

# ETSI TS 155 216 V3.0.0 (2008-01)

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*Technical Specification*

**Digital cellular telecommunications system (Phase 2+);  
Specification of the A5/3 encryption algorithms for GSM and  
ECSD, and the GEA3 encryption algorithm for GPRS;  
Document 1: A5/3 and GEA3 specification  
(3GPP TS 55.216 version 3.0.0 Release 1999)**

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# Foreword

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

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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.

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## 0 Scope

The present document specifies the A5/3 and GEA3 specification.

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## 0A 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 TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 55.216 Release-7 (v7.x.x): "Specification of the A5/3 encryption algorithms for GSM and ECSD, and the GEA3 encryption algorithm for GPRS; Document 1: A5/3 and GEA3 specification".

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## 0B Definitions, symbols and abbreviations

### 0B.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] and in the Release 7 Specification [2] apply. A term defined in the latter document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

### 0B.2 Symbols

For the purposes of the present document, the symbols defined in the Release 7 Specification [2] apply.

### 0B.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [2] and in the Release 7 Specification [2] apply. An abbreviation defined in the latter document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

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## 0C Technical provisions

The technical provisions of the current document are contained in the Release 7 Specification [2].

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## Annex D (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2002-05	-	-	-	-	ETSI SAGE first publication		SAGE V1.0
2002-07	-	-	-	-	Agreed at SA WG3 #24 for presentation to TSG SA #17 for approval. Converted into 3GPP TS format as TS 55.216 (Technically equivalent to SAGE V1.0)	SAGE V1.0	1.0.0
2002-09	SP-17	SP-020506	-	-	Approved for Release 6 - version 6.0.0	1.0.0	6.0.0
2002-12	SP-18	SP-020721	001	-	EGPRS algorithm	6.0.0	6.1.0
2003-09	SP-19	SP-030490	002	-	Clarification on the usage of the Key length	6.1.0	6.2.0
2007-12	SP-38	SP-070776	007	-	Creation of R99 version	6.2.0	3.0.0

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## History

<b>Document history</b>		
V3.0.0	January 2008	Publication