

ETSI TS 122 032 V18.0.0 (2024-04)



**Digital cellular telecommunications system (Phase 2+) (GSM);  
Universal Mobile Telecommunications System (UMTS);  
LTE;  
Immediate Service Termination (IST);  
Service description;  
Stage 1  
(3GPP TS 22.032 version 18.0.0 Release 18)**



---

**Reference**

RTS/TSGS-0322032vi00

---

**Keywords**

GSM,LTE,SECURITY,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 - APE 7112B  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° w061004871

---

**Important notice**

The present document can be downloaded from:

<https://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 prevailing version of an ETSI deliverable is the one made publicly available in PDF format at [www.etsi.org/deliver](http://www.etsi.org/deliver).

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

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

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>

If you find a security vulnerability in the present document, please report it through our  
Coordinated Vulnerability Disclosure Program:

<https://www.etsi.org/standards/coordinated-vulnerability-disclosure>

---

**Notice of disclaimer & limitation of liability**

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

---

**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.

© ETSI 2024.  
All rights reserved.

---

# Intellectual Property Rights

## Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are 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 Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, 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.

## Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

---

# Legal Notice

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. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found under <https://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
Legal Notice .....	2
Modal verbs terminology.....	2
Foreword.....	4
1 Scope .....	5
2 Normative references .....	5
3 Definitions and abbreviations.....	5
3.1 Definitions .....	5
3.2 Abbreviations .....	5
4 Immediate Service Termination (IST).....	6
4.1 Description .....	6
4.2 Applicability.....	6
4.3 Normal procedure.....	6
4.4 Exception procedures .....	6
5 Security requirements between HPLMN and VPLMN.....	6
<b>Annex A (Informative): Normal procedure.....</b>	<b>7</b>
<b>Annex B (Informative): Change History .....</b>	<b>8</b>
History .....	9

---

# 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.

---

# 1 Scope

This Technical Specification specifies the stage 1 description of the Immediate Service Termination (IST) service which provides the means for the HPLMN to terminate all the activities of an HPLMN subscriber in a VPLMN.

The purpose of this network feature is to enable the HPLMN to control the activities of its subscribers, particularly while they are roaming. If the HPLMN decides (based upon information received via Fraud Information Gathering System (FIGS) or other systems) that a roaming subscriber is behaving in a fraudulent or suspicious manner, the HPLMN can terminate all activities of the subscriber, including calls (including transferred and diverted calls) that are in progress.

This procedure can also be used to terminate all the activities of a subscriber when the subscription has ended.

The primary aim is to enable service providers/network operators to use IST to reduce the amount of money that they lose because of roaming fraud.

---

# 2 Normative 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: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Vocabulary for 3GPP Specifications".

---

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of this specification the following definitions apply:

**subscriber activities:** subscriber activities that must be terminated. These can be call related events (e.g. call set-up, call termination) or the invocation of call related and call independent supplementary services (e.g. Call Hold, Call Waiting, Call Transfer, Call Forwarding, Unstructured Supplementary Service Data (USSD)).

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following abbreviations apply:

<b>IST</b>	Immediate Service Termination
<b>FIGS</b>	Fraud Information Gathering System

---

## 4 Immediate Service Termination (IST)

### 4.1 Description

It shall be possible for the Home Public Land Mobile Network (HPLMN) to instruct any PLMN to terminate immediately all the activities of a specified HPLMN subscriber.

Immediate Service Termination (IST) is controlled by the HPLMN and can be triggered by the HPLMN only.

A subscriber shall be specified by the International Mobile Subscriber Identity (IMSI).

For subscribers that are marked as subscribed to a CAMEL-based service, IST shall be possible using Customised Application for Mobile network Enhanced Logic (CAMEL).

IST shall also be possible for subscribers who are not marked as subscribed to any CAMEL-based service (see Annex A).

### 4.2 Applicability

This network feature applies to all subscribed Bearer Services and Teleservices of the subscriber, except for emergency calls.

### 4.3 Normal procedure

The HPLMN will normally direct a request for IST for a particular subscriber to the current Visited PLMN (VPLMN) of that subscriber and the PLMN visited by the subscriber immediately prior to visiting the current VPLMN

**NOTE:** In practice, the IST command will be sent to individual Mobile-services Switching Centres (MSCs), and not to "VPLMNs" as a whole (but such detail is for Stage 2 and not Stage 1). IST will therefore be sent to all MSCs in which the subscriber has (or may have) an active call, as logged by the HPLMN. These MSCs may be confined to the current VPLMN or may include MSC(s) in the PLMN visited by the subscriber immediately prior to visiting the current VPLMN (or PLMNs visited even earlier).

