

ETSI TS 132 347 V8.0.0 (2009-04)

Technical Specification

**Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
File Transfer (FT) Integration Reference Point (IRP);
SOAP Solution Set (SS)
(3GPP TS 32.347 version 8.0.0 Release 8)**



Reference

DTS/TSGS-0532347v800

Keywords

GSM, 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, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

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 2009.
All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™**, **TIPHON™**, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

LTE™ is a Trade Mark of ETSI currently being 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 (<http://webapp.etsi.org/IPR/home.asp>).

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>.

Contents

Intellectual Property Rights	2
Foreword.....	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 Architectural features	6
4.1 General	6
5 Mapping	7
5.1 Operation and notification mapping	7
5.2 Operation parameter mapping	8
5.2.1 Operation listAvailableFiles	8
5.2.1.1 Input parameters.....	8
5.2.1.2 Output parameters	8
5.2.1.3 Fault definition.....	8
5.2.2 Operation fileDownloadIndication.....	8
5.2.2.1 Input parameters.....	8
5.2.2.2 Output parameters	9
5.2.2.3 Fault definition.....	9
Annex A (normative): WSDL specifications.....	10
Annex B (informative): WSDL electronic files	12
Annex C (informative): Change history	13
History	14

Foreword

This Technical Specification (TS) 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:

- 32.341: "File Transfer (FT) Integration Reference Point (IRP): Requirements"
- 32.342: "File Transfer (FT) Integration Reference Point (IRP): Information Service (IS)"
- 32.343: "File Transfer (FT) Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)"
- 32.345: "File Transfer (FT) Integration Reference Point (IRP): eXtensible Markup Language (XML) definitions"
- 32.347: "File Transfer (FT) Integration Reference Point (IRP): SOAP Solution Set (SS)"**

The present document is part of a TS-family which describe the requirements and information model necessary for the Telecommunication Management (TM) of 3G systems. The TM principles and TM architecture are specified in 3GPP TS 32.101 [1] and 3GPP TS 32.102 [2].

Network Elements (NEs) under management, element managers as well as network managers generate various management information stored in file format. This IRP is addressing how these files are exchanged through Itf-N as well as certain aspects of file management and maintenance. It is anticipated that management functions (e.g. PM, Call Trace, CM) make reuse of capabilities provided by this File Transfer IRP.

1 Scope

The present document specifies the SOAP Solution Set for the IRP whose semantics are specified in File Transfer IRP: Information Service (3GPP TS 32.342 [4]).

This Solution Set specification is related to 3GPP TS 32.342 V8.0.X.

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.) 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 32.341: " Technical Specification Group Services and System Aspects; Telecommunication management; File Transfer (FT) Integration Reference Point (IRP): Requirements ".
- [4] 3GPP TS 32.342: " Technical Specification Group Services and System Aspects; Telecommunication management; File Transfer (FT) Integration Reference Point (IRP): Information Service (IS)".
- [5] 3GPP TS 32.345: " Telecommunication management; File Transfer (FT) Integration Reference Point (IRP): eXtensible Markup Language (XML) definitions".
- [6] 3GPP TS 32.311: "Telecommunication management; Generic Integration Reference Point (IRP) management; Requirements".
- [7] 3GPP TS 32.312: "Telecommunication management; Generic Integration Reference Point (IRP) management; Information Service (IS)".
- [8] 3GPP TS 32.317: "Telecommunication management; Generic Integration Reference Point (IRP) management; SOAP solution set".
- [9] 3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".
- [10] 3GPP TS 32.307: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): SOAP solution set".
- [11] W3C SOAP 1.1 specification (<http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>)
- [12] W3C XPath 1.0 specification (<http://www.w3.org/TR/1999/REC-xpath-19991116>)
- [13] W3C WSDL 1.1 specification (<http://www.w3.org/TR/2001/NOTE-wsdl-20010315>)
- [14] W3C SOAP 1.2 specification (<http://www.w3.org/TR/soap12-part1/>)

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], 3GPP TS 32.150 [9] and 3GPP TS 32.341 [3] and the following apply:

IRP document version number string (or "IRPVersion"): See 3GPP TS 32.311 [6].

3.2 Abbreviations

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

IS	Information Service
SS	Solution Set
WSDL	Web Service Description Language

4 Architectural features

4.1 General

The overall architectural feature of the File Transfer (FT) IRP is specified in 3GPP TS 32.342 [4]. This clause specifies features that are specific to the SOAP solution set.

The SOAP 1.1 specification [11] and WSDL 1.1 specification [13] are supported.

The SOAP 1.2 specification [14] is supported optionally.

This specification uses "document" style in WSDL file.

This specification uses "literal" encoding style in WSDL file.

The filter language used in the SS is the XPath Language (see W3C XPath 1.0 specification [12]). IRPAgents may throw a FilterComplexityLimit fault when a given filter is too complex.

