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AMENDMENT 1
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Information technology — Message Handling Systems (MHS) —

Part 9:
Electronic Data Interchange Messaging System

AMENDMENT 1: Compression extension

Technologies de l'information — Systèmes de messagerie (MHS) —

Partie 9: Système de messagerie avec échange de données informatisé

AMENDEMENT 1: Extension de compression

ISO IEC

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Amendment 1 to ISO/IEC 10021-9:1995 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

This Amendment is also published by ITU-T, but not as identical text.

Information technology — Message Handling Systems (MHS) —

Part 9: Electronic Data Interchange Messaging System

AMENDMENT 1: Compression extension

1. Insert at the end of clause 2

" CCITT Recommendation V.42 bis (1990), Data Compression Procedures for data circuit terminating equipment (DCE) using error correction procedures"

2. Insert new subclauses at the end of 8.2.19 as follows :

8.2.19.1 Compression Extension introduction

The following extension describes the parameters that need to be exchanged when the primary body part is transferred in a compressed mode. The absence of this parameter implies that the content of the primary body part is not compressed.

```
primary-body-part-compression-indication EDIM-EXTENSION
      CompressionParameter--as defined for P2 File Transfer Body Part
      CRITICAL FOR DELIVERY
      ::= id-edi-compression
```

The syntax of this parameter is that of the corresponding parameter in the file transfer body-part defined in ITU-T Rec. X.420/ISO/IEC 10021-7.

The following macro gives a notation to express an instance of the compression extension.

```
            COMPRESSION-ALGORITHM MACRO ::=
            BEGIN
                  TYPE NOTATION ::= type | empty
                  VALUE NOTATION ::= value ( VALUE OBJECT IDENTIFIER )
            END
```

NOTE: Although this specification identifies V.42 bis compression, other compression algorithms may be used.

8.2.19.2 V.42bis compression

The following instance of the COMPRESSION-ALGORITHM macro defines the parameters needed to perform V.42 bis compression as stated in the CCITT Recommendation V.42 bis(1990).

```
V42BisCompression COMPRESSION-ALGORITHM V42BisCompressionParameter
      ::= id-edi-compression-v42bis


V42BisCompressionParameter ::= SEQUENCE {
 p1-Number-of-codewords        INTEGER DEFAULT 512,
 p2-Maximum-string-size        INTEGER DEFAULT 6,
```

NOTE: The values 4096 for p1-Number-of-codewords and 512 for p2-Maximum-string-size may give better performance for EDI purposes rather than the default values (which are those specified by V.42bis).

The V42BisCompressionParameter has the following components :

a)   **p1-Number-of-codewords:** gives the number of codewordsThe default value 512 allows 509 entries in the dictionary

b)   **p2-Maximum-string-size:** defines the Maximum string size (largest repetitive chain of bytes that can be compressed).

3.   Change 9.3 as follows:

Insert a new error code in the NNUAMSDiagnosticField after "proof-service-failure"

```
        compression-unsupported (35) --used when the received compression is not supported
```

Insert a new error code in the NNUserBasicCodeField by replacing "user-defined-reason (10)" by
"   user-defined-reason (10),

```
        compression-unsupported (11) --used when the received compression is not supported"
```

4.   Modify Annex A

Insert the following two lines at the end of the "Categories" section:
id-ext   ID ::= {id-edims 17}
id-alg   ID ::= {id-edims 18}

Insert two new sections at the end of Annex A, before "END"

```
-- Extensions
id-edi-compression ID::= { id-ext 0 }

-- Algorithms
id-edi-compression-v42bis ID::= { id-alg 0 }
```

5.   Modify Annex B as follows

Replace the ASN.1 definition of HeadingExtensionsField as follows :

```
HeadingExtensionsField ::= SET OF HeadingExtensionsSubField
    CHOSEN FROM { primary-body-part-compression-indication, ... }
```

Insert a new section before the last END of the ASN.1 module :

```
-- Compression extensions

Primary-body-part-compression-indication EDIM-EXTENSION
CompressionParameter--as defined for P2 File Transfer Body Part
    CRITICAL FOR DELIVERY
    ::= id-edi-compression

COMPRESSION-ALGORITHM MACRO ::=
    BEGIN
            TYPE NOTATION ::= type | empty
            VALUE NOTATION ::= value ( VALUE OBJECT IDENTIFIER )
    END


V42BisCompression COMPRESSION-ALGORITHM
        V42BisCompressionParameter
::= id-edi-compression-v42bis


V42BisCompressionParameter ::= SEQUENCE {
      p1-Number-of-codewords      INTEGER DEFAULT 512,
      p2-Maximum-string-size      INTEGER DEFAULT 6}
```

Insert a new error code in the NNUAMSDiagnosticField after "proof-service-failure"

```
compression-unsupported (35) --used when the received compression is not supported
```

Insert a new error code in the NNUserBasicCodeField by replacing "user-defined-reason (10)" by
"   user-defined-reason (10),

```
compression-unsupported (11) --used when the received compression is not supported"
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