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3G Security;  
Specification of the A5/3 encryption algorithms for GSM and  
ECSD, and the GEA3 encryption algorithm for GPRS;  
Document 4: Design and evaluation report  
(3GPP TR 55.919 version 14.0.0 Release 14)**

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**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

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## Foreword

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## Introduction

This Report has been produced by ETSI SAGE Task Force for the design of the GSM A5/3 and GEA3 encryption algorithms.

The work described in this report was undertaken in response to a request made by Security Group GSM Association. The work was done under supervision of the ETSI Mobile Competence Centre (MCC) and the GSM Association.

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# 1 Scope

This Technical Report has been prepared by the ETSI SAGE GSM A5/3 Task Force, and gives a detailed report on the design and evaluation of the A5/3 encryption algorithms for GSM and ECSD, and of the GEA3 encryption algorithm for GPRS (including EGPRS).

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# 2 References

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

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[1] Void

[2] Void

[3] Void

[4] Void

[5] Void

[6] Void

[7] Void

[8] Void

[9] Void

[10] Void

[11] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[12] 3GPP Task Force Report: "Specification of the A5/3 encryption algorithms for GSM and ECSD, and the GEA3 encryption algorithm for GPRS; Document 4: Design and evaluation report".

Note: Reference [2] is available via <http://portal.etsi.org/dvbandca/home.asp> and is subject to licensing conditions described at this site.

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# 3 Definitions, symbols and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [11] and in the 3GPP Task Force Report [12] apply. A term defined in the latter document takes precedence over the definition of the same term, if any, in TR 21.905 [11].