JT-X411
MHS Interworking Profile

1.Relations with international standards

(1) Part I of this Standard is based on the X.400-series of ITU-T Recommendations (1984), and mainly describes the use of X.411 and X.420, as well as extended functions for use of the Japanese language.

(2) Part II of this Standard is based on the X.400, X.402, X.407, X.411, X.413, X.419, X.420, X.208, X.209, X.214, X.215, X.216, X.217, X.218, X.224, X.225, X.226, X.227, and X.228 of ITU-T Recommendations (1988), and mainly describes the use of X.411, X.419, X.420, as well as extended functions for use of the Japanese language.
Readers of this Standard should consult the ITU-T Recommendations as well. The following is a list of ITU-T Recommendations that this Standard should refer to:

	Part I (Recommendationsin 1984)	Part II (Recommendations in 1988)
Scope	X.400	X.400, X.402
Services	X.401, X.411, X.420	X.400, X.402, X.411, X.420
Protocols	X.409, X.411 X.420	X.411, X.208, X.209, X.419, X.420
The use of RTS	X.410	X.218
The use of session service	X.410, X.215, X.225	X.228
The use of transport service	X.214, X.224	

For the lower layer of services and protocols, it is prerequisite to use the ITU-T Recommendations X.214, X.215, X.224 and X.225, which should be referred to chapters 7 and 8 of this Standard.
(3) Part I of this Standard is also based on Version 4 of the ITU-T X.400 series Implementor's Guide. Since the activities for the MHS functional standards are proceeding internationally, it is necessary that they all maintain consistency.

(4) Chapter 9 of part I and Chapter 8 of part II of this Standard specify the extension for delivery to a G3 facsimile and a telex terminal, based on the X.400, X.411 of ITU-T Recommendations (1984), X.400, X.402, X.411, F.400, F.401 of I TU-T Recommendations (1988), X.121, and IAOG GUIDELINES (Note 1).
(Note 1) IAOG GUIDELINES for ACCOUNTINGS, SERVICE AND OPERATIONAL ASPECTS of INTERNATIONAL MESSAGE HANDLING SERVICES provided by ADMINISTRATION MANAGEMENT DOMAINS, MAY 1989.

2.Summary of departures from ITU-T Recommendations

In addition to the ITU-T Recommendations, this standard specifies the following items:
(1) Classification of support for services This specifies whether the originating MD, relaying MD, or recipient MD should provide the services that may be provided by any MD in the Recommendations.

(2) Protocol classification All protocol elements of P1 and P2 protocols are classified into five

categories to make clear how the elements should be treated by the originating MD and the relaying/recipient MD.

(3) Protocol elements and maximum size The maximum number (or size) of elements to be generated and/or the minimum number (or size) of elements guaranteed to be handled at every MD, is provided for each protocol element to keep the systems' performance consistent.

(4)Protocol elements and maximum size, OR name syntax The following items are added to meet the domestic needs for Japanese functions. For each of these functions, it is noted that an advanced bilateral agreement is necessary to use these functions, and/or that these functions may not be adaptable for international communication.
(a) Value for explicit conversion
(b)T.61 organization name, T.61 personal name, and T.61 organizational Unit in OR name
(c)T.61 string for subject
(d)Local time notation
(e)T.61 string for OR name

(5) Per recipient flag
A choice is provided for reducing the load, to enable all of the trace information to be handled.

(6) The use of RTS
The following items are recommended to facilitate implementation.
(a)The dialogue mode should be a monologue.
(bInitial tokens should be given to the initiating side.
(c)The maximum size should be provided for the RTS user data.

(7) The use of sessions / under chapter 7 of part I and chapter 6.1.1 of partII
The following items are recommended to facilitate implementation in the use of 1984 X.410 mode.
(a)Tokens should not be reversed between the initiator and responder.
(b)The initiating side should recover the session connection, but the recipient side should not.
(c)As a reference, the timer value to recover from an aborted session connection is given.

(8) The usage of OR name in Chapter 9 of part I and Chapter 8 of partII
This standard specifies the OR name forms to provide functions so as to relay messages between MDs for delivery to a G3 facsimile and a telex terminal in view of the following circumstances:

- OR name is specified in the X.400, X.411 of ITU-T Recommendation (1984), X.400, X.402, X.411, F.400, F.401 of ITU-T Recommendation (1988).
- IAOG(International Administration Management Domain Operators Group) provides the guideline to specify the usage of Encoded Information.

