Information technology — Text Communication — Message-Oriented Text Interchange Systems (MOTIS) —

Part 4:
Message Transfer System: Abstract Service Definition and Procedures

TECHNICAL CORRIGENDUM 4

Technologies de l'information — Communication de texte — Systèmes d'échange de texte en mode message —

Partie 4: Système de transfert de message: Procédures et définition de service abstrait

RECTIFICATIF TECHNIQUE 4

Technical corrigendum 4 to International Standard ISO/IEC 10021-4 : 1990 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology.*

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Page 9

Subclause 8.1.1.1.1.2

Insert a new paragraph six:

"Symmetric algorithms may be used within the above **asymmetric-token** (see clause 8.5.8)."

Page 11

Subclause 8.1.1.1.2.2

Insert a new last paragraph:

"Symmetric algorithms may be used within the above **asymmetric-token** (see clause 8.5.8)."

Page 17

Subclause 8.2.1.1.1.11

Delete the following values from Explicit-conversion:

"**teletex-to-telex, telex-to-ia5-text, telex-to-teletex, telex-to-g4-class-1, telex-to-videotex, ia5-text-to-telex, telex-to-g3-facsimile, videotex-to-telex,**"

Page 18

Subclause 8.2.1.1.1.14

In the first sentence of the last paragraph replace "mhs-preferred-delivery-method" with "preferredDeliveryMethod".

Page 18

Subclause 8.2.1.1.1.17

Replace the second paragraph with the following:

"This argument's value is the combination of two independent components. If present, the first component shall have one of the following values: **ordinary-mail, special-delivery, express-mail, counter-collection, counter-collection-with-telephone-advice, counter-collection-with-telex-advice**, or **counter-collection-with-teletex-advice**. If present, the second component shall have the value **bureau-fax-delivery**."

Page 20

Subclause 8.2.1.1.1.25

Add to the end of the sentence in the third paragraph:

"with an asymmetric algorithm (see clause 8.5.8)."

Page 21

Subclause 8.2.1.1.1.26

Insert a new last paragraph:

"Symmetric algorithms may be used within the above **asymmetric-token** (see clause 8.5.8). If symmetric algorithms are used for both the **message-token** and the **content-integrity-check** then the **message-token** can only support Non Repudiation of Origin elements-of-service if the security policy in force provides for the involvement of a third party acting as a notary."

Page 24

Subclause 8.2.1.1.1.34

In the bullet identified by "**external**:" after "1984 systems" insert:

"; it shall only be used with **mts-transfer-protocol-1984**"

After this bullet insert a new note:

"NOTE - The interworking rules ensure that the **external content-type** is never used in conjunction with **mts-transfer** or **mts-transfer-protocol**. Although the **external content-type** is designed to allow interworking between 1988 systems through intermediate 1984 systems, a 1984 system may deliver (or submit) a **content** of the **external content-type** provided that the MTS-user (or the MTA itself) performs the equivalent of the upgrading (or downgrading) rules given in ISO/IEC 10021-6."

Page 25

Subclause 8.2.1.1.1.34

In the description of **inner-envelope**, replace:

", for forwarding by the recipient named on the outer-envelope to those named on the inner-envelope."

with:

". When delivered to the recipient named on the outer-envelope, the outer-envelope is removed and the content is deciphered, if needed, resulting in an inner-envelope and its content. The information contained in the inner-envelope is used to transfer the content of the inner-envelope to the recipients named on the inner-envelope."

Page 25

Subclause 8.2.1.1.1.37

The word content in the second paragraph should be in bold face.

Add at the end of the subclause:

"NOTE - The value of the octet string containing the encoded **content** does not change as the message crosses the MTS."

Pages 26-27

Subclause 8.2.1.1.2.4

In the third paragraph replace "the arguments of the submitted message (see clause 8.2.1.1.1)" with "the Message-submission arguments (see clause 8.2.1.1.1) of the subject message".

Delete the last sentence of the third paragraph.

