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**Digital cellular telecommunications system (Phase 2+) (GSM);  
Universal Mobile Telecommunications System (UMTS);  
LTE;  
Telecommunication management;  
Generic Integration Reference Point (IRP) management;  
Requirements  
(3GPP TS 32.311 version 17.0.0 Release 17)**



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# 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.....	5
3.1 Definitions .....	5
3.2 Abbreviations .....	6
4 Generic IRP functions over Itf-N .....	6
4.1 Version retrieval function.....	6
4.2 Profiles retrieval functions .....	6
<b>Annex A (informative): Change history .....</b>	<b>8</b>
History .....	9

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# Foreword

This Technical Specification (TS) 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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# Introduction

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

**32.311: "Generic Integration Reference Point (IRP) management; Requirements".**

32.312: "Generic Integration Reference Point (IRP) management; Information Service (IS)".

32.316: "Generic Integration Reference Point (IRP) management; Solution Set (SS) Definitions".

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].

The IRPs support a set of common services. Those features allow to retrieve IRP profile and IRP supported versions. The present document contains the requirements of those common services.

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# 1 Scope

The purpose of the present document is to define a common service supported by all IRPs such as AlarmIRP. The present document is the "Requirements" part. It defines the requirements that shall be fulfilled by all IRPs, such as AlarmIRP, supporting this common service.

With this common service supported by all IRPs, an IRPManager shall be able to retrieve the profile of operations and notifications supported by a given IRP which is name-contained by an IRPAgent. An IRPManager shall also be able to retrieve the IRPVersions supported by the given IRP.

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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 TS 32.101: "Telecommunication management; Principles and high level requirements".

[2] 3GPP TS 32.102: "Telecommunication management; Architecture".

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# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] and the following apply:

**IRP:** see 3GPP TS 32.102 [2].

**IRPAgent:** see 3GPP TS 32.102 [2].

**IRPManager:** see 3GPP TS 32.102 [2].

**IRP document version number string:** the IRP document version number (sometimes called "IRPVersion") string is used to identify a technology of a particular IRP Solution Set (SS) specification and its version number.

For Release 9 and earlier releases, it is derived using the following rule:

Take the 3GPP TS/version number on the front page of the SS specification, such as "3GPP TS 32.111-3 V4.1.0 (2001-09)". Discard the leading "3GPP TS". Discard all characters after and including the last period. Eliminate leading and trailing spaces. Reduce multiple consecutive spaces to one space. Express the resultant in a string. Capitalise all letters of the string.

EXAMPLE 1: If the 3GPP document version number is "3GPP TS 32.111-3 V4.1.0 (2001-09)", then the IRP document version number shall be "32.111-3 V4.1".

EXAMPLE 2: If the 3GPP document version number is "3GPP TS 32.303 V4.1.0 (2001-09)", then the IRP document version number shall be "32.303 V4.1".

For Release 10 and later releases, it is derived using the following rule:

Take the 3GPP TS/version number on the front page of the SS specification, such as "3GPP TS 32.111-6 V10.1.0 (2011-06)", Discard the leading "3GPP TS". Discard all characters after and including the last period. Remove all spaces. Construct a string that is a concatenation of '-', the identifier of the Annex where the solution set technology is captured (e.g., 'A' for Annex A) and a trailing space. Insert the concatenated string before 'V', Express the resultant in a string. Capitalise all letters of the string.

EXAMPLE 3: If the 3GPP document version number is "3GPP TS 32.111-6 V10.1.0 (2011-06)", then the IRP document version number shall be:

- "32.111-6-A V10.1" for CORBA Solution Set;
- "32.111-6-B V10.1" for XML Definitions;
- "32.111-6-C V10.1" for SOAP Solution Set.

EXAMPLE 4: If the 3GPP document version number is "3GPP TS 32.306 V10.1.0 (2011-09)", then the IRP document version number shall be:

- "32.306-A V10.1" for CORBA Solution Set;
- "32.306-B V10.1" for XML Defintions;
- "32.306-C V10.1" for SOAP Solution Set.

## 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
NE	Network Element
NM	Network Manager
SS	Solution Set

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## 4 Generic IRP functions over Itf-N

The requirements for the generic IRP service over Itf-N are provided in the following clauses.

### 4.1 Version retrieval function

An IRPAgent may support one or multiple IRP instances simultaneously (e.g. AlarmIRP instances, BulkCMIRP instances, etc.).

The set of capabilities of each IRP instance is fully identified by the version number of the corresponding IRP specification (i.e. the "IRP document version number string" or in short, the IRPVersion; see clause 3.1.).

An IRP instance shall provide a function to allow IRPManager to retrieve all its (i.e. IRP instance's) supported IRPVersion(s) over Itf-N.

An IRPManager may then decide if it wants to communicate with the IRP instance.

### 4.2 Profiles retrieval functions

Each IRP supported by an IRPAgent provides a set of operations and notifications. It is possible to define in each IRP Information Service (IS) some operations and notification that are optional, which means that the final implementation of those operations and notifications is vendor dependant. Similarly, some parameters of operations and notifications may be defined as optional in the IRP IS.

It shall be possible for an IRPManager to retrieve over Itf-N the profile of an IRP of a given version: the profile shall provide information such as name of supported operations and notifications, and the list of supported parameters for each supported operation and notification.



## Annex A (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Jun 2001	SA_12	SP-010285	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0
Jul 2001	--	--	--	--	TS number wrongly shown as 32.312 instead of 32.311	4.0.0	4.0.1
Mar 2002	SA_15	--	--	--	Automatic upgrade to Rel-5 (no Rel-5 CR)	4.0.1	5.0.0
Dec 2002	--	--	--	--	Cosmetics	5.0.0	5.0.1
Dec 2003	SA_22	SP-030639	0002	--	Align with 32.102	5.0.1	5.1.0
Mar 2004	SA_23	SP-040105	--	--	Automatic upgrade to Rel-6 (no CR)	5.1.0	6.0.0
Dec 2004	SA_26	SP-040794	0003	--	Update UML diagrams, Add reference to its CORBA/CMIP SSs	6.0.0	6.1.0
Jun 2007	SA_36	--	--	--	Automatic upgrade to Rel-7 (no CR) at freeze of Rel-7. Deleted reference to CMIP SS, discontinued from R7 onwards.	6.1.0	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
Dec 2012	SA_54	SP-110706	0004	4	Enhance definition of IRPVersion	10.0.0	10.1.0
2012-09	-	-	-	-	Update to Rel-11 version (MCC)	10.1.0	<b>11.0.0</b>
2014-10	-	-	-	-	Update to Rel-12 version (MCC)	11.0.0	<b>12.0.0</b>
2016-01	-	-	-	-	Update to Rel-13 version (MCC)	12.0.0	<b>13.0.0</b>
2017-03	-	-	-	-	Update to Rel-14 version (MCC)	13.0.0	<b>14.0.0</b>
2018-06	-	-	-	-	Update to Rel-15 version (MCC)	14.0.0	<b>15.0.0</b>
2020-07	-	-	-	-	Update to Rel-16 version (MCC)	15.0.0	<b>16.0.0</b>
2022-03	-	-	-	-	Update to Rel-17 version (MCC)	16.0.0	<b>17.0.0</b>

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# History

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