

# TS-3GA-36.441(Rel11)v11.0.0

## Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Layer 1 for interfaces supporting Multimedia Broadcast Multicast Service (MBMS) within E-UTRAN

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THE TELECOMMUNICATION TECHNOLOGY COMMITTEE

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Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Layer 1 for interfaces supporting Multimedia Broadcast Multicast Service (MBMS) within E-UTRAN

<参考> [Remarks]

1. 英文記述の適用レベル [Application level of English description]

適用レベル [Application level] : E2

本標準の本文、付属資料および付録の文章および図に英文記述を含んでいる。

[English description is included in the text and figures of main body, annexes and appendices.]

2. 国際勧告等の関連 [Relationship with international recommendations and standards]

本標準は、3GPP で承認された Technical Specification 36.441 (Version 11.0.0) に準拠している。

[This standard is standardized based on the Technical Specification 36.441 (Version 11.0.0) approved by 3GPP.]

3. 上記国際勧告等に対する追加項目等 [Departures from international recommendations]

原標準に対する変更項目 [Changes to original standard]

原標準が参照する標準のうち、TTC 標準に置き換える項目。 [Standards referred to in the original standard, which are replaced by TTC standards.]

原標準が参照する標準のうち、それらに準拠した TTC 標準等が制定されている場合は自動的に最新版 TTC 標準等に置き換え参照するものとする。 [Standards referred to in the original standard should be replaced by derived TTC standards.]

4. 工業所有権 [IPR]

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[Status of “Confirmation of IPR Licensing Condition” submitted is provided in the TTC web site.]

5. 作成専門委員会 [Working Group]

3GPP 専門委員会 [3GPP Working Group]

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# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> 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.

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## 1 Scope

The present document specifies the standards allowed to implement layer 1 on the interfaces supporting Multimedia Broadcast Multicast Service (MBMS) within E-UTRAN.

In the following, 'layer 1' and 'physical layer' are assumed to be synonymous.

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## 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] Void

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## 3 Abbreviations

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

E-UTRAN	Evolved Universal Terrestrial Radio Access Network
MBMS	Multimedia Broadcast Multicast Service

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## 4 Introduction

The main functions of layer 1 are summarized in the following:

- Interface to physical medium;
- Frame delineation;
- Layer 1 alarms extraction and generation;
- Transmission quality control.

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## 5 Layer 1 specifications

The support of any suitable layer 1 technique - like point-to-point or point-to-multipoint techniques - shall not be prevented.



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## Annex A (informative): Change history

TSG #	TSG Doc.	CR	Rev	Subject/Comment	New
2009-10				Update to take into account comments raised at RAN3 #65bis	0.0.2
2009-12				Stepping to version 2.0.0 for approval at RAN#46	2.0.0
46	RP-091209			Approved at RAN#46	9.0.0
2010-12				Created Rel-10 version based on version v. 9.0.0	10.0.0
52	RP-110685	0003		Reference review outcome in TS 36.441	10.1.0
2012-09				Update to Rel-11 version (MCC)	11.0.0