Page 40

Subclause 8.3.1.1.1.4

In the first paragraph, replace the last sentence with "An additional value of this argument shall be present for each occasion the message was redirected.".

Page 40

Subclause 8.3.1.1.1.5

In the first paragraph, replace the last sentence with "An additional value of this argument shall be present for each occasion the message was redirected.".

Page 40

Subclause 8.3.1.1.1.6

Replace the first paragraph with the following:

"If the originator of the message requested disclosure of other recipients, this argument contains the **OR-names** of the originally-specified recipients other than the one (if any) identified by either the **originally-intended-recipient-name** argument, if present, or else by the **this-recipient-name** argument. This argument shall be generated by the MTS if, and only if, the message-submission abstract-operation had the **disclosure-of-other-recipients** argument set to **disclosure-of-other-recipients-requested** and there is at least one such other recipient."

Add at the end of the subclause:

"NOTE - If DL expansion has been performed, the **OR-names** of the DL's members are not disclosed. The **OR-name** of the DL is disclosed if, and only if, it is that of an originally-specified recipient."

Page 49

Subclause 8.3.1.2.1.11

Add new **non-delivery-diagnostic-codes** to the end of the list, replacing the full stop at the end of "**unable-to-downgrade**" by a semi-colon:

> "**unable-to-complete-transfer**: receiving system has indicated that it is permanently unable to complete transfer of the subject; for example, when the transfer is of such a size that it could never be accepted;

> **transfer-attempts-limit-reached**: the maximum number or time duration of repeat attempts to transfer the subject was reached."

Page 49

Subclause 8.3.1.2.1.13

To improve its clarity, replace the fourth paragraph by:

"The **report-origin-authentication-check** contains the **report-origin-authentication-algorithm-identifier** and an asymmetrically-encrypted hashed version of:

the **report-origin-authentication-algorithm-identifier**;

the **content-identifier** of the subject;

the **message-security-label** of the subject;

and all values of the following (per-recipient) arguments:

the **actual-recipient-name**,

the **originally-intended-recipient-name**, and:

for a delivery-report:

the **message-delivery-time**,

the **type-of-MTS-user**,

the **recipient-certificate** if requested by the originator of the message for recipients to which the report relates;

the **proof-of-delivery** if requested by the originator of the message for recipients to which the report relates and if the report is on a message; or

for a non-delivery-report:

the **non-delivery-reason-code**, and

the **non-delivery-diagnostic-code**."

Page 61

Subclause 8.5.2

Add a new sentence at the end of the third paragraph "If the identification is relative to the associated ADMD then that **administration-domain-name** shall be present." and delete Note 2.

Page 62

Subclause 8.5.5

In the fourth paragraph replace ", optionally a number of **extension-attributes**" with " selected from those defined in ISO/IEC 10021-2"

Replace the last paragraph with:

"In the abstract syntax definition in clause 9, the standard attributes are represented by **built-in-standard-attributes** and by **extension-standard-attributes** and the domain-defined attributes are represented by **built-in-domain-defined-attributes** and by **extension-domain-defined-attributes**.

Clause 18.5 of ISO/IEC 10021-2 specifies several **OR-address** forms. These define which standard and domain-defined attributes may be used together to construct a valid **OR-address**.

Clause 18.3 of ISO/IEC 10021-2 specifies rules indicating the character sets - numeric, printable, and teletex - from which the values of a particular standard attribute may be drawn, and it also defines the valid combinations of the different variants of that standard attribute in the abstract syntax."

Page 62

Subclause 8.5.6

Delete the second paragraph.

In the (existing) third paragraph delete the sentence "The **telex** type is defined in CCITT Recommendation F.1.". In the penultimate sentence replace "(**sfd**) type is" with "(**sfd**) type and the **telex** type were" and replace "SFDs" with "SFD and TLX body parts".

After the (existing) third paragraph insert the following new paragraphs:

"Externally-defined **encoded-information-types** are those which are not basic **encoded-information-types**.