The VPLMN shall confirm receipt of the IST command.

The VPLMN shall then terminate all activities of that subscriber in the VPLMN including ongoing calls and forwarded, deflected and transferred calls. The call records of calls terminated by the operation of IST shall contain a field indicating that the call terminated because of the operation of IST.

The VPLMN shall then confirm to the HPLMN that all subscriber activities in that VPLMN have been terminated.

If the specified subscriber has no activities in the VPLMN then the VPLMN shall inform the HPLMN of this.

### 4.4 Exception procedures

If after sending an IST command to a VPLMN, the HPLMN does not receive a positive acknowledgement from the VPLMN indicating receipt and comprehension of the IST command, the HPLMN should assume that the VPLMN does not support IST.

---

## 5 Security requirements between HPLMN and VPLMN

It is expected that there will be a need for authentication and confidentiality of the communication made between PLMNs.

These issues are for study under other work items within the SMG10 work programme.

---

## Annex A (Informative): Normal procedure

IST has been defined to work in co-ordination with existing GSM facilities.

- 1) The HPLMN changes the subscriber's entry in the HLR to prevent the resumption of activity in the HPLMN and VPLMN after IST has terminated all subscriber activity.
- 2) The HPLMN sends a MAP "Cancel Location" command to the VLR to prevent the resumption of activity by the subscriber within the VPLMN without reference to the HPLMN.
- 3) The HPLMN sends an IST command to the VPLMN, (possibly a specific MAP message).
- 4) The VPLMN confirms receipt and comprehension of the command.
- 5) The VPLMN terminates all activities of the subscriber indicated by the command.
- 6) The VPLMN confirms to the HPLMN that all subscriber activities have been terminated.



## Annex B (Informative): Change History

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Cat	Subject/Comment	Old	New
<b>Status of GSM 02.32</b>								
						No Phase 1 version		
06-1997	SMG#22					to SMG#22 for information		1.0.0
03-1998	SMG#25					to SMG#25 for approval	1.0.0	2.0.0
03-1998	SMG#25					TS approved by SMG#25. IST is part of Release 98	2.0.0	7.0.0
06-1998	SMG#26		A001	-	C	CR 02.32-A001 (cat C) approved by SMG#26	7.0.0	7.1.0
08-1999						R98 publication version	7.1.0	7.1.1
04-2000						R99 publication version	7.1.1	8.0.0
<b>Status of TS 42.032 (Created from TS 02.32 Release 1999)</b>								
SP-11	02.32					Upgrade to 42.032 Release 4 (3GPP numbering)	02.32 8.0.0	42.032 4.0.0
<b>Status of TS 22.032 (Created from TS 42.032 Release 4)</b>								
06-2002	SP-16					Decision to transfer IST to 3GPP system specification set	42.032 4.0.0	22.032 4.0.0
06-2002	SP-16					Upgrade to Rel-5	4.0.0	5.0.0
12-2004	SP-26					Upgrade to Rel-6	5.0.0	6.0.0
06-2007	SP-36					Upgrade to Rel-7	6.0.0	7.0.0
12-2008	SP-42	--	--	--	--	Upgrade to Rel-8	7.0.0	8.0.0
12-2009	SP-46	-	-	-	-	Upgrade to Rel-9	8.0.0	9.0.0
2011-03	-	-	-	-	-	Update to Rel-10 version (MCC)	9.0.0	10.0.0
2012-09	-	-	-	-	-	Update to Rel-11 version (MCC)	10.0.0	11.0.0
2014-09	-	-	-	-	-	Update to Rel-12 version (MCC)	11.0.0	12.0.0
2015-12	-	-	-	-	-	Update to Rel-13 version (MCC)	12.0.0	13.0.0
2017-03	-	-	-	-	-	Update to Rel-14 version (MCC)	13.0.0	14.0.0
2018-06	-	-	-	-	-	-	14.0.0	15.0.0
2020-07	-	-	-	-	-	Update to Rel-16 version (MCC)	15.0.0	16.0.0
2022-03	-	-	-	-	-	Update to Rel-17 version (MCC)	16.0.0	17.0.0
2024-03	-	-	-	-	-	Update to Rel-18 version (MCC)	17.0.0	18.0.0

---

# History

<b>Document history</b>		
V18.0.0	April 2024	Publication