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AMENDMENT 1
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Information technology — Text Communication — Message-Oriented Text Interchange Systems (MOTIS) —

Part 6: Protocol Specifications

AMENDMENT 1: Message Store Extensions

*Technologies de l'information — Communication de texte — Systèmes d'échange
de texte en mode message (MOTIS) —*

Partie 6: Spécifications du protocole

AMENDEMENT 1: Extensions de dépôt de message



Reference number
ISO/IEC 10021-6:1990/Amd 1:1994(E)



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Foreword

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Amendment 1 to International Standard ISO/IEC 10021-6:1990 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee 18, *Document processing and related communication*.

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

Part 6: Protocol Specifications

Amendment 1: Message Store Extensions

0 Introduction

This clause provides an introduction to this Amendment. The text in this clause is not intended for inclusion in ISO/IEC 10021-6.

This Amendment accommodates the requirements for additional Application Contexts arising from ISO/IEC 10021-5:1994 concerning Message Store extensions, and from Amendment 2 to ISO/IEC 10021-4:1990 concerning P3 extensions.

2.1 Open Systems Interconnection

Replace existing clause 2.1 with the following:

This part of ISO/IEC 10021 cites the following OSI specifications:

- | | |
|---------------------------------|--|
| ISO/IEC 8649:1988, | <i>Information technology - Open Systems Interconnection - Service Definition for the Association Control Service Element.</i> |
| ISO/IEC 8822:1994, | <i>Information technology - Open Systems Interconnection - Basic Presentation Service Definition.</i> |
| ISO/IEC 8824-1: ¹⁾ , | <i>Information technology - Open Systems Interconnection - Abstract Syntax Notation One (ASN.1): Specification of Basic Notation.</i> |
| ISO/IEC 8824-2: ¹⁾ , | <i>Information technology - Open Systems Interconnection - Abstract Syntax Notation One (ASN.1): Information Object Specification.</i> |
| ISO/IEC 8824-3: ¹⁾ , | <i>Information technology - Open Systems Interconnection - Abstract Syntax Notation One (ASN.1): Constraint Specification.</i> |

¹⁾ To be published.

- ISO/IEC 8824-4: ¹⁾, *Information technology - Open Systems Interconnection - Abstract Syntax Notation One (ASN.1): Parameterization of ASN.1 Specifications.*
- ISO/IEC 9066-1:1989, *Information processing systems - Text communication - Reliable Transfer - Part 1: Model and service definition.*
- ISO/IEC 9066-2:1989, *Information processing systems - Text communication - Reliable Transfer - Part 2: Protocol Specification.*
- ISO/IEC 13712-1: ¹⁾, *Information technology - Remote Operations: Concepts, Model and Notation.*
- ISO/IEC 13712-2: ¹⁾, *Information technology - Remote Operations: OSI Realisations: Remote Operations Service Element (ROSE) Service Definition.*
- ISO/IEC 13712-3: ¹⁾, *Information technology - Remote Operations: OSI Realisations: Remote Operations Service Element (ROSE) Protocol Specification.*

2.2 Message Handling Systems

Replace existing clause 2.2 with the following:

This part of ISO/IEC 10021 cites the following Message Handling specifications:

- ISO/IEC 10021-1:1990, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 1: System and service overview.*
- ISO/IEC 10021-1/Amd.1:1994, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 1: System and service overview - Amendment 1: Message Store Extensions.*
- ISO/IEC 10021-2:1990, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture.*
- ISO/IEC 10021-2/Amd.1:1994, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture - Amendment 1: Representation of OIR addresses for human exchange.*
- ISO/IEC 10021-2/Amd.2:1994, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture - Amendment 2: Minor Enhancements - Multinational organizations and terminal-form addresses.*
- ISO/IEC 10021-2/Amd.3: ¹⁾, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture - Amendment 3.*
- ISO/IEC 10021-4:1990, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures.*
- ISO/IEC 10021-4/Amd.1:1994, *Information technology—Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures - Amendment 1: Minor Enhancements: Notification type and Directory substitution.*

