

# ETSI TS 132 153 V9.1.0 (2016-04)



**Digital cellular telecommunications system (Phase 2+) (GSM);  
Universal Mobile Telecommunications System (UMTS);  
LTE;  
Telecommunication management;  
Integration Reference Point (IRP)  
technology specific templates, rules and guidelines  
(3GPP TS 32.153 version 9.1.0 Release 9)**



---

Reference

RTS/TSGS-0532153v910

---

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

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™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.  
**3GPP™** and **LTE™** 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 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>.

---

## 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
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	5
Introduction .....	5
1 Scope .....	6
2 References .....	6
3 Definitions and abbreviations.....	7
3.1 Definitions .....	7
3.2 Abbreviations .....	7
4 Interface IRP SS template .....	8
5 NRM IRP SS template .....	14
<b>Annex A (normative): General rules for Solution Sets (SS) .....</b>	<b>16</b>
A.1 Introduction .....	16
A.2 Solution Set (SS) versioning .....	16
A.3 Referenced Information Service (IS) specification .....	16
<b>Annex B (normative): Technology specific rules &amp; guidelines for CORBA Solution Sets.....</b>	<b>17</b>
B.1 Rules.....	17
B.1.1 Introduction .....	17
B.1.2 Rules for specification of CORBA Solution Sets.....	17
B.1.2.1 Introduction.....	17
B.1.2.2 Pragma prefix.....	17
B.1.3 Implementation aspects of Interface IRP CORBA Solution Sets .....	17
B.1.3.1 Introduction.....	17
B.1.3.2 IRPAgent behaviour on incoming optional method.....	18
B.1.3.3 IRPAgent behaviour on incoming optional parameter of operation .....	18
B.1.3.4 IRPAgent behaviour on outgoing attributes of notification .....	18
B.1.3.5 Encoding rule of absence semantics .....	18
B.1.4 Rules for NRM IRP CORBA SS extensions .....	19
B.1.4.1 Allowed extensions .....	19
B.1.4.2 Extensions not allowed .....	19
B.2 Guidelines (Style Guide for CORBA SS IDL).....	20
B.2.1 Modules and File .....	20
B.2.1.1 Use of Modules .....	20
B.2.1.2 File Names .....	20
B.2.1.3 Include Conventions .....	20
B.2.1.4 File Structure .....	21
B.2.1.4.1 File Internal Identification.....	21
B.2.1.4.2 File Guard .....	21
B.2.1.4.3 Required Contents.....	21
B.2.1.4.4 Example illustrating a File Structure.....	21
B.2.2 Identifiers .....	22
B.2.2.1 Mixed Case, Beginning Upper, No Underscores .....	22
B.2.2.2 Lower Case with Underscores .....	22
B.2.2.3 Upper Case with Underscores.....	23
B.2.2.4 Naming IDL Sequence Types.....	23
B.2.3 Interface IRP .....	24

B.2.3.1	Constant String and Type Definitions.....	24
B.2.3.2	Operations.....	25
B.2.3.3	Notifications .....	25
B.2.4	NRM IRP.....	27
<b>Annex C (normative): Technology specific rules &amp; guidelines for SOAP SSs .....</b>		<b>28</b>
C.1	Rules.....	28
C.1.1	Introduction.....	28
C.1.2	Rules for specification of SOAP Solution Sets.....	28
C.1.2.1	Introduction.....	28
C.1.2.2	File names .....	28
C.1.2.3	Void.....	28
C.1.2.4	XML version encoding .....	28
C.1.3	Implementation aspects of Interface IRP SOAP Solution Sets.....	29
C.1.3.1	Introduction.....	29
C.1.3.n	XXXX rule.....	29
C.2	Guidelines (Style Guide for SOAP SS WSDL).....	29
C.2.1	File structure .....	29
C.2.1.1	Definitions.....	29
C.2.1.2	Namespaces.....	29
C.2.1.3	Documentation .....	29
C.2.1.4	Types.....	29
C.2.1.5	Message.....	29
C.2.1.6	Port type .....	29
C.2.1.7	Binding.....	29
C.2.1.8	Port.....	29
C.2.1.9	Service.....	29
C.2.2	Identifiers.....	30
C.2.2.n	Rule n .....	30
C.3	XML Schema Guidelines .....	30
C.3.1	XSD guidelines for messages definition.....	30
C.3.1.1	Request message .....	30
C.3.1.2	Response messages .....	30
C.3.1.3	Fault messages .....	30
C.3.2	XSD guidelines for parameters definition .....	30
C.3.1.1	General guidelines.....	30
C.3.1.1	Simple type definitions .....	30
C.3.1.2	Complex type definition.....	30
C.3.3	Identifiers.....	30
<b>Annex D (normative): Technology specific rules &amp; guidelines for XML specifications .....</b>		<b>31</b>
D.1	Rules.....	31
D.1.1	XSD Use Cases .....	31
D.1.1.1	Background .....	31
D.1.1.2	Use Cases Set 1 .....	31
D.1.1.3	Use Cases Set 2 .....	32
D.1.2	Rules for NRM IRP XML specification extensions .....	32
D.1.3	XML version encoding .....	32
D.2	Guidelines.....	33
<b>Annex E (informative): Change history .....</b>		<b>34</b>
History .....		35

---

## 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.

---

## 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:

TS 32.150 "Integration Reference Point (IRP) Concept and definitions"

TS 32.151 "Integration Reference Point (IRP) Information Service (IS) template"

TS 32.152 "Integration Reference Point (IRP) Information Service (IS) Unified Modelling Language (UML) repertoire"

**TS 32.153 "Integration Reference Point (IRP) technology specific templates, rules and guidelines"**

TS 32.154 "Backward and Forward Compatibility (BFC); Concept and definitions"

TS 32.155 "Requirements template".

---

# 1 Scope

The present document contains the templates to be used for the production of Integration Reference Point (IRP) technology-specific specifications.

---

# 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".
- [3] 3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".
- [4] Void.
- [5] Void.
- [6] 3GPP TS 32.111-2: "Telecommunication management; Fault Management; Part 2: Alarm Integration Reference Point (IRP): Information Service (IS)".
- [7] Void.
- [8] W3C SOAP 1.2 specification (<http://www.w3.org/TR/soap12-part1/>).
- [9] OMG IDL Style Guide, ab/98-06-03, June 17, 1998.
- [10] W3C WSDL 1.1 specification (<http://www.w3.org/TR/wsdl>) .
- [11] Void.
- [12] Void.
- [13] Void.
- [14] Void.
- [15] W3C XML Specifications (<http://www.w3.org/XML/Core/>).
- [16] IETF RFC 3629 (<http://tools.ietf.org/html/rfc3629#ref-UNICODE>).
- [17] 3GPP TS 32.642: "Telecommunication management; Universal Terrestrial Radio Access Network (UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".