

CIstatus, Connect, DataRate, DataRatesNW, Directivity, KineVectOut, Link-ID, MACaddress,
MedType, PARAMS, UserPriority FROM CALMllsap {iso (1) standard (0) calm-ll-sap (21218)
asnm-1 (1)}

ITS-SCUtype FROM CALMiitsscu {iso (1) standard (0) calm-management (24102) iitsscu (4)
asnm-1 (1)}

ITSSappCPReqReg, MediumCost FROM CITSapplReq {iso (1) standard (0) cits-applReq (17423)
asnm-1 (1)}

LogicalChannelType FROM CITSapplMgmtComm {iso (1) standard (0) cits-applMgmt (17419) comm
(3)}

ITSaid FROM CITSapplMgmtITSaid {iso (1) standard (0) cits-applMgmt (17419) applRegistry
(2)}
;

-- End of IMPORTS

-- Types

ApplReqList::=ITSSappCPReqReg -- from TS 17423

ApplicationID::=SEQUENCE{
```

```
       itsaid     ITSaid,
       itsscu     ITS-scuId,
       instance   INTEGER(0..255) -- allows for 256 instances of this app in a single ITS-
SCU
       }


CrCiPrioList::=SEQUENCE (SIZE(0..255)) OF CrCiPrioReq

CrCiPrioReq::=SEQUENCE{
       linkId     Link-ID, -- requesting CI
       timeout    INTEGER(0..255),
       request    CCPrequest,
       interferer SEQUENCE OF CCPpotInt -- potential interferers
       }

CCPrequest::=SEQUENCE (SIZE(0..255)) OF SEQUENCE
       {
       reqNo      INTEGER(0..255),
       priority   UserPriority,
       status     CCPstatus
       }

CCPpotInt::=SEQUENCE{
       linkID     Link-ID, -- interferer
       status     CCPstatus
       }

CCPstatus::=INTEGER{
       released (0),
       requestd (16),
       ignored (64),
       granted (128)
       }

ITS-scuId::=INTEGER{
       reserved (0),
       hosts (1),
       routers (2),
       testSystem (3),
       any (65535)
       }(0..65535)

ITS-scuList::=SEQUENCE{
       iTS-scuId      ITS-scuId,
       its-scuType    ITS-SCUtype,
       time           GeneralizedTime,
       uniqueID       UTF8String
       }

ITS-SSI::=SEQUENCE{
       stationType      StationType,
       stationID        StationID,
       stationPosition KineVectOut
       }

MPARAM ::= PARAMS

Param24102::=SEQUENCE{
       paramNo      MPARAM.&paramRef({M-Params}),
       parameter    MPARAM.&Parameter({M-Params}{@paramNo})
       }

M-Params         MPARAM::={stationID | minPrioCrossCI | stationPosition | iTS-scuId |
vciList | crCiPrioList | timerITS-SSI | its-ssi | applReqList | vCIperformList | talive |
iTS-scuList, ...}

stationID        MPARAM::={&paramRef 0, &Parameter StationID}
minPrioCrossCI   MPARAM::={&paramRef 1, &Parameter UserPriority}
stationPosition MPARAM::={&paramRef 2, &Parameter KineVectOut}
iTS-scuId        MPARAM::={&paramRef 3, &Parameter ITS-scuId}
```

```
vciList          MPARAM::={&paramRef 4, &Parameter VciList}
crCiPrioList     MPARAM::={&paramRef 5, &Parameter CrCiPrioList}
timerITS-SSI     MPARAM::={&paramRef 6, &Parameter INTEGER(0..65535)}
its-ssi          MPARAM::={&paramRef 7, &Parameter ITS-SSI}
applReqList      MPARAM::={&paramRef 8, &Parameter ApplReqList}
vCIperformList   MPARAM::={&paramRef 9, &Parameter VCIperformList}
talive           MPARAM::={&paramRef 10, &Parameter Talive}
iTS-scuList      MPARAM::={&paramRef 11, &Parameter ITS-scuList}


Param24102No::=INTEGER{
       stationID       (0),
       minPrioCrossCI  (1),
       stationPosition (2),
       iTS-scuId       (3),
       vciList         (4),
       crCiPrioList    (5),
       timerITS-SSI    (6),
       its-ssi         (7),
       applReqList     (8),
       vCIperformList  (9),
       talive          (10),
       iTS-scuList     (11)
       } (0..255)

Talive::=INTEGER(0..65535) -- time in ms

VciList::=SEQUENCE (SIZE(0..255)) OF VciListEntry

VciListEntry::=SEQUENCE{
       linkId     Link-ID,
       medType    MedType,
       status     CIstatus,
       connect    Connect,
       macAddress MACaddress
       }

VCIperformList::=SEQUENCE (SIZE(0..255)) OF VCIperformance

VCIperformance::=SEQUENCE{
       linkId       Link-ID,
       channelType  LogicalChannelType,
       channelNo    INTEGER(0..255),
       minUserPrio  UserPriority,
       dataRateNW   DataRate,
       dataRatesNW  DataRatesNW,
       directivity  Directivity,
       commRangeRef INTEGER(0..65535),   -- in 1/10 m
       cost         MediumCost,
       reliability  INTEGER(0..255)
       }

StationID::=OCTET STRING (SIZE(4))

StationType::= INTEGER{
       mobile          (0), -- vehicle
       fixed           (1), -- roadside
       portable        (2), -- portable
       infrastructure  (254), -- central
       unknown         (255)
       } (0..255)

-- Value definitions

version INTEGER(0..255)::=2

/*
   The ASN.1 specification has been checked for conformance to the ASN.1
   standards by OSS ASN.1 Syntax Checker, and by OSS ASN-1STEP
*/
```

END