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Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Generic Integration Reference Point (IRP) management;
Solution Set (SS) definitions
(3GPP TS 32.316 version 18.0.0 Release 18)**

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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 - APE 7112B
Association à but non lucratif enregistrée à la
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Contents

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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:

32.311: 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

1 Scope

The present document provides the Solution Set definitions for Generic Integration Reference Point (IRP) management, whose capabilities are specified in 3GPP TS 32.312 [1], the Generic IRP management: Information Service.

This Solution Set Definition specification is related to 3GPP TS 32.312 V14.0.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.) 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 32.312: "Telecommunication management; Generic Integration Reference Point (IRP) management: Information Service (IS)".

[2] 3GPP TS 32.311: "Telecommunication management; Generic Integration Reference Point (IRP) management; Requirements".

[3] 3GPP TS 32.111-2: "Telecommunication management; Alarm Integration Reference Point (IRP); Information Service (IS)".

[4] 3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Information Service (IS)".

[5] W3C WSDL 1.1 specification (http://www.w3.org/TR/2001/NOTE-wsdl-20010315)

[6] Thompson, H.S., Beech, D., Maloney, M., Mendleshon, N., eds. (May 2002). "XML Schema Part 1: Structures," Recommendation, World Wide Web Consortium http://www.w3.org/TR/xmlschema-1/

[7] Biron, P.V., Malhotra, A., eds. (May 2002). "XML Schema Part 2: Datatypes," Recommendation, World Wide Web Consortium http://www.w3.org/TR/xmlschema-2/

[8] W3C SOAP 1.1 specification (http://www.w3.org/TR/2000/NOTE-SOAP-20000508/)

[9] RFC 2616 (June 1999): "Hypertext Transfer Protocol – HTTP/1.1"

[10] W3C WSDL 1.1 specification (http://www.w3.org/TR/2001/NOTE-wsdl-20010315)

[11] W3C SOAP 1.2 specification (http://www.w3.org/TR/soap12-part1/)

[12] 3GPP TS 32.300: "Telecommunication management; Configuration Management (CM); Name convention for Managed Objects".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 32.312 [1] apply.

IRP document version number string (or "IRPVersion"): See 3GPP TS 32.311 [2] subclause 3.1.

3.2 Abbreviations

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

CORBA	Common Object Request Broker Architecture
HTTP	HyperText Transfer Protocol
IDL	Interface Definition Language
IRP	Integration Reference Point
IOC	Information Object Class
OMG	Object Management Group
SS	Solution Set
WSDL	Web Services Description Language
WS-I	Web Services Interoperability Organization
XML	eXtensible Markup Language

4 Solution Set definitions

This specification defines the following 3GPP Generic IRP management Solution Set definitions:

- 3GPP Generic IRP management CORBA SS (Annex A)
- 3GPP Generic IRP management SOAP Solution Set (Annex B)

Solution Set to XML definitions is not present in the current version of this specification.

Annex A (normative): CORBA Solution Set

This annex contains the CORBA Solution Set for the IRP whose semantics is specified in Generic IRP: Information Service (TS 32.312 [1]).

A.1 Architectural Features

The overall architectural feature of this IRP is specified in 3G TS 32.312 [1]. This clause specifies features that are specific to the CORBA SS.

A.1.1 Syntax for Distinguished Names

The syntax of a Distinguished Name is defined in 3GPP TS 32.300 [12].

A.1.2 Abstract IOC

The capabilities of the Generic IRP management: IS [1] are captured by the definition of an IOC called ManagedGenericIRP. This IOC is an abstract class and is mapped to a MOC of the same name. The MOC is intended for inheritance by other MOCs specified in Interface IRPs such as AlarmIRP [3], NotificationIRP [4], etc.

A.2 Mapping

A.2.1 Operation mapping

Generic IRP management: IS [1] defines semantics of operation visible across the Itf-N. Table A.1 indicates mapping of these operations to their equivalents defined in this SS.

