

## Information technology - Message Handling Systems (MHS): Message transfer system - Abstract service definition and procedures

### CONTENTS

	<i>Page</i>
SECTION ONE – INTRODUCTION .....	1
1 Scope .....	1
2 Normative references .....	1
2.1 Open Systems Interconnection .....	2
2.2 Message Handling Systems .....	2
2.3 Directory Systems .....	2
2.4 Country Codes .....	3
2.5 Telematic Services .....	3
3 Definitions .....	3
4 Abbreviations .....	3
5 Conventions .....	3
5.1 Terms .....	3
5.2 Presence of Parameters .....	3
5.3 Abstract Syntax Definitions .....	3
5.4 Interpretation of UTC Time values .....	4
SECTION TWO – MESSAGE TRANSFER SYSTEM ABSTRACT SERVICE .....	4
6 Message Transfer System Model .....	4
7 Message Transfer System Abstract Service Overview .....	5
7.1 MTS Bind and Unbind .....	6
7.2 Submission Port .....	6
7.3 Delivery Port .....	6
7.4 Administration Port .....	6
8 Message Transfer System Abstract Service Definition .....	6
8.1 MTS-bind and MTS-unbind .....	6
8.1.1 Abstract-bind and Abstract-unbind .....	7
8.1.2 Bind-errors .....	10
8.2 Submission Port .....	10
8.2.1 Abstract-operations .....	10
8.2.2 Abstract-errors .....	31
8.3 Delivery Port .....	33
8.3.1 Abstract-operations .....	33
8.3.2 Abstract-errors .....	48
8.4 Administration Port .....	50
8.4.1 Abstract-operations .....	50
8.4.2 Abstract-errors .....	55
8.5 Common Parameter Types .....	56
8.5.1 MTS-identifier .....	56
8.5.2 Global-domain-identifier .....	57
8.5.3 MTA-name .....	57
8.5.4 Time .....	57
8.5.5 OR-name .....	57
8.5.6 Encoded-information-types .....	57
8.5.7 Certificate .....	58
8.5.8 Token .....	60
8.5.9 Security-label .....	60
8.5.10 Algorithm-identifier .....	61
8.5.11 Password .....	61
9 Message Transfer System Abstract Syntax Definition .....	61
9.1 Extension Mechanism .....	62
9.2 Criticality Mechanism .....	62

	<i>Page</i>
SECTION THREE – MESSAGE TRANSFER AGENT ABSTRACT SERVICE .....	102
10    Refined Message Transfer System Model .....	102
11    Message Transfer Agent Abstract Service Overview .....	103
11.1    MTA-bind and MTA-unbind .....	103
11.2    Transfer Port Abstract-operations .....	103
12    Message Transfer Agent Abstract Service Definition .....	103
12.1    MTA-bind and MTA-unbind .....	103
12.1.1    Abstract-bind and Abstract-unbind .....	104
12.1.2    Bind-errors .....	106
12.2    Transfer Port .....	107
12.2.1    Abstract-operations .....	107
12.2.2    Abstract-errors .....	113
12.3    Common Parameter Types .....	113
12.3.1    Trace-information and internal-trace-information .....	113
13    Message Transfer Agent Abstract Syntax Definition .....	115
SECTION FOUR – PROCEDURES FOR DISTRIBUTED OPERATION OF THE MTS .....	123
14    Procedures for Distributed Operation of the MTS .....	123
14.1    Overview of the MTA Model .....	123
14.1.1    Organization and Modelling Technique .....	123
14.2    Deferred Delivery Module .....	125
14.2.1    Deferred Delivery Procedure .....	125
14.3    Main Module .....	126
14.3.1    Control Procedure .....	128
14.3.2    Front-end Procedure .....	130
14.3.3    Routing-and-conversion-decision Procedure .....	131
14.3.4    Routing-decision Procedure .....	132
14.3.5    Conversion-decision Procedure .....	134
14.3.6    Error-processing Procedure .....	135
14.3.7    Redirection Procedure .....	136
14.3.8    Splitter Procedure .....	137
14.3.9    Conversion-procedure .....	138
14.3.10    Distribution-list-expansion Procedure .....	138
14.3.11    Loop Detection and Routing Algorithm .....	140
14.3.12    Directory Name Resolution Procedure .....	140
14.3.13    Double-envelope Procedure .....	141
14.3.14    Double-envelope-extractor Procedure .....	142
14.4    Report Module .....	143
14.4.1    Control Procedure .....	143
14.4.2    Report-front-end Procedure .....	144
14.4.3    Report-generation Procedure .....	144
14.4.4    Report-routing Procedure .....	145
14.4.5    Double-envelope Procedure .....	147
14.5    MTS-bind and MTS-unbind .....	147
14.5.1    MTS-user initiated MTS-bind Procedure .....	147
14.5.2    MTS-user initiated MTS-unbind Procedure .....	148
14.5.3    MTA initiated MTS-bind Procedure .....	148
14.5.4    MTA initiated MTS-unbind Procedure .....	149
14.6    Submission Port .....	149
14.6.1    Message-submission Procedure .....	149
14.6.2    Probe-submission Procedure .....	150
14.6.3    Cancel-deferred-delivery Procedure .....	151
14.6.4    Submission-control Procedure .....	152
14.7    Delivery Port .....	152
14.7.1    Message-delivery Procedure .....	152
14.7.2    Probe-delivery-test Procedure .....	154

	<i>Page</i>
14.7.3 Report-delivery Procedure .....	155
14.7.4 Delivery-control Procedure .....	155
14.8 Administration Port .....	156
14.8.1 Register Procedure .....	156
14.8.2 MTS-user initiated Change-credentials Procedure.....	157
14.8.3 MTA initiated Change-credentials Procedure.....	157
14.9 MTA-bind and MTA-unbind .....	158
14.9.1 MTA-bind-in Procedure.....	158
14.9.2 MTA-unbind-in Procedure.....	158
14.9.3 MTA-bind-out Procedure.....	159
14.9.4 MTA-unbind-out Procedure.....	159
14.10 Transfer Port .....	160
14.10.1 Message-in Procedure .....	160
14.10.2 Probe-in Procedure.....	160
14.10.3 Report-in Procedure .....	161
14.10.4 Message-out Procedure .....	161
14.10.5 Probe-out Procedure.....	162
14.10.6 Report-out Procedure .....	162
Annex A – Reference Definition of MTS Object Identifiers .....	164
Annex B – Reference Definition of MTS Parameter Upper Bounds .....	166
Annex C – Definition of 1988 Message Transfer System Abstract Service .....	169
C.1 Register-88 .....	169
C.1.1 Arguments .....	169
C.1.2 Results .....	170
C.1.3 Abstract-errors .....	170
C.2 Delivery-control-88 .....	171
C.2.1 Arguments .....	171
C.2.2 Results .....	171
C.2.3 Abstract-errors .....	171
Annex D – Differences between ISO/IEC 10021-4 and ITU-T Recommendation X.411 .....	175
Annex E – Index .....	176