¹⁾ To be published

- ISO/IEC 10021-4/Amd.2: ¹⁾ *Information technology —Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures - Amendment 2: ASN.1 and P3 extensions.*
- ISO/IEC 10021-5:1994, *Information technology —Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 5: Message Store - Abstract service definition.*
- ISO/IEC 10021-6:1990, *Information technology —Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 6: Protocol Specifications.*
- ISO/IEC 10021-7:1990, *Information technology —Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 7: Interpersonal messaging system.*
- ISO/IEC 10021-7/Amd.1:1994, *Information technology —Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 7: Interpersonal messaging system - Amendment 1: Minor Enhancements: File transfer body part and auto-submission indication.*
- ISO/IEC 10021-7/Amd.2: ¹⁾ *Information technology —Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 7: Interpersonal messaging system - Amendment 2: Voice body part and new ASN.1.*
- ISO/IEC 10021-7/Amd.3:1994, *Information technology —Text Communication - Message Oriented Text Interchange Systems (MOTIS) - Part 7: Interpersonal messaging system - Amendment 3: Message Store Extensions.*

6.1 MHS Access Protocol Model

Replace paragraph 5 of 6.1 ("Access to the MTS ...") with the following:

Access to the MTS Abstract Service is realized by the pairing of three ports between the MTS and the MTS-user. Each port is supported by an application-service-element; for some port types more than one version of the application-service-element is defined. The Message Submission Service Element (MSSE) supports the services of the submission-port. The Message Delivery Service Element 1988 (MDSE-88) and Message Delivery Service Element 1994 (MDSE-94) support the services of the delivery-port. The Message Administration Service Element 1988 (MASE-88) and Message Administration Service Element 1994 (MASE-94) support the services of the administration-port.

Replace paragraph 6 of 6.1 ("Similarly, access to the MS ...") with the following:

Similarly, access to the MS Abstract Service is realized by the pairing of three ports between the MS and the MS-user. Each port is supported by an application-service-element; for each port type more than one version of the application-service-element is defined. The Message Submission Service Element (MSSE) and the MS Message Submission Service Element (MS-MSSE) support the services of the MS-submission-port. The Message Retrieval Service Element 1988 (MRSE-88) and the Message Retrieval Service Element 1994 (MRSE-94) support the services of the retrieval-port. The Message Administration Service Element 1988 (MASE-88) and Message Administration Service Element 1994 (MASE-94) support the services of the administration-port. The MS-user ASEs act as the consumer, and the MTS ASEs act as the supplier of the MS Abstract Service.

Replace the second sentence of paragraph 8 of 6.1 ("The MSSE, MDSE ...") with the following:

The MSSE, MS-MSSE, MDSE-88, MDSE-94, MRSE-88, MRSE-94, MASE-88, and MASE-94 provide the mapping function of the abstract-syntax notation of an abstract service onto the services provided by the ROSE.

¹⁾ To be published

Replace the first sentence of paragraph 11 of 6.1 ("The combination of one or more ...") with the following:

The combination of one or more of the MSSE, MS-MSSE, MDSE-88, MDSE-94, MRSE-88, MRSE-94, MASE-88, and MASE-94, together with their supporting ASEs, defines the application-context of an application-association.

Replace Table 1 with the following:

Table 1 MHS Access Protocol Application Contexts

Application Context	Message Handling ASEs								Supporting ASEs		
	MSSE	MS-MSSE	MDSE-88	MDSE-94	MASE-88	MASE-94	MRSE-88	MRSE-94	ROSE	RTSE	ACSE
MTS Access Protocol											
mts-access-88	C	-	C	-	C	-	-	-	x	-	x
mts-forced-access-88	S	-	S	-	S	-	-	-	x	-	x
mts-reliable-access-88	C	-	C	-	C	-	-	-	x	x	x
mts-forced-reliable-access-88	S	-	S	-	S	-	-	-	x	x	x
mts-access-94	C	-	-	C	-	C	-	-	x	-	x
mts-forced-access-94	S	-	-	S	-	S	-	-	x	-	x
mts-reliable-access-94	C	-	-	C	-	C	-	-	x	x	x
mts-forced-reliable-access-94	S	-	-	S	-	S	-	-	x	x	x
MS Access Protocol											
ms-access-88	C	-	-	-	C	-	C	-	x	-	x
ms-reliable-access-88	C	-	-	-	C	-	C	-	x	x	x
ms-access-94	-	C	-	-	-	C	-	C	x	-	x
ms-reliable-access-94	-	C	-	-	-	C	-	C	x	x	x