Table A.1: Mapping from IS Notification/Operation to SS equivalents

IS Operation TS 32.312 [1]	SS Method	Qualifier
getIRPVersion	get_irp_versions	M
getOperationProfile	get_interface_irp_operation_profile	O
getNotificationProfile	get_interface_irp_notification_profile	O

A.2.2 Operation parameter mapping

Generic IRP management: IS [1] defines semantics of parameters carried in operations across the Itf-N. The following set of tables indicates the mapping of these parameters, as per operation, to their equivalents defined in this SS.

Table A.2 Mapping from IS `getIRPVersion` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
versionNumberSet	Return value of type GenericIRPManagementConstDefs::VersionNumberSet	M
status	Exceptions: GenericIRPManagementSystem::GetIRPVersions	M

Table A.3 Mapping from IS `getOperationProfile` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
iRPVersion	GenericIRPManagementConstDefs::VersionNumber this_irp_version	M
operationNameProfile, operationParameterProfile	Return value of type GenericIRPManagementConstDefs::MethodList	M
status	Exceptions: GenericIRPManagementSystem::GetInterfaceIRPOperationsProfile, GenericIRPManagementSystem::OperationNotSupported, GenericIRPManagementSystem::InvalidParameter, GenericIRPManagementSystem::ValueNotSupported	M

Table A.4 Mapping from IS `getNotificationProfile` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
iRPVersion	GenericIRPManagementConstDefs::VersionNumber this_irp_version	M
notificationNameProfile, notificationParameterProfile	Return value of type GenericIRPManagementConstDefs::NotificationList	M
status	Exceptions: GenericIRPManagementSystem::GetInterfaceIRPNotificationProfile, GenericIRPManagementSystem::OperationNotSupported, GenericIRPManagementSystem::InvalidParameter, GenericIRPManagementSystem::ValueNotSupported	M

A.3 Solution Set definitions

A.3.1 IDL definition structure

Clause A.3.2 defines the constants and types used by the Generic IRP.

Clause A.3.3 defines the operations and notifications which are performed by the Generic IRP agent.

