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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 attributs*



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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# 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

### 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 IAPBDLE 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;

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,

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)};"

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)
```

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

**New Annex**

*Add the following informative annex E.*

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