# ITU-T

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU



# SERIES X: DATA NETWORKS, OPEN SYSTEM COMMUNICATIONS AND SECURITY

OSI networking and system aspects – Abstract Syntax Notation One (ASN.1)

Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation

**Technical Corrigendum 1** 

7-011

Recommendation ITU-T X.680 (2015) – Technical Corrigendum 1



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

PUBLIC DATA NETWORKS	W 1 W 10
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.1599
CLOUD COMPUTING SECURITY	X.1600–X.1699

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

#### INTERNATIONAL STANDARD ISO/IEC 8824-1 RECOMMENDATION ITU-T X.680

# Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation

### **Technical Corrigendum 1**

#### Summary

This technical corrigendum to Rec. ITU-T X.680 | ISO/IEC 8824-1 provides correction of a misspelling of a keyword in time type properties.

#### History

Edition	Recommendation	Approval	Study Group	Unique ID <sup>*</sup>
1.0	ITU-T X.680	1994-07-01	7	11.1002/1000/3040
1.1	ITU-T X.680 (1994) Amd. 1	1995-04-10	7	11.1002/1000/3041
1.2	ITU-T X.680 (1994) Technical Cor. 1	1995-11-21	7	<u>11.1002/1000/3282</u>
1.3	ITU-T X.680 (1994) Technical Cor. 2	1997-12-12	7	11.1002/1000/4180
1.4	ITU-T X.680 (1994) Amd. 1/Technical Cor.1	1997-12-12	7	<u>11.1002/1000/4179</u>
1.5	ITU-T X.680 (1994) Amd. 2	1997-12-12	7	11.1002/1000/4181
2.0	ITU-T X.680	1997-12-12	7	11.1002/1000/4449
2.1	ITU-T X.680 (1997) Technical Cor. 1	1999-06-18	7	11.1002/1000/4700
2.2	ITU-T X.680 (1997) Amd. 1	1999-06-18	7	11.1002/1000/4698
2.3	ITU-T X.680 (1997) Amd. 2	1999-06-18	7	11.1002/1000/4699
2.4	ITU-T X.680 (1997) Technical Cor. 2	2000-03-31	7	11.1002/1000/5046
2.5	ITU-T X.680 (1997) Technical Cor. 3	2001-02-02	7	11.1002/1000/5331
2.6	ITU-T X.680 (1997) Technical Cor. 4	2001-03-15	7	<u>11.1002/1000/5332</u>
2.7	ITU-T X.680 (1997) Amd. 3	2001-10-29	7	<u>11.1002/1000/5562</u>
2.8	ITU-T X.680 (1997) Amd. 4	2001-10-29	7	<u>11.1002/1000/5563</u>
3.0	ITU-T X.680	2002-07-14	17	11.1002/1000/6085
3.1	ITU-T X.680 (2002) Amd. 1	2003-10-29	17	<u>11.1002/1000/7019</u>
3.2	ITU-T X.680 (2002) Amd. 2	2004-08-29	17	<u>11.1002/1000/7291</u>
3.3	ITU-T X.680 (2002) Technical Cor. 1	2005-05-14	17	<u>11.1002/1000/8512</u>
3.4	ITU-T X.680 (2002) Amd. 3	2006-06-13	17	<u>11.1002/1000/8836</u>
3.5	ITU-T X.680 (2002) Amd. 4	2007-05-29	17	<u>11.1002/1000/9105</u>
4.0	ITU-T X.680	2008-11-13	17	11.1002/1000/9604
4.1	ITU-T X.680 (2008) Cor. 1	2011-10-14	17	<u>11.1002/1000/11376</u>
4.2	ITU-T X.680 (2008) Cor. 2	2014-03-01	17	<u>11.1002/1000/12144</u>
5.0	ITU-T X.680	2015-08-13	17	11.1002/1000/12479
5.1	ITU-T X.680 (2015) Cor. 1	2017-05-14	17	11.1002/1000/13257

<sup>\*</sup> To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, <u>http://handle.itu.int/11.1002/1000/11830-en</u>.

#### 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 <u>http://www.itu.int/ITU-T/ipr/</u>.

#### © ITU 2017

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

ii

## Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation

### **Technical Corrigendum 1**

*Conventions used in this corrigendum: Original, unchanged, text is in* normal font. *Deleted text is struck-through, thus:* deleted text. *Inserted text is underlined, thus:* inserted text.

#### 1 Table 7

Replace the eleventh row of table 7 with:

Hours component	"Basic=Date-Time"	ISO 8601, 4.3.2 Extended format: [Thh]
	or "Basic=Interval" and "SE-point=Date_Time" or "Basic=Rec-Interval" and "SE-point=Date_Time"	The value notation <b>T24</b> shall always be used for the hours component of the abstract value "midnight at end of day" and the value notation <b>T00</b> for "midnight at start of day".

#### 2 Clause 51.12.2

*Replace clause 51.12.2 with the following:* 

**51.12.2** Both the "Value"s in the "ValueRange" shall identify a time abstract value (either value notation or a value reference) that is present in the subtype:

TIME ( (SETTINGS "Basic=Date")

(SETTINGS "Basic=Time")

|(SETTINGS "Basic=Date-Time"))

#### 3 Clause K.3.3

Replace clause K.3.3 with:

**K.3.3** If the portion contains a LATIN CAPITAL LETTER T, then it has the property setting "SE point=Date\_Time", and the part of the portion before the "T" can be analyzed as a string containing a date (see K.4) and the part following the "T" can be analyzed as a string containing a time (see K.7) to determine further property settings.

NOTE – If the type of the choice alternative is an untagged choice type, the outermost tag for that alternative will appear more than once in the encoding. This is different from how BER works.

# SERIES OF ITU-T RECOMMENDATIONS

Series A Organization of the work of ITU-T

- Series D Tariff and accounting principles and international telecommunication/ICT economic and policy issues
- 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 Environment and ICTs, climate change, e-waste, energy efficiency; 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 Telephone transmission quality, telephone installations, local line networks
- Series Q Switching and signalling, and associated measurements and tests
- 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, next-generation networks, Internet of Things and smart cities
- Series Z Languages and general software aspects for telecommunication systems