A.3.2 IDL specification “GenericIRPManagementConstDefs.idl”

```
//File: GenericIRPManagementConstDefs.idl
#ifndef _GENERIC_IRP_MANAGEMENT_CONST_DEFS_IDL_
#define _GENERIC_IRP_MANAGEMENT_CONST_DEFS_IDL_
#include <TimeBase.idl>
// This statement must appear after all include statements
#pragma prefix "3gppsa5.org"
/* ## Module: GenericIRPManagementConstDefs
This module contains definitions commonly used among all IRPs.
================================================================
*/
module GenericIRPManagementConstDefs
{
   /*
    * Definition imported from CosTime.
    * The time refers to time in Greenwich Time Zone.
    * It also consists of a time displacement factor in the form of minutes of
    * displacement from the Greenwich Meridian.
    */
    typedef TimeBase::UtcT IRPTime;
    typedef string DN;
    typedef sequence <DN> DNList;

    enum Signal {OK, FULL_FAILURE, PARTIAL_FAILURE};
    enum Result {SUCCESS, FAILURE};
   /*
    * This holds a list of notification Ids
    */
    typedef sequence <long> NotifIdSet;

   /*
    * This holds identifiers of notifications that are correlated.
    */
    struct CorrelatedNotification
    {
        DN source;// Contains DN of MO that emitted the set of notifications
                  // DN string format in compliance with Name Convention for
                  // Managed Object.
                  // This may be a zero-length string. In this case, the MO
                  // is identified by the value of the MOI attribute
                  // of the Structured Event, i.e., the notification.
        NotifIdSet notif_id_set;  // Set of related notification ids
    };
   /*
    * The VersionNumber is a string that identifies the IRP specification name
    * and its version number. See definition "IRP document version number
    * string" or "IRPVersion".
    * The VersionNumberSet is a sequence of such VersionNumber. It is returned
    * by get_XXX_IRP_versions(). The sequence order has no significance.
    */
    typedef string VersionNumber;
    typedef sequence <VersionNumber> VersionNumberSet;
    typedef string MethodName;
    typedef string ParameterName;
    typedef sequence <ParameterName> ParameterList;
   /*
    * The Method defines the structure to be returned as part of
    * get_supported_operations_profile(). The name shall be the actual method
    * name (ex. "attach_push", "change_subscription_filter", etc.)
    * The parameter_list contains a list of strings. Each string shall be
    * the actual parameter name (ex. "manager_reference", "filter", etc.)
    */
    struct Method
```

```
    {
        MethodName name;
        ParameterList parameter_list;
    };
   /*
    * List of all methods and their associated parameters.
    */
    typedef sequence <Method> MethodList;
    typedef string NotificationName;
    struct Notification
    {
        NotificationName name;
        ParameterList parameter_list;
    };
    typedef sequence <Notification> NotificationList;
   /*
    * Defines the name of an attribute of a Managed Object
    */
    typedef string MOAttributeName;
   /*
    * Defines the value of an attribute of a Managed Object in form of a CORBA
    * Any. Apart from basic datatypes already defined in CORBA, the allowed
    * attribute value types are defined in the AttributeTypes module.
    */
    typedef any MOAttributeValue;
   /*
    * Represents an attribute: "name" is the attribute name
    * and "value" is the attribute value.
    */
    struct MOAttribute
    {
        MOAttributeName name;
        MOAttributeValue value;
    };
    typedef sequence <MOAttribute> MOAttributeSet;

    typedef string ManagerIdentifier;
   /*
    * The following are types carrying an optional parameter.
    * If the boolean is TRUE, then the value is present.
    * Otherwise the value is absent.
    */
    union StringOpt switch (boolean)
    {
        case TRUE: string value;
    };
    union ShortOpt switch (boolean)
    {
        case TRUE: short value;
    };
    union UnsignedShortOpt switch (boolean)
    {
        case TRUE: unsigned short value;
    };
    union LongOpt switch (boolean)
    {
        case TRUE: long value;
    };
    union UnsignedLongOpt switch (boolean)
    {
        case TRUE: unsigned long value;
    };
    union IRPTimeOpt switch (boolean)
    {
       case TRUE: GenericIRPManagementConstDefs::IRPTime value;
    };};
#endif // _GENERIC_IRP_MANAGEMENT_CONST_DEFS_IDL_
```

A.3.3 IDL specification “GenericIRPManagementSystem.idl”

```
//File: GenericIRPManagementSystem.idl
#ifndef _GENERIC_IRP_MANAGEMENT_SYSTEM_IDL_
#define _GENERIC_IRP_MANAGEMENT_SYSTEM_IDL_

#include <GenericIRPManagementConstDefs.idl>

// This statement must appear after all include statements
#pragma prefix "3gppsa5.org"

module GenericIRPManagementSystem
{
   exception GetInterfaceIRPNotificationProfile { string reason; };
   exception GetInterfaceIRPOperationProfile { string reason; };
   exception GetIRPVersions { string reason; };

   /*
   Exception thrown when an unsupported optional parameter
   is passed with information.
   The parameter shall be the actual unsupported parameter name.
   */
   exception ParameterNotSupported {
      GenericIRPManagementConstDefs::ParameterName parameter; };

   /*
   Exception thrown when an invalid parameter value is passed.
   The parameter shall be the actual parameter name.
   */
   exception InvalidParameter {
      GenericIRPManagementConstDefs::ParameterName parameter; };

   /*
   Exception thrown when a valid but unsupported parameter value is passed.
   The parameter shall be the actual parameter name.
   */
   exception ValueNotSupported {
      GenericIRPManagementConstDefs::ParameterName parameter; };

   /*
   Exception thrown when an unsupported optional method is called.
   */
   exception OperationNotSupported {};

   interface GenericIRPManagement
   {
      /*
      Return the list of all supported Interface IRP versions
      Each IRPVersion is defined by the rule in the definition
      "IRP document version number string" or "IRPVersion"
      (see subclause 3.1).
      */
      GenericIRPManagementConstDefs::VersionNumberSet get_irp_versions
      (
      )
      raises (GetIRPVersions);

      /*
      Return the list of all supported methods and their supported
      parameters for this Interface IRPVersion.
      */
      GenericIRPManagementConstDefs::MethodList
         get_interface_irp_operation_profile
      (
         in GenericIRPManagementConstDefs::VersionNumber this_irp_version
      )
      raises (GetInterfaceIRPOperationProfile,
              OperationNotSupported,
              InvalidParameter,
              ValueNotSupported);

      /*
      Return the list of all supported notifications and their supported
      parameters for this Interface IRPVersion.
      */
      typedef GenericIRPManagementConstDefs::NotificationList NotificationList;
```

```
      NotificationList get_interface_irp_notification_profile
      (
         in GenericIRPManagementConstDefs::VersionNumber this_irp_version
      )
      raises (GetInterfaceIRPNotificationProfile,
              OperationNotSupported,
              InvalidParameter,
              ValueNotSupported);
    };

};

#endif // _GENERIC_IRP_MANAGEMENT_SYSTEM_IDL_
```

