ETSI TS 143 020 V13.5.0 (2017-04)

Digital cellular telecommunications system (Phase 2+) (GSM);
Security related network functions
(3GPP TS 43.020 version 13.5.0 Release 13)

Reference
RTS/TSGS-0343020vd50

Keywords
GSM,SECURITY

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (https://ipr.etsi.org/).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under http://webapp.etsi.org/key/queryform.asp.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

0 Scope

This Technical Specification specifies the network functions needed to provide the security related service and functions specified in 3GPP TS 42.009.

This specification does not address the cryptological algorithms that are needed to provide different security related features. This topic is addressed in annex C. Wherever a cryptological algorithm or mechanism is needed, this is signalled with a reference to annex C. The references refers only to functionalities, and some algorithms may be identical or use common hardware.

0.1 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

[1] 3GPP TS 21.905: “Vocabulary for 3GPP Specifications".

[2] 3GPP TS 41.061: " GPRS ciphering algorithm requirements".

[3] Void

[4] 3GPP TS 42.009: " Security aspects".

[5] 3GPP TS 42.017: " Subscriber Identity Modules (SIM) Functional characteristics".

[6] 3GPP TS 42.056: " GSM Cordless Telephone System (CTS) Phase 1; Service Description; Stage 1".

[7] 3GPP TS 22.060: “General Packet Radio Service (GPRS); Service description; Stage 1".

[8] 3GPP TS 23.003: "Numbering, addressing and identification".

[9] GSM 03.56: "Digital cellular telecommunications system (Phase 2+); GSM Cordless Telephone System (CTS), Phase 1; CTS Architecture Description; Stage 2".

[10] 3GPP TS 23.060: " Service description; Stage 2".

[11] 3GPP TS 24.008: “Mobile radio interface layer 3 specification".

[12] Void

[13] 3GPP TS 45.001: “Physical layer on the radio path; General description”.

[14] 3GPP TS 45.002: “Multiplexing and multiple access on the radio path”.

[15] 3GPP TS 45.003: “Channel coding”.

[16] 3GPP TS 29.002: " Mobile Application Part (MAP) specification".

[17] 3GPP TS 51.011: " Specification of the Subscriber Identity Module- Mobile Equipment (SIM-ME) interface".

[18] 3GPP TS 33.102: "Technical Specification Group Services and System Aspects; 3G Security; Security architecture ".