INTERNATIONAL STANDARD

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Information technology — Telecommunications and information exchange between systems — Elements of management information related to OSI Data Link Layer standards

AMENDMENT 1: Addition of DCE conditions and new attributes

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Éléments d'information de gestion concernant les normes de la couche de liaison de données OSI

AMENDEMENT 1: Addition de conditions DCE et de nouveaux atrtributs

Reference number
ISO/IEC 10742:1994/Amd.1:1995(E)

Foreword

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Amendment 1 to International Standard ISO/IEC 10742:1994 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems.*

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Introduction

This amendment to ISO/IEC 10742:1994 adds specifications answering to requirements for DCE aspects and some new attributes for LAPBDLE MOs and IVMOs.

These new specifications came out of the comments to DIS 10742. They will be merged into the base document ISO/IEC 10742:1994 at the next revision.

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AMENDMENT 1: Addition of DCE conditions and new attributes

5.1.3.2 DLE

Change the last sentence to:

"The sN-ServiceProvider attribute of the Network layer Linkage,X25PLE-DTE MOs and X25PLE-DCE" MOs contains the local distinguished name of a 'DLE' MO".

5.6 The LAPB Data Link Entity managed object

Add a new CONDITIONAL PACKAGE to lAPBDLE MO CLASS:

"mLP-Counters-P PRESENT IF ITU-T DCE mode operation is supported"

Add the attributes mW and mX in the mLP-P PACKAGE:

"mW REPLACE-WITH-DEFAULT GET-REPLACE
mX REPLACE-WITH-DEFAULT GET-REPLACE"

Add the following definition of the new CONDITIONAL PACKAGE in Packages:

"mLP-Counters-P PACKAGE
BEHAVIOUR mLP-Counters-P-B BEHAVIOUR
DEFINED AS
Additional properties present when ITU-T DCE mode operation is supported;;
ATTRIBUTES
receivedMlpResets REPLACE-WITH-DEFAULT GET-REPLACE,
timesMT1Expired REPLACE-WITH-DEFAULT GET-REPLACE,
iFramesReassignments REPLACE-WITH-DEFAULT GET-REPLACE,
receivedMlpFramesInGuardRegion REPLACE-WITH-DEFAULT GET-REPLACE,
REGISTERED AS {DLM.poi mLP-Counters-P(6)};"

Add the following definitions of the new ATTRIBUTES in Attributes:

"iFramesReassignments ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR iFramesReassignments-B BEHAVIOUR
DEFINED AS
Counter. Number of reassignments of IFrames on another slp.;;
REGISTERED AS {DLM.aoi iFramesReassignments(46)};

mW ATTRIBUTE
WITH ATTRIBUTE SYNTAX DLM.MW;

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```
MATCHES FOR EQUALITY, ORDERING;
BEHAVIOUR  mW-B  BEHAVIOUR
  DEFINED AS
    MLP window size.;;
REGISTERED AS   {DLM.aoi mW(47)};

mX  ATTRIBUTE
WITH ATTRIBUTE SYNTAX DLM.MX;
MATCHES FOR EQUALITY, ORDERING;
BEHAVIOUR  mX-B  BEHAVIOUR
  DEFINED AS
    Receive MLP window in the Guard Region.;;
REGISTERED AS   {DLM.aoi mX(48)};

receivedMlpFramesInGuardRegion  ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR  receivedMlpFramesInGuardRegion-B  BEHAVIOUR
  DEFINED AS
    Counter. Number of MLP Frames received in the Guard Region.;;
REGISTERED AS  {DLM.aoi receivedMlpFramesInGuardRegion(49)};

receivedMlpResets  ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR receivedMlpResets-B  BEHAVIOUR
  DEFINED AS
    Counter. Number of received MLP Resets.;;
REGISTERED AS   {DLM.aoi receivedMlpResets(50)};

timesMT1Expired ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR timesMT1Expired-B  BEHAVIOUR
  DEFINED AS
    Counter. Lost multilink frames.;;
REGISTERED AS   {DLM.aoi timesMT1Expired(51)};"
```

5.8 The LAPB Single Link Protocol Connection managed object

Complete the condition for the CONDITIONAL PACKAGE t3-P with:

"or ITU-T DCE mode operation is supported"

Add a new CONDITIONAL PACKAGE to sLPConnection MO CLASS:

"t4-P PRESENT IF Timer T4 of ISO/IEC 7776 or ITU-T DCE mode is supported"

Add a new CONDITIONAL PACKAGE to sLPConnection MO CLASS:

"link-reset-disconnect-n2-P PRESENT IF supported"

Remove in commonSLPConnection-P PACKAGE:

"ATTRIBUTE : t4Timer" *and*
"ATTRIBUTE GROUP: t4Timer"

Add in Packages the following definitions:

