

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.519

Corrigendum 1
(02/2011)

SERIES X: DATA NETWORKS, OPEN SYSTEM
COMMUNICATIONS AND SECURITY

Directory

Information technology – Open Systems
Interconnection – The Directory: Protocol
specifications

Technical Corrigendum 1

Recommendation ITU-T X.519 (2008) – Technical
Corrigendum 1



ITU-T X-SERIES RECOMMENDATIONS
DATA NETWORKS, OPEN SYSTEM COMMUNICATIONS AND SECURITY

PUBLIC DATA NETWORKS	
Services and facilities	X.1–X.19
Interfaces	X.20–X.49
Transmission, signalling and switching	X.50–X.89
Network aspects	X.90–X.149
Maintenance	X.150–X.179
Administrative arrangements	X.180–X.199
OPEN SYSTEMS INTERCONNECTION	
Model and notation	X.200–X.209
Service definitions	X.210–X.219
Connection-mode protocol specifications	X.220–X.229
Connectionless-mode protocol specifications	X.230–X.239
PICS proformas	X.240–X.259
Protocol Identification	X.260–X.269
Security Protocols	X.270–X.279
Layer Managed Objects	X.280–X.289
Conformance testing	X.290–X.299
INTERWORKING BETWEEN NETWORKS	
General	X.300–X.349
Satellite data transmission systems	X.350–X.369
IP-based networks	X.370–X.379
MESSAGE HANDLING SYSTEMS	X.400–X.499
DIRECTORY	X.500–X.599
OSI NETWORKING AND SYSTEM ASPECTS	
Networking	X.600–X.629
Efficiency	X.630–X.639
Quality of service	X.640–X.649
Naming, Addressing and Registration	X.650–X.679
Abstract Syntax Notation One (ASN.1)	X.680–X.699
OSI MANAGEMENT	
Systems management framework and architecture	X.700–X.709
Management communication service and protocol	X.710–X.719
Structure of management information	X.720–X.729
Management functions and ODMA functions	X.730–X.799
SECURITY	X.800–X.849
OSI APPLICATIONS	
Commitment, concurrency and recovery	X.850–X.859
Transaction processing	X.860–X.879
Remote operations	X.880–X.889
Generic applications of ASN.1	X.890–X.899
OPEN DISTRIBUTED PROCESSING	X.900–X.999
INFORMATION AND NETWORK SECURITY	X.1000–X.1099
SECURE APPLICATIONS AND SERVICES	X.1100–X.1199
CYBERSPACE SECURITY	X.1200–X.1299
SECURE APPLICATIONS AND SERVICES	X.1300–X.1399
CYBERSECURITY INFORMATION EXCHANGE	X.1500–X.1598

For further details, please refer to the list of ITU-T Recommendations.

**Information technology – Open Systems Interconnection –
The Directory: Protocol specifications**

Technical Corrigendum 1

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T X.519	1988-11-25	
2.0	ITU-T X.519	1993-11-16	7
3.0	ITU-T X.519	1997-08-09	7
3.1	ITU-T X.519 (1997) Technical Cor. 1	2000-03-31	7
3.2	ITU-T X.519 (1997) Amend. 1	2000-03-31	7
3.3	ITU-T X.519 (1997) Technical Cor. 2	2001-02-02	7
4.0	ITU-T X.519	2001-02-02	7
4.1	ITU-T X.519 (2001) Cor. 1	2008-05-29	17
5.0	ITU-T X.519	2005-08-29	17
5.1	ITU-T X.519 (2005) Cor. 1	2008-05-29	17
5.2	ITU-T X.519 (2005) Cor. 2	2011-02-13	17
6.0	ITU-T X.519	2008-11-13	17
6.1	ITU-T X.519 (2008) Cor. 1	2011-02-13	17

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

© ITU 2011

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

CONTENTS

	<i>Page</i>
1) Correction of the defects reported in defect report 337	1
2) Correction of the defects reported in defect report 339	1
3) Correction of the defects reported in defect report 347	2
4) Correction of the defects reported in defect report 350	2

INTERNATIONAL STANDARD
RECOMMENDATION ITU-TInformation technology – Open Systems Interconnection –
The Directory: Protocol specifications

Technical Corrigendum 1

*(covering resolution to defect reports 337, 339, 347 and 350)***1) Correction of the defects reported in defect report 337***Update other parts of 9.1 and in addition 9.2 and 9.3 as follows:*`bind` PDU to be replaced with `IdmBind` PDU.`bindResult` PDU to be replaced with `IdmBindResult` PDU.`bindError` PDU to be replaced with `IdmBindError`.PDU.`request` PDU to be replaced with `Request` PDU.`result` PDU to be replaced with `IdmResult` PDU.`error` PDU to be replaced with `Error` PDU.`reject` PDU to be replaced with `IdmReject` PDU.`unbind` PDU to be replaced with `Unbind` PDU.**2) Correction of the defects reported in defect report 339***Replace in 10.2 and Annex E `directoryBind` with `dsABind`:*

```

dsp-ip IDM-PROTOCOL ::= {
  BIND-OPERATION      directorySABind
  OPERATIONS          { chainedRead | chainedCompare | chainedAbandon
                       | chainedList | chainedSearch
                       | chainedAddEntry | chainedRemoveEntry
                       | chainedModifyEntry | chainedModifyDN }
  ID                  id-idm-dsp }