Types, address forms, and method of identification of services in the case of delivery to a G3 facsimile and a telex terminal.
The following items are added to IAOG GUIDELINES.
(a)Value of PC information ID in original Encoded Information Types of message envelop is added.
(b)IAOG GUIDELINES states that, for systems conforming to Recommendation X.400(1984 version), DDA values of type = and value = should be used to distinguish the service requested. However, as the X.400 Series of Recommendations (1984) defines that the maximum size of DDA type is 8 octets, IAOG GUIDELINES violates this, that is, the length of is 9 octets. Therefore, values of DDA type and value are not specified in this Standard until this specification in the IAOG GUIDELINES is revised.
(c)Default recognition of service identification for the case of no protocol element or in case that it is impossible to identify is defined.
(d)The usage of OR name for an answerback is added.

(9) EDI(Electronic Data Interchange) in MHS(1984)
(a)One EDI is allowed in one body. In case of a multi-part body, only the first body part can include the EDI.
(b)Indication of EDI standard and character decides in "subject".
(c)Addition of unidentified body part described in Version 4 of ITU-T X.400 Series (1984) Implementor's Guide.

(10) The use of Japanese
The domestic local specification for the use of Japanese per PC information ID on Part I is deleted, but a specification is added to guarantee the international and domestic interconnectability.

(11) The limit of Multi-destination Delivery
The limit of Multi-destination Delivery is a guide to implement and guarantee the interconnectability with the International Recommendation in Multi-destination Delivery.

(12) Use of normal mode RTS in chapter 6.2 of part II
This addition is aimed to guarantee the international and domestic interconnectability in order to meet the activities for standardization of international recommendations concerning 1988 version MHS.

3.History of revision

Version No.	Date	Content of revision
Version 1	April 28,1987	First edition
Version 2	April 28,1989	Part I : JT-X411 version 1 Part II : Protocol specified in correspondence with the X.400 Series Recommendations.
Version 3	April 25,1990	The following items are added. (a) delivery to G3 facsimile/Teletex terminal of text messages and teletex messages that are received through MHS network (b) delivery to G3 facsimile terminal of G3 facsimile of encoded messages that are received through MHS network (c) EDI(Electronic Data Interchange)
Version 4	April 26,1991	The following items are revised in Part I (a) The basic type classes of encoded information types are specified. The following items are revised in Part II (a) The details of extension tables 4-2 and 4-3 are specified. (b) Support of PC information ID is stopped. The bilateral use of PC information ID is specified, and the guideline is added as Annex 3. (c) Instead of PC information ID, the externally-defined- body-part is specified in Annex2. (d) Encoded-information-types are added Downgrading details. (e) The limit of Multi-destination delivery is added, and minimum number of elements guaranteed is specified. (f) Annex 4 Referred object identifier. (g) Annex 6 Connection with other standards.

<table>
<tr><td>Version 5</td><td>April 28,1992</td><td>The following items are revised in Part I
(a) The default values of check point and window size are specified for session service. The following items are revised in Part II
(a) The use of normal mode RTS is specified in chapter 6.2 and the chapter arrangements are edited as follows:
<table><tr><td>Old Version</td><td>Revision</td><td></td><td></td></tr><tr><td>Chapter 6 Use of RTS</td><td>=></td><td>6.1</td><td></td></tr><tr><td>Chapter 7 Use of Session Service</td><td>=></td><td>6.1.1</td><td></td></tr><tr><td>Chapter 8 Use of Transport Service</td><td>=></td><td>6.1.2</td><td></td></tr><tr><td></td><td></td><td>6.2
6.2.1
6.2.2
6.2.3
6.2.4
6.2.5</td><td>} Newly added</td></tr><tr><td>Chapter 9 Downgranding</td><td>=></td><td>Chapter 7</td><td></td></tr><tr><td>Chapter 10 Use of MHS</td><td>=></td><td>Chapter 8</td><td></td></tr><tr><td>Chapter 11 Use of Japanese</td><td>=></td><td>Chapter 9</td><td></td></tr><tr><td>Chapter 12 Limitation of Multi-destination delivery Transport Service</td><td>=></td><td>Chapter 10</td><td></td></tr></table>(b) Relation of the normal mode RTS with the X.410 mode RTS is added.</td></tr>
<tr><td>Version 6</td><td>November 28,1995</td><td>Modification to apply "Implementors' Guide Version 8".</td></tr>
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4.Other