Annex B (normative): SOAP Solution Set

This annex specifies the SOAP Solution Set for the IRP whose semantics are specified in Generic IRP: Information Service (3GPP TS 32.312[1]).

B.1 Architectural Features

The overall architectural feature of this IRP is specified in 3G TS 32.312 [1]. This clause specifies features that are specific to the SOAP SS.

The SOAP 1.1 specification [8] and WSDL 1.1 specification [5] are supported.

The SOAP 1.2 specification [11] is optionally supported.

This specification uses "document" style in the WSDL description.

This specification uses "literal" encoding style in the WSDL description.

This specification uses a number of namespace prefixes throughout that are listed in Table B.1.

Table B.1: Prefixes and Namespaces used in this specification

Prefix	Namespace
http	http://schemas.xmlsoap.org/wsdl/http/
soap	http://schemas.xmlsoap.org/wsdl/soap/
SOAP-ENV	http://schemas.xmlsoap.org/soap/envelope/
SOAP-ENC or soapenc	http://schemas.xmlsoap.org/soap/encoding/
xs or xsd	http://www.w3.org/2001/XMLSchema
xsi	http://www.w3.org/2001/XMLSchema-instance
genericIRPData	http://www.3gpp.org/ftp/specs/archive/32_series/32.316#GenericIRPData

B.1.1 Syntax for Distinguished Names

The syntax of a Distinguished Name is defined in 3GPP TS 32.300 [12].

B.2 Mapping

B.2.1 Operation mapping

Generic IRP management: IS [1] defines semantics of operation visible across the Itf-N. Table B.2.1 indicates mapping of these operations to their equivalents defined in this SS.

Table B.2.1: Mapping from IS Notification/Operation to SS equivalents

IS Operation TS 32.312 [1]	SS Operation	Qualifier
getIRPVersion	getIRPVersion	M
getOperationProfile	getOperationProfile	O
getNotificationProfile	getNotificationProfile	O

B.2.2 Operation parameter mapping

B.2.2.1 Operation getIRPVersion

B.2.2.1.1 Input parameters

None.

Here is the XML schema fragment of the getIRPVersion request:

```
<!-- getIRPVersion Request -->
<element name="getIRPVersion">
</element>
```

B.2.2.1.2 Output parameters

None.

Table B.2.2.1.2: Mapping from IS getIRPVersion output parameters to SS equivalents

IS Operation parameter	SS Operation parameter	Qualifier
versionNumberSet	genericIRPData:VersionNumberSetType versionNumberSet	M
status	genericIRPData:getIRPVersionFault	M

Here is the XML schema fragment of the getIRPVersion response:

```
<!-- getIRPVersion Response -->
<element name="getIRPVersionResponse">
    <complexType>
        <sequence>
            <element name="versionNumberSet" type="genericIRPData:VersionNumberSetType"/>
        </sequence>
    </complexType>
</element>
```

B.2.2.1.3 Fault definition

```
<!-- getIRPVersion Fault -->
<element name="getIRPVersionFault">
    <complexType>
        <choice>
            <element name="getIRPVersionFault" type="string" default="getIRPVersionFault"/>
        </choice>
    </complexType>
</element>
```