Legend	
x	present
-	absent
C	present with initiator the consumer
S	present with initiator the supplier

Replace the fourth last paragraph of 6.1 ("If the MTS Access Protocol ...") with the following:

If the 1994 version of the MTS Access Protocol (P3) is supported, then support for the mts-access-94 and mts-forced-access-94 application-contexts is mandatory for an MTA. If the 1988 version of the MTS Access Protocol (P3) is supported, then support for the mts-access-88 and mts-forced-access-88 application-contexts is mandatory for an MTA. If an MTA supports the mts-reliable-access-94 application-context, it shall also support the mts-forced-reliable-access-94 application-context, and vice versa. If an MTA supports the mts-reliable-access-88 application-context, it shall also support the mts-forced-reliable-access-88 application-context, and vice versa. Support for each of the MTS Access Protocol (P3) application-contexts is optional for an MTS-user. The 1994 versions of these application-contexts were introduced to provide revised versions of the Delivery-control and Register operations.

Replace the third last paragraph of 6.1 ("If the MS Access Protocol ...") with the following:

If the MS Access Protocol (P7) is supported, then support for the ms-access-88 application-context is mandatory for an MS, and support for the ms-reliable-access-88, ms-access-94, and ms-reliable-access-94 application-contexts is optional. If an MS supports the ms-reliable-access-94 application-context, it shall also support the ms-reliable-access-88 and ms-access-94 application-contexts. Support for each of the MS Access Protocol (P7) application-contexts is optional for an MS-user. The ms-access-94 and ms-reliable-access-94 application-contexts were introduced in the 1994 version of this part of ISO/IEC 10021 in order to offer a broader range of Message Store services (see 7.4 of ISO/IEC 10021-1:1994). These 1994

application-contexts may be used to offer both the original (1988) range of services and the enhanced range of services. Nevertheless, these two application-contexts are intended to stay optional in the next version of this part of ISO/IEC 10021.

NOTE - An MS which supports one of the 1994 MS Access Protocols may be required to interwork with the MTS using one of the 1988 MTS Access Protocols. If the MS-user invokes Register (a 1994 operation), the MS should attempt to downgrade the Register argument to a Register-88 argument, and invoke the Register-88 operation over its association with the MTS. If this is not possible the MS returns a register-rejected error to the MS-user.

Append the following to the second last paragraph of 6.1:

This illustrates only one of the possible application-contexts supporting the MTS Access Protocol; in the 1988 version of the MTS Access Protocol, the MDSE-88 replaces the MDSE-94, and the MASE-88 replaces the MASE-94.

Append the following to the last paragraph of 6.1:

This illustrates only one of the possible application-contexts supporting the MS Access Protocol; in the 1988 version of the MS Access Protocol, the MSSE replaces the MS-MSSE, the MRSE-88 replaces the MRSE-94, and the MASE-88 replaces the MASE-94.

In Figures 1 and 2, replace "MDSE" with "MDSE-94" (twice), "MRSE" with "MRSE-94" (twice), and "MASE" with "MASE-94" (four times). In Figure 2, replace "MSSE" with "MS-MSSE" (twice).

6.2 Services provided by the MTS access protocol

In existing clause 6.2, replace the last seven lines (from "Message Delivery Service Element" onwards) with:

Message Delivery Service Element 1988 (MDSE-88)

- g) Message-delivery
- h) Report-delivery
- i) Delivery-control-88

Message Administration Service Element 1988 (MASE-88)

- j) Register-88
- k) Change-credentials

In the 1994 version of the MTS Access Protocol, the Message Delivery Service Element 1988 and Message Administration Service Element 1988 are replaced by the following:

Message Delivery Service Element 1994 (MDSE-94)

- l) Message-delivery
- m) Report-delivery
- n) Delivery-control

Message Administration Service Element 1994 (MASE-94)

- o) Register
- p) Change-credentials

6.3 Services provided by the MS access protocol

In existing clause 6.3, replace the last ten lines (from "Message Retrieval Service Element" onwards) with:

