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INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Corrigendum 1
X.690

(11/95)

**DATA NETWORKS AND OPEN SYSTEM
COMMUNICATIONS**

**OSI NETWORKING AND SYSTEM ASPECTS –
ABSTRACT SYNTAX NOTATION ONE (ASN.1)**

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

TECHNICAL CORRIGENDUM 1

Corrigendum 1 to
ITU-T Recommendation X.690
Superseded by a more recent version

(Previously "CCITT Recommendation")

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FOREWORD

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The approval of Recommendations by the Members of ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, 1993). In addition, the World Telecommunication Standardization Conference (WTSC), which meets every four years, approves Recommendations submitted to it and establishes the study programme for the following period.

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. The text of ITU-T Recommendation X.690, Corrigendum 1, was approved on 21st of November 1995. The identical text is also published as ISO/IEC International Standard 8825-1.

NOTE

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

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ITU-T X-SERIES RECOMMENDATIONS

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

(February 1994)

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Summary

This technical corrigendum to Rec. X.690 | ISO/IEC 8825-1 describes the use of useful control functions for the ASN.1 types UniversalString or BMPString while forbidding the escape to other character sets. It is based on the disposition of defect Report 8825-1/010.

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) Subclause 8.20.7

Replace the text with the following:

For the "UniversalString" type, the octet string shall contain the octets specified in ISO/IEC 10646-1, using the 4-octet canonical form (see 14.2 of ISO/IEC 10646-1). Signatures shall not be used. Control functions may be used provided they satisfy the restrictions imposed by subclause 8.20.9.

2) Subclause 8.20.8

Replace the text with the following:

For the "BMPString" type, the octet string shall contain the octets specified in ISO/IEC 10646-1, using the 2-octet BMP form (see 14.1 of ISO/IEC 10646-1). Signatures shall not be used. Control functions may be used provided they satisfy the restrictions imposed by subclause 8.20.9.

3) Subclause 8.20.9

Create a new subclause 8.20.9 as defined below:

8.20.9 The C0 and C1 control functions of ISO/IEC 6429 may be used with the following exceptions:

NOTES

1 The effect of this subclause is to allow the useful control functions such as LF, CR, TAB, etc., while forbidding the use of escapes to other character sets.

2 The C0 and C1 control functions are each encoded in two octets for BMPString and four for UniversalString.

a) Announcer escape sequences defined in ISO/IEC 2022 shall not be used.

NOTE 1 – The assumed character coding environment is ISO/IEC 10646-1.

b) Designating or identifying escape sequences defined in ISO/IEC 2022 shall not be used, including the identifying escape sequences permitted by ISO/IEC 10646-1, 17.2 and 17.4.

NOTE 2 – ASN.1 allows the use of the PermittedAlphabet subtype notation to select the set of allowed characters. PermittedAlphabet is also used to select the level of implementation of ISO/IEC 10646-1. BMPString is always used for two-octet form and UniversalString for the four-octet form.

c) Invoking escape sequence or control sequences of ISO/IEC 2022 shall not be used, such as SHIFT IN (SI), SHIFT OUT (SO), or LOCKING SHIFT FOR G3 (SS3)

d) The coding shall conform to ISO/IEC 10646-1 and remain in that code set.

e) Control sequences for identifying subsets of graphic characters according to ISO/IEC 10646-1, 17.3 shall not be used.

NOTE 3 – ASN.1 applications use subtyping to indicate subsets of the graphic characters of ISO/IEC 10646-1 and to select the ISO/IEC 10646-1 cells that correspond to the control characters of ISO/IEC 6429.

f) The escape sequences of ISO/IEC 10646-1, 17.5 shall not be used to switch to ISO/IEC 2022 codes.