B.2.2.2 Operation getOperationProfile

B.2.2.2.1 Input parameters

Table B.2.2.2.1: Mapping from IS getOperationProfile input parameters to SS equivalents

IS Operation parameter	SS Operation parameter	Qualifier
iRPVersion	genericIRPData:VersionNumberType iRPVersion	M

Here is the XML schema fragment of the getOperationProfile request:

```
<!-- getOperationProfile Request -->
<element name="getOperationProfile">
    <complexType>
        <sequence>
            <element name="iRPVersion" type="genericIRPData:VersionNumberType"/>
        </sequence>
    </complexType>
</element>
```

B.2.2.2.2 Output parameters

Table B.2.2.2.2: Mapping from IS getOperationProfile output parameters to SS equivalents

IS Operation parameter	SS Operation parameter	Qualifier
operationNameProfile,operationParameterProfile	genericIRPData:OperationSetType operationSet	M
status	genericIRPData:getOperationProfileFault	M

Here is the XML schema fragment of the getOperationProfile response:

```
<!-- getOperationProfile Response -->
<element name="getOperationProfileResponse">
    <complexType>
        <sequence>
            <element name="operationSet" type="genericIRPData:OperationSetType"/>
        </sequence>
    </complexType>
</element>
```

B.2.2.2.3 Fault definition

```
<!-- getOperationProfile Fault -->

<element name="getOperationProfileFault">
    <complexType>
        <choice>
            <element name="getOperationProfileFault" type="string"/>
            <element ref="genericIRPData:OperationNotSupportedFault"/>
            <element ref="genericIRPData:InvalidParameterFault"/>
        </choice>
    </complexType>
</element>
```

B.2.2.3 Operation getNotificationProfile

B.2.2.3.1 Input parameters

Table B.2.2.3.1: Mapping from IS getNotificationProfile input parameters to SS equivalents

IS Operation parameter	SS Operation parameter	Qualifier
iRPVersion	genericIRPData:VersionNumberType iRPVersion	M

Here is the XML schema fragment of the getNotificationProfile request:

```
<!-- getNotificationProfile Request -->
<element name="getNotificationProfile">
    <complexType>
        <sequence>
            <element name="iRPVersion" type="genericIRPData:VersionNumberType"/>
        </sequence>
    </complexType>
</element>
```

B.2.2.3.2 Output parameters

Table B.2.2.3.2: Mapping from IS getNotificationProfile output parameters to SS equivalents

IS Operation parameter	SS Operation parameter	Qualifier
notificationNameProfile,notificationParameterProfile	genericIRPData:NotificationSetType notificationSet	M
Status	genericIRPData:getNotificationProfileFault	M

Here is the XML schema fragment of the getNotificationProfile response:

```
<!-- getNotificationProfile Response -->
<element name="getNotificationProfileResponse">
    <complexType>
        <sequence>
            <element name="notificationSet"type="genericIRPData:NotificationSetType"/>
        </sequence>
    </complexType>
</element>
```

B.2.2.3.3 Fault definition

```
<!-- getNotificationProfile Fault -->
<element name="getNotificationProfileFault">
    <complexType>
        <choice>
            <element name="getNotificationProfileFault" type="string"
default="getNotificationProfileFault"/>
            <element ref="genericIRPData:OperationNotSupportedFault"/>
            <element ref="genericIRPData:InvalidParameterFault"/>
        </choice>
    </complexType>
</element>
```

B.3 Solution Set definitions

B.3.1 WSDL definition structure

Clause B.3.2 provides a graphical representation of the Generic IRP service.

Clause B.3.3 defines the services which are supported the Generic IRP agent.

B.3.2 Graphical Representation

Not present in the current version of this specification.

