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Information technology — Generic applications of ASN.1 —

Part 4: Cryptographic message syntax

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This document was prepared by ITU-T [Telecommunication Standardization Sector of ITU] (as ITU-T X.894 [10/2018]) and drafted in accordance with its editorial rules, in collaboration with Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.

A list of all parts in the ISO/IEC 24824 series can be found on the ISO and IEC websites.

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1 Scope

This Recommendation | International Standard enhances the existing cryptographic message syntax (CMS) protocol by adding signcryption techniques and providing a new Abstract Syntax Notation One (ASN.1) module which conforms to the latest edition of the ASN.1 standard which can be used with all standardized encoding rules of ASN.1.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

– Recommendation ITU-T X.509 (2016) | ISO/IEC 9594-8:2017, *Information technology – Open Systems Interconnection – The Directory: Public-key and attribute certificate frameworks*.

2.2 Paired Recommendations | International Standards equivalent in technical content

None.

2.3 Additional References

– ISO 11568-1:2005, *Banking – Key management (retail) – Part 1: Principles*.

– ISO/IEC 11770-6:2016, *Information technology – Security techniques – Key management – Part 6: Key derivation*.

– ISO/IEC 18033-2:2006, *Information technology – Security techniques – Encryption algorithms – Part 2: Asymmetric ciphers*.

– ISO/IEC 29150:2011, *Information technology – Security techniques – Signcryption*.

– IETF RFC 5652 (2009), *Cryptographic message syntax (CMS)*.

– IETF RFC 6268 (2011), *Additional new ASN.1 modules for the cryptographic message syntax (CMS) and the public key infrastructure using X.509 (PKIX)*.