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**Universal Mobile Telecommunications System (UMTS);  
LTE;  
Evolved Universal Terrestrial  
Radio Access Network (E-UTRAN);  
SLM interface layer 1  
(3GPP TS 36.457 version 17.0.0 Release 17)**



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**Reference**

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**Keywords**

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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 SLm interface.

The specification of transmission delay requirements and O&M requirements are not in the scope of the present document.

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".

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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 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

## 3.3 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 UTRAN
O&M	Operation and Maintenance

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## 4 Introduction

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

- Interface to physical medium;
- Frame delineation;
- Line clock extraction capability;
- 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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## 6 Interface to management plane

The description of the interface towards the management plane is out of scope of this document, but at least the following O&M functions should be foreseen:

- Performance monitoring functions;
- Alarm status reporting functions;
- Synchronisation source management.

## Annex A (informative): Change history

Change history						
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	New
2012-12	58	RP-121767			Approved in RAN#58 and put under change control	11.0.0
2014-09					Update to Rel-12 version (MCC)	12.0.0
2015-12					Update to Rel-13 version (MCC)	13.0.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2017-03	SA#75					Promotion to Release 14 without technical change	14.0.0
2018-06	SA#80	-	-	-	-	Promotion to Release 15 without technical change	15.0.0
2020-07	SA#88-e	-	-	-	-	Update to Rel-16 version (MCC)	16.0.0
2022-03	SA#95-e					Promotion to Release 17 without technical change	17.0.0



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# History

<b>Document history</b>		
V17.0.0	May 2022	Publication