B.3.3 WSDL specification “GenericIRPSystem.wsdl”

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:genericIRPSystem="http://www.3gpp.org/ftp/specs/archive/32_series/32.316#GenericIRPSystem"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:genericIRPData="http://www.3gpp.org/ftp/specs/archive/32_series/32.316#GenericIRPData"
targetNamespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.316#GenericIRPSystem">
    <types>
        <schema
targetNamespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.316#GenericIRPData"
xmlns="http://www.w3.org/2001/XMLSchema">
            <element name="OperationNotSupportedFault" type="string"/>
            <element name="InvalidParameterFault" type="string"/>
            <simpleType name="VersionNumberType">
                <restriction base="string"/>
            </simpleType>
            <complexType name="VersionNumberSetType">
                <sequence>
                    <element name="versionNumber" type="genericIRPData:VersionNumberType"
maxOccurs="unbounded"/>
                </sequence>
            </complexType>
            <complexType name="ParameterSetType">
                <sequence>
                    <element name="parameterName" type="string" maxOccurs="unbounded"/>
                </sequence>
            </complexType>
            <complexType name="OperationType">
                <sequence>
                    <element name="operationName" type="string"/>
                    <element name="parameterSet" type="genericIRPData:ParameterSetType"/>
                </sequence>
            </complexType>
            <complexType name="OperationSetType">
                <sequence>
                    <element name="operation" type="genericIRPData:OperationType"
maxOccurs="unbounded"/>
                </sequence>
            </complexType>
            <complexType name="NotificationType">
                <sequence>
                    <element name="notificationName" type="string"/>
                    <element name="parameterSet" type="genericIRPData:ParameterSetType"/>
                </sequence>
            </complexType>
            <complexType name="NotificationSetType">
                <sequence>
                    <element name="notification" type="genericIRPData:NotificationType"
maxOccurs="unbounded"/>
                </sequence>
            </complexType>
            <!-- getIRPVersion Request -->
            <element name="getIRPVersion"/>
            <!-- getIRPVersion Response -->
            <element name="getIRPVersionResponse">
                <complexType>
                    <sequence>
                        <element name="versionNumberSet"
type="genericIRPData:VersionNumberSetType"/>
                    </sequence>
                </complexType>
            </element>
            <!-- getIRPVersion Fault -->
            <element name="getIRPVersionFault">
                <complexType>
                    <choice>
                        <element name="getIRPVersionFault" type="string"/>
                    </choice>
                </complexType>
            </element>
            <!-- getOperationProfile Request -->
            <element name="getOperationProfile">
                <complexType>
                    <sequence>
                        <element name="iRPVersion" type="genericIRPData:VersionNumberType"/>
                    </sequence>
                </complexType>
            </element>
            <!-- getOperationProfile Response -->
```

```
        <element name="getOperationProfileResponse">
            <complexType>
                <sequence>
                    <element name="operationSet" type="genericIRPData:OperationSetType"/>
                </sequence>
            </complexType>
        </element>
        <!-- getOperationProfile Fault -->
        <element name="getOperationProfileFault">
            <complexType>
                <choice>
                    <element name="getOperationProfileFault" type="string"/>
                    <element ref="genericIRPData:OperationNotSupportedFault"/>
                    <element ref="genericIRPData:InvalidParameterFault"/>
                </choice>
            </complexType>
        </element>
        <!-- getNotificationProfile Request -->
        <element name="getNotificationProfile">
            <complexType>
                <sequence>
                    <element name="iRPVersion" type="genericIRPData:VersionNumberType"/>
                </sequence>
            </complexType>
        </element>
        <!-- getNotificationProfile Response -->
        <element name="getNotificationProfileResponse">
            <complexType>
                <sequence>
        <element name="notificationSet" type="genericIRPData:NotificationSetType"/>
</sequence>
            </complexType>
        </element>
        <!-- getNotificationProfile Fault -->
        <element name="getNotificationProfileFault">
            <complexType>
                <choice>
                    <element name="getNotificationProfileFault" type="string"/>
                    <element ref="genericIRPData:OperationNotSupportedFault"/>
                    <element ref="genericIRPData:InvalidParameterFault"/>
                </choice>
            </complexType>
        </element>
    </schema>
</types>
<message name="getIRPVersionRequest">
    <part name="parameter" element="genericIRPData:getIRPVersion"/>
</message>
<message name="getIRPVersionResponse">
    <part name="parameter" element="genericIRPData:getIRPVersionResponse"/>
</message>
<message name="getIRPVersionFault">
    <part name="parameter" element="genericIRPData:getIRPVersionFault"/>
</message>
<message name="getOperationProfileRequest">
    <part name="parameter" element="genericIRPData:getOperationProfile"/>
</message>
<message name="getOperationProfileResponse">
    <part name="parameter" element="genericIRPData:getOperationProfileResponse"/>
</message>
<message name="getOperationProfileFault">
    <part name="parameter" element="genericIRPData:getOperationProfileFault"/>
</message>
<message name="getNotificationProfileRequest">
    <part name="parameter" element="genericIRPData:getNotificationProfile"/>
</message>
<message name="getNotificationProfileResponse">
    <part name="parameter" element="genericIRPData:getNotificationProfileResponse"/>
</message>
<message name="getNotificationProfileFault">
    <part name="parameter" element="genericIRPData:getNotificationProfileFault"/>
</message>
<portType name="GenericIRPPortType">
    <operation name="getIRPVersion">
        <input message="genericIRPSystem:getIRPVersionRequest"/>
        <output message="genericIRPSystem:getIRPVersionResponse"/>
        <fault name="getIRPVersionFault" message="genericIRPSystem:getIRPVersionFault"/>
    </operation>
```