(1) Recommendations/Standards for reference
Part I : ITU-T Recommendations (1984)
X.400, X.401, X.409, X.410, X.411, X.420, X.214, X.251, X.224, X.225
ITU-T X.400 Series Implementor's Guide Version 4
Part II: ITU-T Recommendations (1988)
T.61, X.400, X.402, X.407, X.411, X.413, X.419, X.420, X.208, X.209, X.215, X.216, X.217, X.218, X.224, X.225, X.226, X.227, X.227, X.228, X.500 Series, F.400, F.401, X.121
ITU-T Recommendations (1984)

X.410

ISO Standards
ISO 10021

TTC Standards
JT-X500

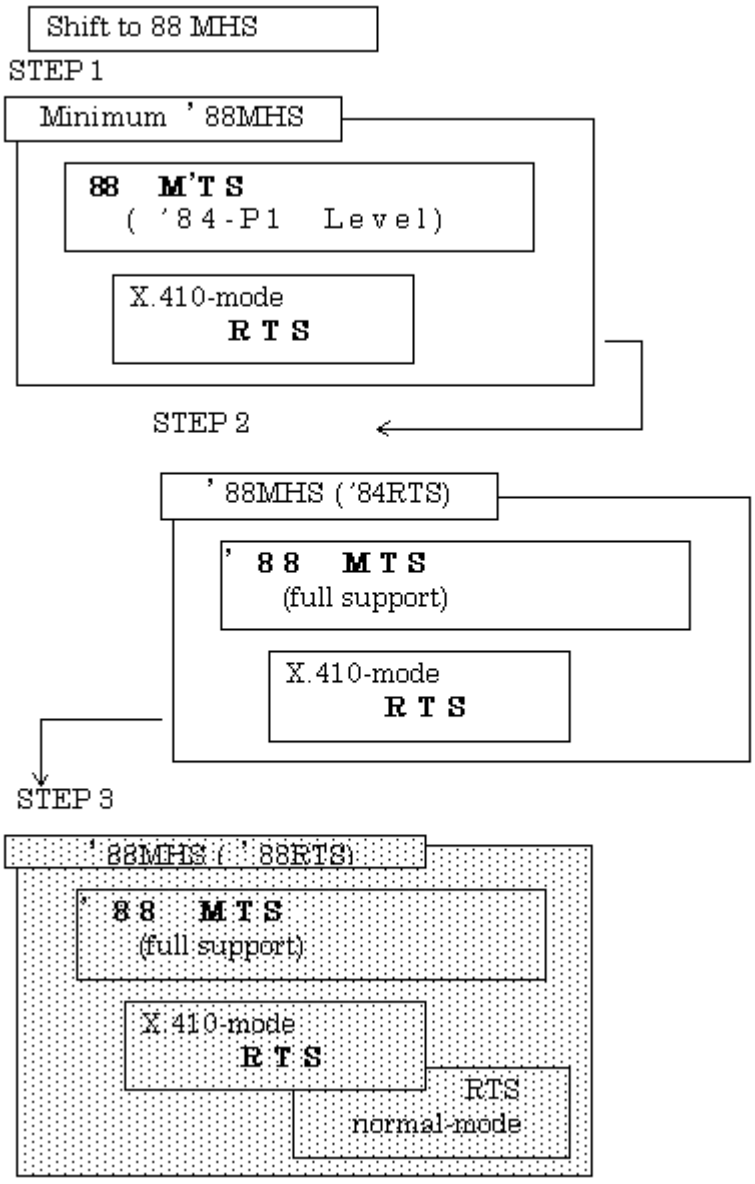
IAOG GUIDELINES
ITU-T X.400 Series Implementor's Guide version 3

(2) Part I of this Standard is described in the same manner as the documents for the P1 and P2 functional standards of JUST (Japanese Unified Standards for Telecommunications), recommended by the MPT (Ministry of Posts and Telecommunications). The construction, contents, and terminology are consistent with the J UST P1 and P2 functional standards.

(3) The interconnection between the EDI transfer method(Pedi) of further study in ITU-T and EDI transfer method of this standard is further study.

(4) "STEP 3" of the following figure is considered as Part II.

(5) "STEP 3" of the following figure is considered as Part II.


Shift to 88 MHS
STEP 1
Minimum '88MHS
88 M'T S
('84-P1 Level)
X.410-mode
R T S
STEP 2
'88MHS ('84RTS)
' 88 MT S
(full support)
X.410-mode
R T S
STEP 3
'88MHS ('88RTS)
' 88 MT S
(full support)
X.410-mode
R T S
RTS
normal-mode