## ETSI TR 123 903 V13.0.0 (2016-01)



# Universal Mobile Telecommunications System (UMTS); LTE;

Redial solution for voice-video switching (3GPP TR 23.903 version 13.0.0 Release 13)





Reference
RTR/TSGS-0223903vd00

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

<a href="http://portal.etsi.org/tb/status/status.asp">http://portal.etsi.org/tb/status/status.asp</a></a>

If you find errors in the present document, please send your comment to one of the following services: https://portal.etsi.org/People/CommiteeSupportStaff.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**<sup>TM</sup>, **PLUGTESTS**<sup>TM</sup>, **UMTS**<sup>TM</sup> and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members. **3GPP**<sup>TM</sup> and **LTE**<sup>TM</sup> 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 Report (TR) 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 <a href="http://webapp.etsi.org/key/queryform.asp">http://webapp.etsi.org/key/queryform.asp</a>.

### 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 <u>ETSI Drafting Rules</u> (Verbal forms for the expression of provisions).

"must" and "must not" are NOT allowed in ETSI deliverables except when used in direct citation.

### Contents

Intell	ectual Property Rights	2
Forev	word	2
Moda	al verbs terminology	2
Forev	word	4
Intro	duction	4
1	Scope	5
2	References	5
3 3.1	Definitions, symbols and abbreviations	
4 4.1	Description of idle mode redial switching between voice and video	
4.2	User initiated switching during an established call	6
4.2.1	Signalling flows and procedures	
4.2.2 4.2.2.	Future enhancements	
4.2.2. 4.3	Fallback to voice during an established video call	
4.3.1	Signalling flows and procedures.	
4.3.1.		
4.3.1.	Fallback from UTRAN Video to GERAN Voice call	10
4.3.2	Future enhancements	
4.3.2.		
4.3.2.		
4.4 4.4.1	Fallback to voice during video call establishment	
4.4.1	Future enhancements	
4.4.2.		
4.4.2.	$\mathcal{C}$	
4.5	Automatic upgrade to video following fallback to voice	
5	Interaction with Supplementary Services and other 3GPP Features	1/
5 5.1	General	
5.2	Calling Line Identity and Single Numbering Scheme	
5.3	CAMEL based services triggered by call release and CCBS	
5.4	Provision of Multi-Media "Ring Back" tones to the A party	
6	O+M, charging and inter-operator and roaming accounting	15
6.1	Call Detail Records and statistics	
6.2	Online charging	15
6.3	Tariffing	
6.4	Inter-operator accounting	
6.5	Roaming accounting	16
Anne	ex A: List of CRs needed to other TSs	17
A.1	General	17
A.2	CRs to other specifications already agreed by TSG Plenaries	17
A.3	Future CRs that are needed and/or are desirable	17
Anne	ex B: Change history	18
Histo	ory	19

#### **Foreword**

This Technical Report 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.

### Introduction

Many 3GPP operators regard circuit switched video services as a key part of UMTS. However there is a strong desire to have an effective and user friendly method of switching between voice and video services when the user desires and/or when radio conditions change and video mode is no longer available.

Following a study of alternative mechanisms, this Technical Report describes the idle mode redial mechanism which 3GPP based systems can use to enhance switching between voice and video services.

### 1 Scope

The present document describes the idle mode redial mechanism which 3GPP based systems can use to enhance switching between circuit switched voice and video services.

### 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*.
- 3GPP TR 21.905: "Vocabulary for 3GPP Specifications". [1] [2] 3GPP TS 44.018: "Mobile radio interface layer 3 specification, Radio Resource Control Protocol". 3GPP TS 48.008: "Mobile-services Switching Centre – Base Station System (MSC – BSS) [3] interface; layer 3 specification". [4] 3GPP TS 25.331: "Radio Resource Control (RRC) protocol specification". [5] 3GPP TS 22.004: "General on supplementary services". [6] 3GPP TS 45.008: "Radio subsystem link control". [7] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3". 3GPP TS 23.009: "Handover procedures". [8] [9] 3GPP TS 32.205: "Telecommunication management; Charging management; Charging data description for the Circuit Switched (CS) domain". [10] 3GPP TS 22.082: "Call Forwarding (CF) supplementary services - Stage 1". 3GPP TS 23.082: "Call Forwarding (CF) supplementary services - Stage 2". [11] [12] 3GPP TS 23.205: "Bearer-independent CS Core Network".

### 3 Definitions, symbols and abbreviations

#### 3.1 Definitions

For the purposes of the present document, the following terms and definitions given in TR 21.905 [1] and the following apply.

**A party:** the calling party.

**B** party: the called party.