



**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Partial Suspension of Itf-N Integration Reference Point (IRP);
Requirements
(3GPP TS 32.381 version 16.0.0 Release 16)**



Reference

RTS/TSGS-0532381vg00

Keywords

GSM,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 prevailing version of an ETSI deliverable is the one made publicly available in PDF format at 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>

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 2020.

All rights reserved.

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.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables 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.

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.

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 <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
Legal Notice	2
Modal verbs terminology.....	2
Foreword.....	4
Introduction	4
1 Scope	5
2 References	5
3 Definitions and abbreviations.....	6
3.1 Definitions	6
3.2 Abbreviations	6
4 Requirements for partial suspension of Itf-N	7
4.1 General requirements	7
4.2 Requirements for notifications	7
4.3 Security related requirements	7
4.4 Multi-Manager Related Requirements	7
Annex A (informative): Change history	8
History	9

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.

Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

32.381: Partial Suspension of Itf-N Integration Reference Point (IRP); Requirements.

32.382: Partial Suspension of Itf-N Integration Reference Point (IRP); Information Service (IS).

32.386: Partial Suspension of Itf-N Integration Reference Point (IRP); Solution Set (SS) definitions.

The Itf-N interface is built up by a number of IRPs and a related Name Convention, which realise the functional capabilities over this interface. The basic structure of the IRPs is defined in 3GPP TS 32.101 [1] and 3GPP TS 32.102 [2].

Information of an event is carried in a notification. An IRPAgent (typically an EM or a NE) emits notifications (see 3GPP TS 32.302 [3]). The IRPManager (typically a Network Management System) receives notifications. In certain scenarios floods of unwanted notifications including alarms would be sent to the IRP manager by network object instances. Thereby the interface and the management systems bear unnecessary load. Even worse: the Operator's awareness is drawn away from really urgent events.

1 Scope

The purpose of Partial Suspension of Itf-N IRP is to define an interface through which an IRPManager can suspend the forwarding of notifications via Itf-N which were generated in parts of the managed systems.

The present document contains the Requirements of Partial Suspension of Itf-N IRP. It defines, for the purpose of generally suspending the forwarding of notifications, the basic requirements to be fulfilled on Itf-N.

2 References

The following documents contain provisions that, 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 TS 32.101: "Telecommunication management; Principles and high level requirements".
- [2] 3GPP TS 32.102: "Telecommunication management; Architecture".
- [3] 3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP); Information Service (IS)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

IRP: See 3GPP TS 32.101 [1].

IRPAgent: See 3GPP TS 32.102 [2].

IRPManager: See 3GPP TS 32.102 [2].

Itf-N suspended managed instance: instance whose notifications are temporarily not forwarded via Itf-N

Partial suspension of Itf-N: the forwarding of all notifications via Itf-N generated by some or all managed objects is suspended

If a bulk CM file was transported into the IRPAgent and is activated there shortly before suspension or not via Itf-N during suspension, then Itf-N notifications resulting from the execution of the file are suspended.

suspended notification: notification which would be sent under normal circumstances via Itf-N, but is not because a corresponding suspension request was previously received

3.2 Abbreviations

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

CM	Configuration Management
EM	Element Manager
IRP	Integration Reference Point
IS	Information Service (see 3GPP TS 32.101 [1])
Itf-N	Interface N
MIB	Management Information Base
NE	Network Element

4 Requirements for partial suspension of Itf-N

4.1 General requirements

4.1.1 Granularity of suspension:

The Itf-N shall allow to specify in a suspension request which managed instances shall be Itf-N suspended.

4.1.2 An IRPManager shall be able to remove a partial suspension of Itf-N.

4.1.3 An IRPManager should be able to request from the IRPAgent a list of the active suspensions.

4.1.4 Impact on logging and alarming:

It's the IRPAgent's decision whether or not the suspended notifications are logged, whether or not they go into the alarmList.

4.1.5 Impact on measurements:

Measurements are not suspended.

4.1.6 Impact on delta synchronization:

Delta synchronization is also not affected by the suspension.

4.2 Requirements for notifications

4.2.1 Suspended notifications shall not be sent, need not to be stored for re-sending after the end of the suspension.

4.2.2 Suspension should be applied as soon as possible, but notifications which are already ready to be sent from notification buffers are allowed to be sent.

4.3 Security related requirements

4.3.1 Authorization and Authentication of IRPManagers requesting partial suspension of Itf-N may be regarded necessary.

4.4 Multi-Manager Related Requirements

4.4.1 If one IRPManager requests a partial suspension of Itf-N, then a notification shall be sent containing the information about the suspension. After receiving the notification, IRPManagers should be aware that the IRPAgent can not deliver reliable results for some operations while partial suspension is active. Therefore the IRPManager should not use such operations, e.g. CM and FM or TM, etc. operations in the scoped branch of the MIB, which is suspended.

4.4.2 If an IRPManager requests an operation related to suspended instances which are subject of notification forwarding, then a notification may be sent to this IRPManager containing the information about the related suspension.

4.4.3 If one IRPManager removes a partial suspension of Itf-N, then a notification shall be sent containing the information about the suspension revocation.

An Itf-N partial suspension may be removed by another IRPManager than the one who requested it. This is useful in order to avoid the critical case that a temporary Itf-N suspension can not be removed anymore because the initiating IRPManager fails for a longer time.

NOTE: The co-ordination between several IRPManagers / NMS operators involved in this functionality is an organizational matter and out of scope of the present document.

Annex A (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
Jun 2006	SA_32	SP-060254	--	--	Submitted to SA#32 for Information	--	1.0.0	
Jun 2006	--	--	--	--	History box clean-up	--	1.0.0	1.0.1
Mar 2007	SA_35	SP-070058	--	--	Submitted to SA#35 for Approval	--	2.0.0	7.0.0
Dec 2008	SA_42	--	--	--	Upgrade to Release 8	--	7.0.0	8.0.0
Dec 2009	-	-	-	-	Update to Rel-9 version (MCC)	-	8.0.0	9.0.0
Mar 2011	-	-	-	-	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
2014-10	-	-	-	-	Update to Rel-12 version (MCC)		11.0.0	12.0.0
2016-01	-	-	-	-	Update to Rel-13 version (MCC)		12.0.0	13.0.0
2017-03	SA#75	-	-	-	Promotion to Release 14 without technical change		13.0.0	14.0.0

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2018-06						Update to Rel-15 version (MCC)	15.0.0
2020-07	-	-	-	-	-	Update to Rel-16 version (MCC)	16.0.0

History

Document history		
V16.0.0	August 2020	Publication