

ETSI TS 132 301 V4.0.2 (2002-12)

Technical Specification

**Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Configuration Management (CM);
Notification Integration Reference Point (IRP):
Requirements
(3GPP TS 32.301 version 4.0.2 Release 4)**



Reference

RTS/TSGS-0532301v402

Keywords

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

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the 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

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, send your comment to:

editor@etsi.org

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2002.
All rights reserved.

DECTTM, **PLUGTESTS**TM and **UMTS**TM are Trade Marks of ETSI registered for the benefit of its Members.
TIPHONTM and the **TIPHON logo** are Trade Marks currently being registered by ETSI for the benefit of its Members.
3GPPTM is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

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 (<http://webapp.etsi.org/IPR/home.asp>).

All published ETSI deliverables shall include information which directs the reader to the above source of information.

Foreword

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, 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 <http://webapp.etsi.org/key/queryform.asp>.

Contents

Intellectual Property Rights	2
Foreword.....	2
Foreword.....	4
Introduction	4
1 Scope	5
2 References	5
3 Definitions and abbreviations.....	5
3.1 Definitions	5
3.2 Abbreviations	6
4 Notification management functions over Itf-N	6
4.1 Notification mechanism subscription functions	6
4.2 Subscription control functions.....	6
4.3 Notification control functions.....	6
4.4 Function to discover notification capabilities.....	6
4.5 Generic notification header	7
Annex A (informative): Change history	8
History	9

Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

The present document is part the 32.300-series covering the 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication Management; Configuration Management, as identified below:

32.301: "Notification Integration Reference Point (IRP): Requirements";

32.302: "Notification Integration Reference Point (IRP): Information Service version 1";

32.303: "Notification Integration Reference Point (IRP): CORBA solution set version 1:1";

32.304: "Notification Integration Reference Point (IRP): CMIP solution set version 1:1".

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 Itf-N interface is built up by a number of Integration Reference Points (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].

Network Elements (NEs) under management and element managers generate notifications of events about occurrences within the network. Different kinds of events carry different kinds of information. For instance a new alarm as specified in Alarm IRP: Information Service [3], is one possible kind of event, an object creation as specified in Basic CM IRP : Information Service [4] is another possible kind of event.

Information of an event is carried in notification. An IRPAgent (typically an EM or a NE) emits notifications. IRPManager (typically a network management system) receives notifications. The purpose of Notification IRP is to define an interface through which an IRPManager can subscribe to IRPAgent for receiving notifications.

This IRP bases its design on work captured in ITU-T Recommendation X.734 [5], OMG Notification Service [6]. The central design ideas are:

- Separation of notification Consumers (IRPManagers) from Producers (IRPAgents);
- Notifications are sent to IRPManagers without the need for IRPManagers to periodically check for new notifications.

Common characteristics related to notifications in all other IRPs are gathered in one IRP.

1 Scope

The purpose of Notification IRP is to define an interface through which an IRPManager can subscribe to an IRPAgent for receiving notifications. The present document is the "Requirements" of Notification IRP. It defines, for the purpose of subscribing to an IRPAgent for receiving notifications, the basic requirements that shall be fulfilled on Itf-N.

How IRPManager discovers the IRPAgent's address or reference (so that IRPManager can invoke an operation) is outside the scope of the present document.

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 TS 32.101: "3G Telecom Management principles and high level requirements".
- [2] 3GPP TS 32.102: "3G Telecom Management Architecture".
- [3] 3GPP TS 32.111-2: "Telecommunication management; Fault Management; Part 2: Alarm Integration Reference Point: Information Service".
- [4] 3GPP TS 32.602: "Telecommunication management; Configuration Management (CM); Basic Configuration Management Integration Reference Point (IRP) information model".
- [5] ITU-T Recommendation X.734: "Information technology - Open Systems Interconnection - Systems Management: Event report management function".
- [6] OMG: "OMG Notification Service". <http://www.omg.org/technology/documents/>

3 Definitions and abbreviations

3.1 Definitions

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

Element Manager (EM): See 3GPP TS 32.101 [1].

IRPAgent: See 3GPP TS 32.102 [2].

IRPManager: See 3GPP TS 32.102 [2].

Network Manager (NM): See 3GPP TS 32.101 [1].

3.2 Abbreviations

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

CM	Configuration Management
CMIP	Common Management Information Protocol
CORBA	Common Object Request Broker Architecture
EM	Element Manager
FM	Fault Management
IRP	Integration Reference Point
ITU-T	International Telecommunication Union - Telecommunication
MIB	Management Information Base
NE	Network Element
NM	Network Manager
NR	Network Resource
OMG	Object Management Group
OS	Operations System
TM	Telecom Management
UMTS	Universal Mobile Telecommunications System

4 Notification management functions over Itf-N

4.1 Notification mechanism subscription functions

The IRPAgent shall provide IRPManagers with the capabilities to subscribe and unsubscribe to the notification mechanism. An IRPManager shall be able to specify the types of notifications IRPAgent should emit to IRPManager during subscription, to specify filtering criteria that shall be applied by the notification mechanism. An IRPManager shall be able to subscribe several times in order to include in a subscription different types of notifications. An IRPManager shall also be able to request multiple subscriptions, which is equivalent, from the IRPAgent perspective, to multiple IRPManagers each providing one subscription.

4.2 Subscription control functions

The IRPAgent may provide to IRPManagers capabilities to control its subscriptions. An IRPManager may then be able to check whether its subscription is still active or not, to know the details of a particular subscription and to know the list of all subscriptions it has opened.

4.3 Notification control functions

In principle, notifications are forwarded to the IRPManagers as soon as they are available. The real-time forwarding of these notifications occurs via appropriate filtering mechanisms ("discriminators" on CMIP interfaces, "subscription" on CORBA interfaces) in accordance with ITU-T Recommendation X.734 [5] or OMG event/notification service. Any IRPManager may be able to set and change filter criteria applicable during the life-cycle of one of its subscriptions in order to ensure that only the notifications which fulfil pre-defined criteria are sent. An IRPManager may also be able to enable and disable the emission of notifications corresponding to its subscriptions.

4.4 Function to discover notification capabilities

The IRPAgent may provide IRPManagers with a capability to discover the IRPs supported by the IRPAgent that are capable of sending notifications through the notification IRP. Those IRPs shall be identified with their version.

4.5 Generic notification header

Notifications are emitted by the notification IRP. Those notifications can be defined in any other IRP (e.g. a notification for a new alarm as specified in Alarm IRP: Information Service [3]). It is required that all notifications emitted by the notification IRP support the same header that contains enough information to identify the type of notification, the resource at the origin of the notification and the time of the notification.

Annex A (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Jun 2001	S_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0
Mar 2002	--	--	--	--	Cosmetics (changed styles/field codes on cover/page headings)	4.0.0	4.0.1
Dec 2002	--	--	--	--	Cosmetics	4.0.1	4.0.2

History

Document history		
V4.0.0	June 2001	Publication (Withdrawn)
V4.0.1	March 2002	Publication (Withdrawn)
V4.0.2	December 2002	Publication