```
        <operation name="getOperationProfile">
            <input message="genericIRPSystem:getOperationProfileRequest"/>
            <output message="genericIRPSystem:getOperationProfileResponse"/>
            <fault name="getOperationProfileFault"
message="genericIRPSystem:getOperationProfileFault"/>
        </operation>
        <operation name="getNotificationProfile">
            <input message="genericIRPSystem:getNotificationProfileRequest"/>
            <output message="genericIRPSystem:getNotificationProfileResponse"/>
            <fault name="getNotificationProfileFault"
message="genericIRPSystem:getNotificationProfileFault"/>
        </operation>
    </portType>
    <binding name="GenericIRPBinding" type="genericIRPSystem:GenericIRPPortType">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <operation name="getIRPVersion">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/specs/archive/32_series/32.316#getIRPVersion" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="getIRPVersionFault">
                <soap:fault name="getIRPVersionFault" use="literal"/>
            </fault>
        </operation>
        <operation name="getOperationProfile">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/specs/archive/32_series/32.316#getOperationProfile"
style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="getOperationProfileFault">
                <soap:fault name="getOperationProfileFault" use="literal"/>
            </fault>
        </operation>
        <operation name="getNotificationProfile">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/specs/archive/32_series/32.316#getNotificationProfile"
style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="getNotificationProfileFault">
                <soap:fault name="getNotificationProfileFault" use="literal"/>
            </fault>
        </operation>
    </binding>
</definitions>
```

Annex C (informative): Change history

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2010-05	SA-48	SP-100272	--	--		Presentation to SA for information and approval	1.0.0
06-2010	SA-48	--	--	--		Publication	10.0.0
09-2012	SA-57	-	-	-		Automatic upgrade from previous Release version 10.0.0	11.0.0
09-2014	SA-65	SP-140559	001	-		Update the link from Solution Set to Information Service due to the end of Release 12	12.0.0
2016-01	-	-	-	-		Update to Rel-13 version (MCC)	13.0.0
2016-06	SA#72	SP-160407	0002	-	F	Update the link from IRP Solution Set to IRP Information Service	13.1.0
2017-03	SA#75	-	-	-		Promotion to Release 14 without technical change	14.0.0
2017-06	SA#76	SP-170502	0003	-	F	Update the link from IRP Solution Set to IRP Information Service	14.1.0
2018-06	-	-	-	-	-	Update to Rel-15 version (MCC)	15.0.0
2020-07	-	-	-	-	-	Update to Rel-16 version (MCC)	16.0.0
2022-04	-	-	-	-	-	Update to Rel-17 version (MCC)	**17.0.0**
2024-04	-	-	-	-	-	Update to Rel-18 version (MCC)	**18.0.0**

History

Document history		
V18.0.0	May 2024	Publication