The FT IRP SOAP SS uses the Notification IRP SOAP SS of 3GPP TS 32.307 [10]. The IRPAgent shall support the push interface model, which means that the IRPAgent sends FT notifications to the IRPManager as soon as new events occur. The IRPManager does not need to check ("pull") for events.

Relevant definitions are imported from the FT IRP XML definitions of 3GPP TS 32.345 [5].

This specification uses a number of namespace prefixes throughout that are listed in Table 4.1.

Table 4.1: Prefixes and Namespaces used in this specification

PREFIX	NAMESPACE
(no prefix)	http://schemas.xmlsoap.org/wsdl/
soap	http://schemas.xmlsoap.org/wsdl/soap/
fTIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#FTIRPSystem
fTIRPData	http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#FTIRPData
xfi	http://www.3gpp.org/ftp/specs/archive/32_series/32.345#fTIRPIOCs
genericIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.317/schema/32317-810/GenericIRPSystem
ntfIRPNtfSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/32307-810/notification/NotificationIRPNtfSystem

The WSDL structure is depicted in Figure 4.1 below, depicting port type, binding and service. The port type contains port type operations, which again contains input, output and fault messages. The binding contains binding operations, which have the same name as the port type operations. The binding connects to a port inside the service.

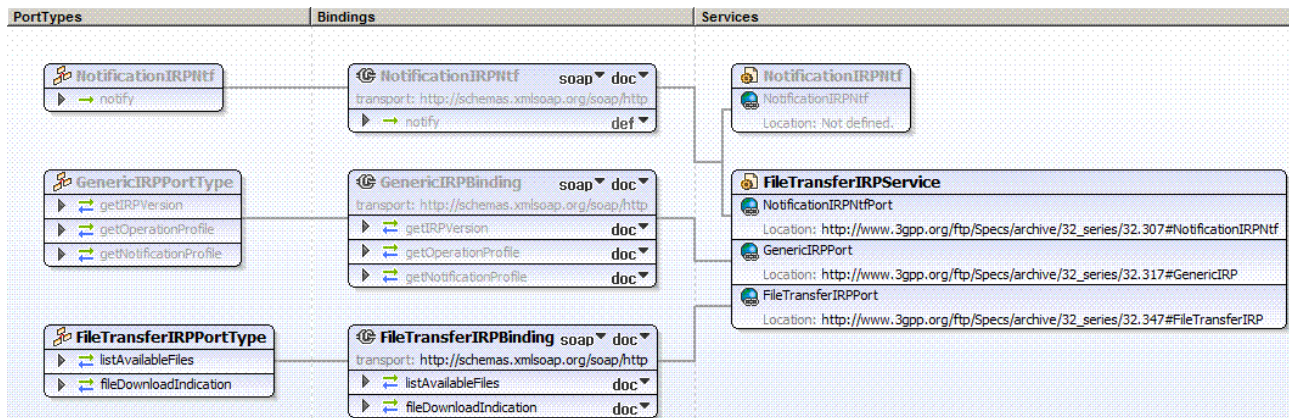


Figure 4.1: File Transfer IRP SOAP Solution Set WSDL structure

5 Mapping

5.1 Operation and notification mapping

The FT IRP IS (3GPP TS 32.342 [4]) defines the operations and their semantics.

Table 5.1 maps the operations defined in the FT IRP IS to their equivalent port type and binding operations in this Solution Set (SS).

Table 5.1 also maps the notifications of the FT IRP IS, as well as inherited operations.

Table 5.1 also qualifies if an operation is Mandatory (M) or Optional (O).

Table 5.1: Mapping from IS Operation to SS Equivalents

IS Operation in 3GPP TS 32.342 [4]	SS: Operation for WSDL port type and WSDL binding	SS: Port of FileTransferIRPService	Qualifier
listAvailableFiles	listAvailableFiles (note 1)	FileTransferIRPPort	M
fileDownloadIndication	fileDownloadIndication (note 1)	FileTransferIRPPort	O
notifyFileReady	notify (note 2)	NotificationIRPNtfPort	M
notifyFilePreparationError	notify (note 2)	NotificationIRPNtfPort	M
getIRPVersion (note 3)	See TS 32.317 [8]	GenericIRPPort	M
getOperationProfile (note 3)	See TS 32.317 [8]	GenericIRPPort	O
getNotificationProfile (note 3)	See TS 32.317 [8]	GenericIRPPort	O
NOTE 1: The operation is under the port type fTIRPSystem:FileTransferIRPPortType and under the binding fTIRPSystem:FileTransferIRPBinding.			
NOTE 2: The IS equivalent maps to an XML definition specified in 3GPP TS 32.345 [5], and this being an input parameter to the operation notify under the port type ntfIRPNtfSystem:NotificationIRPNtf and under the binding ntfIRPNtfSystem:NotificationIRPNtf of 3GPP TS 32.307 [10]. This binding is linked to a port of the FileTransferIRPService as indicated in the table above.			
NOTE 3: The IS operation is inherited from the ManagedGenericIRP IOC specified in 3GPP TS 32.312 [7]. This inheritance is by the FileTransferIRP IOC of 3GPP TS 32.342 [4] inheriting from the ManagedGenericIRP IOC. The corresponding binding is linked to a port of the FileTransferIRPService as indicated in the table above.			