In the abstract syntax definition in clause 9, the **encoded-information-types** are *the logical union of* **built-in-encoded-information-types** and **extended-encoded-information-types**. *The latter are those to which object-identifiers have been allocated by an appropriate authority. They include both standardised and privately-defined* **encoded-information-types**.

A basic **encoded-information-type** may be represented equivalently by a bit in the **built-in-encoded-information-types** or by an **extended-encoded-information-type**. Annex A acts as the registration authority for the object-identifiers to be used as the **extended-encoded-information-type** registrations of the basic **encoded-information-types**.

An externally-defined **encoded-information-type** is always represented by an **extended-encoded-information-type**. Other standards define object-identifiers that may be used as **extended-encoded-information-types**."

Page 63

Subclause 8.5.7

In the second paragraph replace "A **certificate** contains the following parameters:" with:

"A **certificate** contains one or more items of certification information. Each instance of certification information contains the following parameters:"

Change the description of the "**subject-public-keys**" parameter to:

"**subject-public-key**: the public-asymmetric-encryption-keys of the subject;"

Change the description of the "**algorithms**" parameter to:

"**algorithm**: the **algorithm-identifiers**, associated with a **subject-public-key**;"

6

Replace the 8th paragraph, starting "The form of a **certificate**" with:

"The form of a **certificate** is defined in ISO/IEC 9594-8 as the data-type **certificates**."

Page 64

Subclause 8.5.8

Change the description of the "**recipient-name**" parameter to:

"**recipient-name**: either the **OR-address-and-or-directory-name** of the intended-recipient of the token or, when MTAs use strong authentication during a bind, the **MTA-name** and optionally the **global-domain-identifier**;"

Page 70

Figure 2 (Part 3 of 26)

Insert the keyword IMPLICIT in the production for "MessageSubmission":

<u>extensions [1] IMPLICIT EXTENSIONS CHOSEN FROM {</u>

Page 72

Figure 2 (Part 5 of 26)

Insert the keyword IMPLICIT in the production for "MessageDelivery":

<u>proof-of-delivery [1] IMPLICIT ProofOfDelivery OPTIONAL }</u>

Page 74

Figure 2 (Part 7 of 26)

Insert the keyword IMPLICIT in the production for "PerMessageSubmissionFields":

<u>extensions [2] IMPLICIT PerMessageSubmissionExtensions DEFAULT { } }</u>

Page 75

Figure 2 (Part 8 of 26)

Insert the keyword IMPLICIT in the production for "PerRecipientMessageSubmissionFields":

<u>extensions [2] IMPLICIT PerRecipientMessageSubmissionExtensions DEFAULT { } }</u>

Insert the keyword IMPLICIT in the production for "PerProbeSubmissionFields":

<u>extensions [2] IMPLICIT EXTENSIONS CHOSEN FROM {</u>

Insert the keyword IMPLICIT in the production for "PerRecipientProbeSubmissionFields":

```
extensions [2] IMPLICIT EXTENSIONS CHOSEN FROM {
```

Page 76

Figure 2 (Part 9 of 26)

Insert the keyword IMPLICIT in the production for "OtherMessageDeliveryFields":

```
extensions [9] IMPLICIT EXTENSIONS CHOSEN FROM {
```

Insert the keyword IMPLICIT in the production for "PerReportDeliveryFields":

```
extensions [1] IMPLICIT EXTENSIONS CHOSEN FROM {
```

Insert the keyword IMPLICIT in the production for "PerRecipientReportDeliveryFields":

```
extensions [4] IMPLICIT EXTENSIONS CHOSEN FROM {
```

Page 78

Figure 2 (Part 11 of 26)

Replace the production for ExplicitConversion by:

```
ExplicitConversion ::= INTEGER {
        ia5-text-to-teletex (0),
        -- values 1 to 7 are no longer defined
        ia5-text-to-g3-facsimile (8),
        ia5-text-to-g4-class-1 (9),
        ia5-text-to-videotex (10),
        teletex-to-ia5-text (11),
        teletex-to-g3-facsimile (12),
        teletex-to-g4-class-1 (13),
        teletex-to-videotex (14),
        -- value 15 is no longer defined
        videotex-to-ia5-text (16),
        videotex-to-teletex (17) } (0..ub-integer-options)
```