```

Replace in 10.3 and Annex E `directoryBind` with `dsAShadowBind`:

```

disp-ip IDM-PROTOCOL ::= {
  BIND-OPERATION      directorySAShadowBind
  OPERATIONS          { requestShadowUpdate
                       | updateShadow
                       | coordinateShadowUpdate }
  ID                  id-idm-disp }

```

Replace in 10.4 and Annex E `directoryBind` with `dsAOperationalBindingManagementBind`:

```

dop-ip IDM-PROTOCOL ::= {
  BIND-OPERATION      directorySAOperationalBindingManagementBind
  OPERATIONS          { establishOperationalBinding
                       | modifyOperationalBinding
                       | terminateOperationalBinding}
  ID                  id-idm-dop }

```

Update in Annex E the **IMPORTS** clause as follows:

-- from ITU-T Rec. X.501 | ISO/IEC 9594-2

```

    directoryAbstractService, distributedOperations, directoryShadowAbstractService,
    id-idm, idMPProtocolSpecification, opBindingManagement
    FROM UsefulDefinitions {joint-iso-itu-t ds(5) module(1) usefulDefinitions(0) 6}

```

```

    establishOperationalBinding, modifyOperationalBinding, terminateOperationalBinding,
    dSAOperationalBindingManagementBind
    FROM OperationalBindingManagement opBindingManagement

```

-- from ITU-T Rec. X.518 | ISO/IEC 9594-4

```

    chainedAbandon, chainedAddEntry, chainedCompare, chainedList, chainedModifyDN,
    chainedModifyEntry, chainedRead, chainedRemoveEntry, chainedSearch, dSABind
    FROM DistributedOperations distributedOperations

```

-- from ITU-T Rec. X.525 | ISO/IEC 9594-9

```

    coordinateShadowUpdate, requestShadowUpdate, updateShadow, dSAShadowBind
    FROM DirectoryShadowAbstractService directoryShadowAbstractService ;

```

3) Correction of the defects reported in defect report 347

Replace in 7.6.6.5 and Annex B the current definition of **OsiRej**:

```

OsiRej ::= [4] IMPLICIT SEQUENCE {
  invokeId      InvokeId,
  problem       CHOICE {
    general      [0] GeneralProblem,
    invoke       [1] InvokeProblem,
    returnResult [2] ReturnResultProblem,
    returnError  [3] ReturnErrorProblem } }

```

with:

```

OsiRej ::= [4] IMPLICIT SEQUENCE {
  invokeId      InvokeId,
  problem       CHOICE {
    general      [0] IMPLICIT GeneralProblem,
    invoke       [1] IMPLICIT InvokeProblem,
    returnResult [2] IMPLICIT ReturnResultProblem,
    returnError  [3] IMPLICIT ReturnErrorProblem } }

```

4) Correction of the defects reported in defect report 350

In 9.1 in the **IdmReject** PDU type, add three new reason codes:

```

    mistypedParameterError (10) , } }
    unsupportedIdmVersion (11),
    unsuitableIdmVersion (12),
    invalidIdmVersion (13) } }

```

In 9.4, add at the end:

An **unsupportedIdmVersion** reason code shall be returned if an unknown version is specified in the TCP/IP mapping format (see 9.6). The **invokeID** component shall take the **absent** choice.

An **unsuitableIdmVersion** reason code shall be returned if the DSA receives an **IdmBind** request using a mapping format different from that used in already established application-associations and the DSA chooses not to engage in a different type of communication. The **invokeID** component shall take the **absent** choice.

An **invalidIdmVersion** reason code shall be returned if a version number is different from the one specified when the **IdmBind** request was processed and accepted.

In 9.6, delete the NOTE and add in its place:

The version number shall be the same for all IDM-PDUs within an application-association. If a request or response is received violating this rule, the receiver shall return an **IdmReject** with reason code **invalidIdmVersion**. This reject shall be transferred using the version agreed for the application-association.

If the version field indicates an unsupported version, the receiving DSA shall return an **IdmReject** with reason code **unsupportedIdmVersion**. This reject shall be transferred using a version 1 format.

An implementation shall support the version 1 format in the response to an **IdmBind**.

A DSA may also reject an **IdmBind** if existing application-associations are using a version different from the one suggested in the format suggested by the **IdmBind**. In this case, an **IdmReject** with reason code **unsuitableIdmVersion** shall be returned. This reject shall be transferred using the same version as the one used for the request.

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	Telecommunication management, including TMN and network maintenance
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Terminals and subjective and objective assessment methods
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks, open system communications and security
Series Y	Global information infrastructure, Internet protocol aspects and next-generation networks
Series Z	Languages and general software aspects for telecommunication systems