5.2 Operation parameter mapping

The FT IRP IS (3GPP TS 32.342 [4]) defines semantics of parameters carried in the operations. The tables below show the mapping of these parameters, as per operation, to their equivalents defined in this SS.

5.2.1 Operation listAvailableFiles

5.2.1.1 Input parameters

Table 5.2.1.1: Mapping from IS listAvailableFiles input parameters to SS equivalents

IS Operation parameter	SS WSDL type sub-element used in corresponding input message under corresponding port type operation as indicated in Table 5.1	Qualifier
managementDataType	managementDataType	M
beginTime	beginTime	M
endTime	endTime	M

5.2.1.2 Output parameters

Table 5.2.1.2: Mapping from IS listAvailableFiles output parameters to SS equivalents

IS Operation parameter	SS WSDL type sub-element used in corresponding output message under corresponding port type operation as indicated in Table 5.1	Qualifier
fileInfoList	fileInfoList	M
status	status	M

5.2.1.3 Fault definition

Table 5.2.1.3: Mapping from IS listAvailableFiles exceptions to SS equivalents

Assertion name	SS WSDL type enumeration value used in corresponding fault message under corresponding port type operation as indicated in Table 5.1	Qualifier
invalidTimes	InvalidTimes	M

5.2.2 Operation fileDownloadIndication

5.2.2.1 Input parameters

Table 5.2.2.1: Mapping from IS fileDownloadIndication input parameters to SS equivalents

IS Operation parameter	SS WSDL type sub-element used in corresponding input message under corresponding port type operation as indicated in Table 5.1	Qualifier
fileInfoList	fileInfoList	M

5.2.2.2 Output parameters

Table 5.2.2.2: Mapping from IS `fileDownloadIndication` output parameters to SS equivalents

IS Operation parameter	SS WSDL type sub-element used in corresponding output message under corresponding port type operation as indicated in Table 5.1	Qualifier
<code>status</code>	<code>status</code>	M

5.2.2.3 Fault definition

Table 5.2.2.3: Mapping from IS `fileDownloadIndication` exceptions to SS equivalents

Assertion name	SS WSDL type enumeration value used in corresponding fault message under corresponding port type operation as indicated in Table 5.1	Qualifier
<code>InvalidFileInfoList</code>	<code>InvalidFileInfoList</code>	M

Annex A (normative): WSDL specifications

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
3GPP TS 32.347 File Transfer (FT) IRP SOAP Solution Set
-->
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:ftIRPSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#FTIRPSystem"
xmlns:ftIRPData="http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#FTIRPData"
xmlns:xfi="http://www.3gpp.org/ftp/specs/archive/32_series/32.345#ftIRPIOCs"
xmlns:genericIRPSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.317/schema/32317-810/GenericIRPSystem"
xmlns:ntfIRPntfSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/32307-810/notification/NotificationIRPntfSystem"
targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#FTIRPSystem">
  <import namespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/32307-810/notification/NotificationIRPntfSystem"
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/32307-810-wsdl.zip"/>
  <import namespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.317/schema/32317-810/GenericIRPSystem" location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.317/schema/32317-810-wsdl.zip"/>
  <types>
    <schema targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#FTIRPData"
xmlns="http://www.w3.org/2001/XMLSchema">
      <import namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.345#ftIRPIOCs"/>
      <!-- The following types are defined for the File Transfer IRP operations -->
      <simpleType name="OperationStatusTwo">
        <restriction base="string">
          <enumeration value="OperationSucceeded"/>
          <enumeration value="OperationFailed"/>
        </restriction>
      </simpleType>
      <complexType name="FileInfo">
        <sequence>
          <element ref="xfi:fileLocation"/>
          <element ref="xfi:fileSize"/>
          <element ref="xfi:fileReadyTime"/>
          <element ref="xfi:fileExpirationTime"/>
          <element ref="xfi:fileCompression"/>
          <element ref="xfi:fileFormat"/>
        </sequence>
      </complexType>
      <complexType name="FileInfoList">
        <sequence>
          <element name="fileInfo" type="ftIRPData:FileInfo" minOccurs="0"
maxOccurs="unbounded"/>
        </sequence>
      </complexType>
      <!-- listAvailableFiles Request-->
      <element name="listAvailableFiles">
        <complexType>
          <sequence>
            <element ref="xfi:managementDataType"/>
            <element name="beginTime" type="dateTime" minOccurs="0"/>
            <element name="endTime" type="dateTime" minOccurs="0"/>
          </sequence>
        </complexType>
      </element>
      <!-- listAvailableFiles Response -->
      <element name="listAvailableFilesResponse">
        <complexType>
          <sequence>
            <element name="fileInfoList" type="ftIRPData:FileInfoList"/>
            <element name="status" type="ftIRPData:OperationStatusTwo"/>
          </sequence>
        </complexType>
      </element>
      <!-- listAvailableFiles Fault -->
      <element name="listAvailableFilesFault">
        <simpleType>
          <restriction base="string">
            <enumeration value="InvalidTimes"/>
          </restriction>
        </simpleType>
      </element>
      <!-- fileDownloadIndication Request-->
      <element name="fileDownloadIndication">
        <complexType>
          <sequence>
            <element name="fileInfoList" type="ftIRPData:FileInfoList"/>
          </sequence>
        </complexType>
      </element>

```

