

ETSI TS 129 168 V11.5.0 (2016-01)



**Universal Mobile Telecommunications System (UMTS);
LTE;
Cell Broadcast Centre interfaces with the
Evolved Packet Core;
Stage 3**
(3GPP TS 29.168 version 11.5.0 Release 11)



Reference

RTS/TSGC-0429168vb50

Keywords

LTE,UMTS

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

Important notice

The present document can be downloaded from:
<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.
Information on the current status of this and other ETSI documents is available at
<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:
<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2016.
All rights reserved.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are Trade Marks of ETSI registered for the benefit of its Members and
of the 3GPP Organizational Partners.
GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

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

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	5
1 Scope	6
2 References	6
3 Definitions, symbols and abbreviations	7
3.1 Definitions.....	7
3.2 Symbols.....	7
3.3 Abbreviations	7
4 SBc description	8
4.1 Transport	8
4.1.1 General.....	8
4.1.2 Network layer	8
4.1.3 Transport layer.....	8
4.1.4 Services expected from signalling transport	8
4.2. SBc-AP functions	8
4.2.1 Function of SBc-AP.....	8
4.3 SBc-AP procedure	9
4.3.1 General.....	9
4.3.2 List of SBc-AP elementary procedure.....	9
4.3.3 Write Replace Warning Procedure.....	9
4.3.3.1 General	9
4.3.3.2 Successful Operation	9
4.3.3.3 Unsuccessful Operation.....	10
4.3.3A Stop Warning Procedure.....	10
4.3.3A.1 General	10
4.3.3A.2 Successful Operation.....	10
4.3.3A.3 Unsuccessful Operation	11
4.3.3B Error Indication.....	11
4.3.3B.1 General	11
4.3.3B.2 Successful Operation.....	11
4.3.3B.3 Abnormal Conditions	12
4.3.4 Message functional definition and content.....	12
4.3.4.1 Message contents	12
4.3.4.1.1 Presence	12
4.3.4.1.2 Criticality	12
4.3.4.1.3 Range.....	12
4.3.4.1.4 Assigned Criticality	12
4.3.4.2 Warning Message Transmission Messages.....	12
4.3.4.2.1 WRITE-REPLACE WARNING REQUEST	12
4.3.4.2.2 WRITE-REPLACE WARNING RESPONSE	13
4.3.4.2.3 STOP WARNING REQUEST	13
4.3.4.2.4 STOP WARNING RESPONSE	14
4.3.4.2A Management Messages	14
4.3.4.2A.1 ERROR INDICATION	14
4.3.4.3 Information element definition.....	14
4.3.4.3.1 Message Type.....	14
4.3.4.3.2 Cause	15
4.3.4.3.3 Criticality Diagnostics	15
4.3.4.3.4 OMC ID.....	16
4.4 Message and information element abstract syntax	16
4.4.1 General.....	16

4.4.2	Usage of protocol extension mechanism for non-standard use	17
4.4.3	Elementary procedure definitions	17
4.4.4	PDU definitions	19
4.4.5	Information element definitions	22
4.4.6	Common definitions	25
4.4.7	Constant definitions	25
4.4.8	Container Definitions	26
4.4.9	Message transfer syntax	29
4.5	Handling of unknown, unforeseen or erroneous protocol data	29
4.5.1	General	29
4.5.2	Transfer Syntax Error	29
4.5.3	Abstract Syntax Error	29
4.5.3.1	General	29
4.5.3.2	Criticality information	30
4.5.3.3	Presence information	30
4.5.3.4	Not comprehended IE/IE group	31
4.5.3.4.1	Procedure code	31
4.5.3.4.2	Type of Message	31
4.5.3.4.3	IEs other than the Procedure Code and Type of Message	31
4.5.3.5	Missing IE or IE group	32
4.5.3.6	IEs or IE groups received in wrong order or with too many occurrences or erroneously present	33
4.5.4	Logical Error	34
4.5.5	Exceptions	34
Annex A (informative):	Change history:	35
History		36

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.

1 Scope

The present document specifies the procedures and the SBc Application Part (SBc-AP) messages used on the SBc-AP interface between the Mobility Management Entity (MME) and the Cell Broadcast Centre (CBC).

The present document supports the following functions.

- Warning Message Transmission function in the EPS.
-

2 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] IETF RFC 2460 (December 1998): "Internet Protocol, Version 6 (IPv6) Specification".
- [3] IETF RFC 791 (September 1981): "Internet Protocol".
- [4] IETF RFC 4960 (September 2007): "Stream Control Transmission Protocol".
- [5] Void
- [6] Void
- [7] 3GPP TS 36.413: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP)"
- [8] ITU-T Recommendation X.680 (07/2002): "Information Technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [9] ITU-T Recommendation X.681 (07/2002): "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification".
- [10] ITU-T Recommendation X.691 (07/2002): "Information Technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [11] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".
- [12] Void
- [13] 3GPP TS 22.268: "Public Warning System (PWS) requirements".
- [14] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".
- [15] Void