```
"link-reset-disconnect-n2-P PACKAGE
 BEHAVIOUR link-reset-disconnect-n2-P-B BEHAVIOUR
   DEFINED AS
     Present if supported.;;
 ATTRIBUTES
   abnormalLinkDisconnectsReceived GET,
   abnormalLinkDisconnectsSent GET,
```

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```
    linkResetsReceived GET,
    linkResetsSent GET,
    timesN2Reached GET;
ATTRIBUTE GROUPS
    "GMI":counters
        abnormalLinkDisconnectsReceived
        abnormalLinkDisconnectsSent
        linkResetsReceived
        linkResetsSent
        timesN2Reached;
REGISTERED AS {DLM.poi link-reset-disconnect-n2-P(4)};

t4-P PACKAGE
BEHAVIOUR t4-P-B BEHAVIOUR
    DEFINED AS
        Present if the Timer T4 is supported.;;
ATTRIBUTES
    t4Timer REPLACE-WITH-DEFAULT GET REPLACE,
    times T4Expired GET;
ATTRIBUTES GROUPS
    "GMI":counters
        timesT4Expired,
    timers
        t4Timer;
REGISTERED AS {DLM.poi t4-P(7)};"
```

Add the following definitions in Attributes:

```
"abnormalLinkDisconnectsReceived ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR abnormalLinkDisconnectsReceived-B BEHAVIOUR
    DEFINED AS
        Counter. Total number of received abnormal Link Disconnects.;;
REGISTERED AS {DLM.aoi abnormalLinkDisconnectsReceived(41)};

abnormalLinkDisconnectsSent ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR abnormalLinkDisconnectsSent-B BEHAVIOUR
    DEFINED AS
        Counter. Total number of sent abnormal Link Disconnects.;;
REGISTERED AS {DLM.aoi abnormalLinkDisconnectsSent(42)};

linkResetsReceived ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR linkResetsReceived-B BEHAVIOUR
    DEFINED AS
        Counter. Total number of received Link Resets.;;
REGISTERED AS {DLM.aoi linkResetsReceived(43)};

linkResetsSent ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR linkResetsSent-B BEHAVIOUR
    DEFINED AS
        Counter. Total number of sent Link Resets.;;
REGISTERED AS {DLM.aoi linkResetsSent(44)};

timesN2Reached ATTRIBUTE
DERIVED FROM "GMI":nonWrapping64BitCounter;
BEHAVIOUR timesN2Reached-B BEHAVIOUR
    DEFINED AS
        Counter. Total number of times N2 was Reached.;;
REGISTERED AS {DLM.aoi timesN2Reached(45)};"
```

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Add in the definition of Attribute t3Timer ATTRIBUTE for DEFINED AS:

"or ITU-T X25 mandatory parameter"

Add in the definition of Attribute t4Timer ATTRIBUTE for DEFINED AS:

"or a DCE"

5.9 The LAPB Single Link Protocol Connection Initial Values managed object

Complete the condition for the CONDITIONAL PACKAGE t3IVMO-P with:

"or ITU-T DCE mode operation is supported"

Add a new CONDITIONAL PACKAGE to sLPConnection IVMO CLASS:

"t4IVMO-P PRESENT IF Timer T4 of ISO/IEC 7776 or ITU-T DCE mode is supported"

Add the following definition in Packages:

```
"t4IVMO-P PACKAGE
 BEHAVIOUR t4IVMO-P-B BEHAVIOUR
    DEFINED AS
        Present if the Timer T4 is supported.;;
 ATTRIBUTES
    t4Timer REPLACE-WITH-DEFAULT GET REPLACE,
    times T4Expired GET;
 ATTRIBUTES GROUPS
     "GMI":counters
         timesT4Expired,
      timers
         t4Timer;
 REGISTERED AS {DLM.poi t4IVMO-P(8)};"
```

6 ASN.1 module

Add to other definitions

```
"MW  ::= SEQUENCE{
    mWSend      [0] IMPLICIT INTEGER (1...4095),
    mWReceive   [1] IMPLICIT INTEGER (1...4095)}

 MX  ::= SEQUENCE{
    mXSend      [0] IMPLICIT INTEGER (1...4095),
    mXReceive   [1] IMPLICIT INTEGER (1...4095)}"
```

Annex A (normative) Allocation of Object Identifiers

Add the following Object Identifiers to package(4)

```
"link-reset-disconnect-n2-P(4)
 mLP-Counters-P(6)"
 t4-P(7)}
 t4IVMO-P(8)"
```

Add the following Object Identifiers to attribute (7)

```
 "abnormalLinkDisconnectsReceived(41)
  abnormalLinkDisconnectsSent(42)
  linkResetsReceived(43)
  linkResetsSent(44)
  timesN2Reached(45)
  iFramesReassignments(46)
```

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mW(47)
mX(48)
receivedMlpFramesInGuardRegion(49)
receivedMlpResets(50)
timesMT1Expired(51)

New Annex

Add the following informative annex E.

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