```

        </complexType>
      </element>
      <!-- fileDownloadIndication Response -->
      <element name="fileDownloadIndicationResponse">
        <complexType>
          <sequence>
            <element name="status" type="fTIRPData:OperationStatusTwo"/>
          </sequence>
        </complexType>
      </element>
      <!-- fileDownloadIndication Fault -->
      <element name="fileDownloadIndicationFault">
        <simpleType>
          <restriction base="string">
            <enumeration value="InvalidFileInfoList"/>
          </restriction>
        </simpleType>
      </element>
    </schema>
  </types>
  <message name="listAvailableFiles">
    <part name="parameter" element="fTIRPData:listAvailableFiles"/>
  </message>
  <message name="listAvailableFilesResponse">
    <part name="parameter" element="fTIRPData:listAvailableFilesResponse"/>
  </message>
  <message name="listAvailableFilesFault">
    <part name="parameter" element="fTIRPData:listAvailableFilesFault"/>
  </message>
  <message name="fileDownloadIndication">
    <part name="parameter" element="fTIRPData:fileDownloadIndication"/>
  </message>
  <message name="fileDownloadIndicationResponse">
    <part name="parameter" element="fTIRPData:fileDownloadIndicationResponse"/>
  </message>
  <message name="fileDownloadIndicationFault">
    <part name="parameter" element="fTIRPData:fileDownloadIndicationFault"/>
  </message>
  <portType name="FileTransferIRPPortType">
    <operation name="listAvailableFiles">
      <input message="fTIRPSystem:listAvailableFiles"/>
      <output message="fTIRPSystem:listAvailableFilesResponse"/>
      <fault name="listAvailableFilesFault" message="fTIRPSystem:listAvailableFilesFault"/>
    </operation>
    <operation name="fileDownloadIndication">
      <input message="fTIRPSystem:fileDownloadIndication"/>
      <output message="fTIRPSystem:fileDownloadIndicationResponse"/>
      <fault name="fileDownloadIndicationFault"
message="fTIRPSystem:fileDownloadIndicationFault"/>
    </operation>
  </portType>
  <binding name="FileTransferIRPBinding" type="fTIRPSystem:FileTransferIRPPortType">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="listAvailableFiles">
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#listAvailableFiles"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="listAvailableFilesFault">
        <soap:fault name="listAvailableFilesFault" use="literal"/>
      </fault>
    </operation>
    <operation name="fileDownloadIndication">
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#fileDownloadIndication"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="fileDownloadIndicationFault">
        <soap:fault name="fileDownloadIndicationFault" use="literal"/>
      </fault>
    </operation>
  </binding>
  <service name="FileTransferIRPService">
    <port name="FileTransferIRPPort" binding="fTIRPSystem:FileTransferIRPBinding">
      <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.347#FileTransferIRP"/>
    </port>
    <port name="GenericIRPPort" binding="genericIRPSystem:GenericIRPBinding">

```

```
      <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.317#GenericIRP"/>
    </port>
    <port name="NotificationIRPNtfPort" binding="ntfIRPNtfSystem:NotificationIRPNtf">
      <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307#NotificationIRPNtf"/>
    </port>
  </service>
</definitions>
```

Annex B (informative): WSDL electronic files

The electronic files corresponding to the normative WSDL/XML schema defined in the present document are available in native form in the following archive:

http://www.3gpp.org/ftp/Specs/archive/32_series/32.347/schema/32347-800-wsdl.zip

Annex C (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	R	Subject/Comment	Cat	Old	New
March 2009	SA_43	SP-090060	--	--	Presentation to SA for information and approval	--	1.0.0	8.0.0

History

Document history		
V8.0.0	April 2009	Publication