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TECHNICAL CORRIGENDUM 1

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Information technology — ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Règles de codage ASN.1: Spécification des règles de codage compact (PER)

RECTIFICATIF TECHNIQUE 1

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INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information technology – ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)

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:* <u>inserted text</u>.

1   Clause 11.1.1

Modify clause 11.1.1 as follows:

11.1.1   If an ASN.1 type is encoded using any of the encoding rules identified by the object identifiers listed in subclause 33.2 (or by direct textual reference to this Recommendation | International Standard), and the encoding is included in:

>   a)   an ASN.1 octetstring; or
>
>   b)   <u>an ASN.1 bitstring, or</u>
>
>   <u>c)</u>   an ASN.1 open type; or
>
>   ~~c)~~<u>d)</u> any part of an ASN.1 external or embedded pdv type; or
>
>   ~~d)~~<u>e)</u> any carrier protocol that is not defined using ASN.1

then that ASN.1 type is defined as an outermost type for this application, and subclause 11.1.2 shall apply to all encodings of its values.

> NOTE 1 – This means that all complete PER encodings (for all variants) that are used in this way are always an integral multiple of eight bits<u> except when the UNALIGNED variant is used and the encoding is included in an ASN.1 bitstring (case b)) above)</u>.
>
> NOTE 2 – It is possible using the Encoding Control Notation (see Recommendation ITU-T X.692 | ISO/IEC 8825-3) to specify a variant of PER encodings in which the encoding is not padded to an octet boundary as specified in 11.1.2. Many tools support this option.
>
> NOTE 3 – It is recognized that a carrier protocol not defined using ASN.1 need not explicitly carry the additional zero bits for padding (specified in 11.1.2), but can imply their presence.

2   Clause 11.1.3

Modify clause 11.1.3 as follows:

11.1.3   In the UNALIGNED variant of these encoding rules, all fields shall be concatenated without padding. <u>In all the cases of 11.1.1 except case b), subclause 11.1.3.1 applies. In case b) of 11.1.1, subclause 11.1.3.2 applies.</u>

11.1.3.1   <u>(The result of the encoding is not contained in an ASN.1 bitstring)</u> If the result of encoding the outermost value is an empty bit string, the bit string shall be replaced with a single octet with all bits set to 0. If it is a non-empty bit string and it is not a multiple of eight bits, (one to seven) zero bits shall be appended to it to produce a multiple of eight bits.

11.1.3.2   <u>(The result of the encoding is contained in an ASN.1 bitstring) If the result of encoding the outermost value is an empty bit string, the bit string shall be replaced with a single bit set to 0. No padding bits shall be appended.</u>