Message Retrieval Service Element 1988 (MRSE-88)

- g) Summarize
- h) List
- i) Fetch
- j) Delete
- k) Register-MS
- l) Alert

Message Administration Service Element 1988 (MASE-88)

- m) Register-88
- n) Change-credentials

In the 1994 version of the MS Access Protocol, the Message Submission Service Element, the Message Retrieval Service Element 1988 and the Message Administration Service Element 1988 are replaced by the following:

MS Message Submission Service Element (MS-MSSE)

- o) MS-message-submission
- p) MS-probe-submission
- q) MS-cancel-deferred-delivery
- r) MS-submission-control

Message Retrieval Service Element 1994 (MRSE-94)

- s) Modify (in addition to the operations defined for the MRSE-88)

Message Administration Service Element 1994 (MASE-94)

- t) Register
- u) Change-credentials

7 MTS Access Protocol Abstract Syntax Definition

Replace the first sentence of clause 7 with the following:

The abstract-syntax of the 1994 and 1988 versions of the MTS Access Protocol (P3) is defined in Figure 3.

In existing clause 7, replace the last three paragraphs (from "Message Submission Service Element" onwards) and Figure 3 with the following:

Abstract Syntaxes: definitions of the abstract-syntaxes for the supporting application-service-elements and for the three principal application-service-elements (each of which include ROSE):

- a) Message Submission Service Element (Figure 3 Part 4)
- b) Message Delivery Service Element 1994 and 1988 (Figure 3 Part 4)
- c) Message Administration Service Element 1994 and 1988 (Figure 3 Part 5)

```
MTSAccessProtocol {joint-iso-ccitt mhs-motis(6) protocols (0) modules(0) mts-access-protocol (1)
                    version-1994(0)}
```

```
DEFINITIONS IMPLICIT TAGS ::=
```

```
BEGIN
```

```
-- Prologue
```

```
IMPORTS
```

```
-- MTS Abstract Service
```

```
administration, delivery, mts-access-contract, mts-connect, mts-forced-access-contract,
submission
```

```
-----
FROM MTSAbstractService {joint-iso-ccitt mhs-motis(6) mts(3) modules(0)
                        mts-abstract-service(1) version-1994(0)}
```

```
-- MTS Abstract Service (1988)
```

```
administration-88, delivery-88, mts-access-contract-88, mts-forced-access-contract-88
```

```
-----
FROM MTSAbstractService88 {joint-iso-ccitt mhs-motis(6) mts(3) modules(0)
                        mts-abstract-service(1) version-1988(1988)}
```

```
-- Remote Operations
```

```
APPLICATION-CONTEXT
```

```
-----
FROM Remote-Operations-Information-Objects-extensions {joint-iso-ccitt
                        remote-operations(4) informationObjects-extensions(8) version1(0)}
```

```
Code
```

```
-----
FROM Remote-Operations-Information-Objects {joint-iso-ccitt remote-operations(4)
                        informationObjects(5) version1(0)}
```

```
Bind(), InvokeId, Unbind()
```

```
-----
FROM Remote-Operations-Generic-ROS-PDUs {joint-iso-ccitt remote-operations(4)
                        generic-ROS-PDUs(6) version1(0)}
```

```
ROS-SingleAS()
```

```
-----
FROM Remote-Operations-Useful-Definitions {joint-iso-ccitt remote-operations(4)
                        useful-definitions(7) version1(0)}
```

```
acse, association-by-RTSE, pData, transfer-by-RTSE
```

```
-----
FROM Remote-Operations-Realisations {joint-iso-ccitt remote-operations(4)
                        realisations(9) version1(0)}
```

```
acse-abstract-syntax
```

```
-----
FROM Remote-Operations-Abstract-Syntaxes {joint-iso-ccitt remote-operations(4)
                        remote-operations-abstract-syntaxes(12) version1(0)}
```

```
-- Reliable Transfer
```

```
RTSE-apdus
```

```
-----
FROM Reliable-Transfer-APDUS {joint-iso-ccitt reliable-transfer(3) apdus(0)}
```

Figure 3 - Abstract-Syntax Definition of the MTS Access Protocol (P3) (Part 1 of 5)