Page 79

Figure 2 (Part 12 of 26)

In the production for "NonDeliveryDiagnosticCode", replace:

```
unable-to-downgrade (47) } (0..ub-diagnostic-codes)
```

with:

```
        unable-to-downgrade (47),
        unable-to-complete-transfer (48),
        transfer-attempts-limit-reached (49) } (0..ub-diagnostic-codes)
```

8

Page 80

Figure 2 (Part 13 of 26)

Insert the keyword IMPLICIT in the production for "ExtensionField":

```
standard-extension [0] IMPLICIT EXTENSION,
```

Page 82

Figure 2 (Part 15 of 26)

In the second comment line in PhysicalDeliveryModes definition, replace "*with*" by "*independently of*".

Page 85

Figure 2 (Part 18 of 26)

Insert the keyword IMPLICIT in the production for "PerRecipientDeliveryReportFields":

```
proof-of-delivery [1] IMPLICIT ProofOfDelivery OPTIONAL }
```

Page 86

Figure 2 (Part 19 of 26)

Replace the productions for "ORAddress", "StandardAttributes" and intermediate comments with:

```
ORAddress ::= SEQUENCE {
        built-in-standard-attributes BuiltInStandardAttributes,
        built-in-domain-defined-attributes BuiltInDomainDefinedAttributes OPTIONAL,
        -- see also teletex-domain-defined-attributes
        extension-attributes ExtensionAttributes OPTIONAL }
```

--   *The OR-address is semantically absent from the OR-name if the built-in-standard-attribute*
--   *sequence is empty and the built-in-domain-defined-attributes and extension-attributes are both omitted.*

--   *Built-in Standard Attributes*

```
BuiltInStandardAttributes ::= SEQUENCE {
        country-name CountryName OPTIONAL,
        administration-domain-name AdministrationDomainName OPTIONAL,
        network-address [0] NetworkAddress OPTIONAL,
        -- see also extended-network-address
        terminal-identifier [1] TerminalIdentifier OPTIONAL,
        private-domain-name [2] PrivateDomainName OPTIONAL,
        organization-name [3] OrganizationName OPTIONAL,
        -- see also teletex-organization-name
        numeric-user-identifier [4] NumericUserIdentifier OPTIONAL,
        personal-name [5] PersonalName OPTIONAL,
        -- see also teletex-personal-name
        organizational-unit-names [6] OrganizationalUnitNames OPTIONAL
        -- see also teletex-organizational-unit-names -- }
```

Page 87

Figure 2 (Part 20 of 26)

After the definition of "NetworkAddress" add: "-- *see also extended-network-address*"

After the definition of "OrganizationName" add: "-- *see also teletex-organization-name*".

After the definition of "PersonalName" add: "-- *see also teletex-personal-name*".

After the definition of "OrganizationalUnitNames" add: "-- *see also teletex-organizational-unit-names*".

Replace the comment "-- *Domain-defined Attributes*" and the definitions "DomainDefinedAttributes" and "DomainDefinedAttribute" with:

-- *Built-in Domain-defined Attributes*

```
BuiltInDomainDefinedAttributes ::= SEQUENCE SIZE (1..ub-domain-defined-attributes) OF
BuiltInDomainDefinedAttribute

BuiltInDomainDefinedAttribute ::= SEQUENCE {
        type PrintableString (SIZE (1..ub-domain-defined-attribute-type-length)),
        value PrintableString (SIZE (1..ub-domain-defined-attribute-value-length)) }
```

Before the definition of "common-name" add: "-- *Extension Standard Attributes*"

Move the definitions of "teletex-domain-defined-attributes", "TeletexDomainDefinedAttributes" and "TeletexDomainDefinedAttribute" from (Part 21 of 26) to the end of (Part 23 of 26) in Figure 2, with the new heading:

-- *Extension Domain-defined Attributes*

Page 91

Figure 2 (Part 24 of 26)

In the production for "EncodedInformationTypes", change:

```
external-encoded-information-types [4] ExternalEncodedInformationTypes OPTIONAL }
```

to:

```
extended-encoded-information-types [4] ExtendedEncodedInformationTypes OPTIONAL }
```

In the production for BuiltInEncodedInformationTypes, delete "`telex (1),`".

