



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**X.690**

**Corrigendum 1**  
(06/99)

SERIES X: DATA NETWORKS AND OPEN SYSTEM  
COMMUNICATIONS

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

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Information technology – ASN.1 encoding rules:  
Specification of Basic Encoding Rules (BER),  
Canonical Encoding Rules (CER) and  
Distinguished Encoding Rules (DER)

**Technical Corrigendum 1**

ITU-T Recommendation X.690 – Corrigendum 1

(Previously CCITT Recommendation)

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

<b>PUBLIC DATA NETWORKS</b>	
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
<b>OPEN SYSTEMS INTERCONNECTION</b>	
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
<b>INTERWORKING BETWEEN NETWORKS</b>	
General	X.300–X.349
Satellite data transmission systems	X.350–X.399
<b>MESSAGE HANDLING SYSTEMS</b>	<b>X.400–X.499</b>
<b>DIRECTORY</b>	<b>X.500–X.599</b>
<b>OSI NETWORKING AND SYSTEM ASPECTS</b>	
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
<b>Abstract Syntax Notation One (ASN.1)</b>	<b>X.680–X.699</b>
<b>OSI MANAGEMENT</b>	
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
<b>SECURITY</b>	<b>X.800–X.849</b>
<b>OSI APPLICATIONS</b>	
Commitment, Concurrency and Recovery	X.850–X.859
Transaction processing	X.860–X.879
Remote operations	X.880–X.899
<b>OPEN DISTRIBUTED PROCESSING</b>	<b>X.900–X.999</b>

*For further details, please refer to ITU-T List of Recommendations.*

**INTERNATIONAL STANDARD 8825-1**

**ITU-T RECOMMENDATION X.690**

**INFORMATION TECHNOLOGY – ASN.1 ENCODING RULES:  
SPECIFICATION OF BASIC ENCODING RULES (BER),  
CANONICAL ENCODING RULES (CER) AND  
DISTINGUISHED ENCODING RULES (DER)**

**TECHNICAL CORRIGENDUM 1**

**Summary**

This technical corrigendum to ITU-T Rec. X.690 | ISO/IEC 8825-1 clarifies how the "useful types" are to be encoded in BER, and makes a couple of editorial changes.

**Source**

Corrigendum 1 to the ITU-T Recommendation X.690 was approved on the 18th of June 1999. The identical text is also published as Technical Corrigendum 1 to ISO/IEC 8825-1.

## FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The 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 Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 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 term *recognized operating agency (ROA)* includes any individual, company, corporation or governmental organization that operates a public correspondence service. The terms *Administration, ROA* and *public correspondence* are defined in the *Constitution of the ITU (Geneva, 1992)*.

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## CONTENTS

	<i>Page</i>
1) New subclause 8.22 .....	1
2) Subclause 12.5 .....	1
3) Subclause 12.6 .....	1



INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

**INFORMATION TECHNOLOGY – ASN.1 ENCODING RULES:  
SPECIFICATION OF BASIC ENCODING RULES (BER),  
CANONICAL ENCODING RULES (CER) AND  
DISTINGUISHED ENCODING RULES (DER)**

**TECHNICAL CORRIGENDUM 1**

**1) New subclause 8.22**

*Create a new subclause as follows:*

**8.22** The following "useful types" shall be encoded as if they had been replaced by their definitions given in clauses 41-43 of ITU-T Rec. X.680 | ISO/IEC 8824-1:

- generalized time;
- universal time;
- object descriptor.

**2) Subclause 12.5**

*Change "12.1, 12.3 or 12.4" to: "12.2, 12.3 or 12.4".*

**3) Subclause 12.6**

*Change "12.1" to: "12.2".*

## ITU-T RECOMMENDATIONS SERIES

Series A	Organization of the work of the ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
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	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	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
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
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
<b>Series X</b>	<b>Data networks and open system communications</b>
Series Y	Global information infrastructure
Series Z	Languages and general software aspects for telecommunication systems