In the production for "ExternalEncodedInformationTypes", change:

-- *External Encoded Information Types*

```
ExternalEncodedInformationTypes ::= SET SIZE (1..ub-encoded-information-types) OF
ExternalEncodedInformationType

ExternalEncodedInformationType ::= OBJECT IDENTIFIER
```

to:

-- *Extended Encoded Information Types*

```
ExtendedEncodedInformationTypes ::= SET SIZE (1..ub-encoded-information-types) OF
ExtendedEncodedInformationType
```

10

```
ExtendedEncodedInformationType ::= OBJECT IDENTIFIER
```

Page 92

Figure 2 (Part 25 of 26)

Insert the keyword IMPLICIT in the production for "Token":

```
token-type-identifier [0] IMPLICIT TOKEN,
```

Insert the keyword IMPLICIT in the production for "AsymmetricToken":

```
encrypted-data [2] IMPLICIT ENCRYPTED TokenData OPTIONAL }
```

Insert the keyword IMPLICIT in the production for "TokenData":

```
type [0] IMPLICIT TOKEN-DATA,
```

Insert the keyword IMPLICIT in the production for "MessageTokenSignedData":

```
content-integrity-check [1] IMPLICIT ContentIntegrityCheck OPTIONAL,
```

Page 93

Figure 2 (Part 26 of 26)

Insert the keyword IMPLICIT in the production for "MessageTokenEncryptedData":

```
content-integrity-check [1] IMPLICIT ContentIntegrityCheck OPTIONAL,
```

Insert the keyword IMPLICIT in the production for "SecurityCategory":

```
type [0] IMPLICIT SECURITY-CATEGORY,
```

Page 97

Subclause 12.1.1.1.1.2

Insert a new paragraph six:

"Symmetric algorithms may be used within the above **asymmetric-token** (see clause 8.5.8)."

Page 98

Subclause 12.1.1.1.2.2

Insert a new last paragraph:

"Symmetric algorithms may be used within the above **asymmetric-token** (see clause 8.5.8)."

Page 102

Subclause 12.2.1.1.1.2

Delete the Note from the second bullet in the second paragraph.

Page 110

Subclause 12.3.1

In the last sentence of the last paragraph add "and either" before "**redirected** or **dl-operation**".

Append the last paragraph with the following sentence: "To indicate the order in which redirection and DL expansion have occurred, **redirected** and **dl-operation** indications shall not both appear in a single **trace-information-element** (or **internal-trace-information-element**).".

Page 114

Figure 4 (Part 3 of 7)

Insert the keyword IMPLICIT in the production for "PerMessageTransferFields":

        extensions [3] IMPLICIT EXTENSIONS CHOSEN FROM {

Insert the keyword IMPLICIT in the production for "PerRecipientMessageTransferFields":

        extensions [3] IMPLICIT EXTENSIONS CHOSEN FROM {

Page 115

Figure 4 (Part 4 of 7)

Insert the keyword IMPLICIT in the production for "PerProbeTransferFields":

        extensions [3] IMPLICIT EXTENSIONS CHOSEN FROM {

Insert the keyword IMPLICIT in the production for "PerRecipientProbeTransferFields":

        extensions [3] IMPLICIT EXTENSIONS CHOSEN FROM {

Insert the keyword IMPLICIT in the production for "ReportTransferEnvelope":

        extensions [1] IMPLICIT EXTENSIONS CHOSEN FROM {

Page 116

Figure 4 (Part 5 of 7)

Insert the keyword IMPLICIT in the production for "PerReportTransferFields":

        extensions [3] IMPLICIT EXTENSIONS CHOSEN FROM {