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Technical Specification

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Configuration Management (CM);
Bulk CM Integration Reference Point (IRP):
Bulk CM IRP SOAP Solution Set (SS)
(3GPP TS 32.617 version 8.1.0 Release 8)

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Contents

Foreword

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

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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:

32.611: "Configuration Management (CM); Bulk CM Integration Reference Point (IRP): Requirements".

32.612: "Configuration Management (CM); Bulk CM Integration Reference Point (IRP): Information Service (IS)".

32.613: "Configuration Management (CM); Bulk CM Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

32.615: "Configuration Management (CM); Bulk CM Integration Reference Point (IRP): eXtensible Markup Language (XML) file format definition".

32.617: "Configuration Management (CM); Bulk CM Integration Reference Point (IRP): SOAP Solution Set (SS)'

1 Scope

The present document specifies the SOAP Solution Set for the IRP whose semantics are specified in Bulk CM IRP: Information Service (3GPP TS 32.612 [4]).

This Solution Set specification is related to 3GPP TS 32.612 V8.1.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 32.611: " Technical Specification Group Services and System Aspects; Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP): Requirements ".

[4] 3GPP TS 32.612: " Technical Specification Group Services and System Aspects; Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP): Information Service (IS)".

[5] 3GPP TS 32.615: " Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP): eXtensible Markup Language (XML) file format definition".

[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 32.611 [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 Bulk CM IRP is specified in 3GPP TS 32.612 [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 Bulk CM 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 Bulk CM notifications to the IRPManager as soon as new events occur. The IRPManager does not need to check ("pull") for events.

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/
bulkCMIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#BulkCMIRPSystem
bulkCMIRPData	http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#BulkCMIRPData
xn	http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm
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.

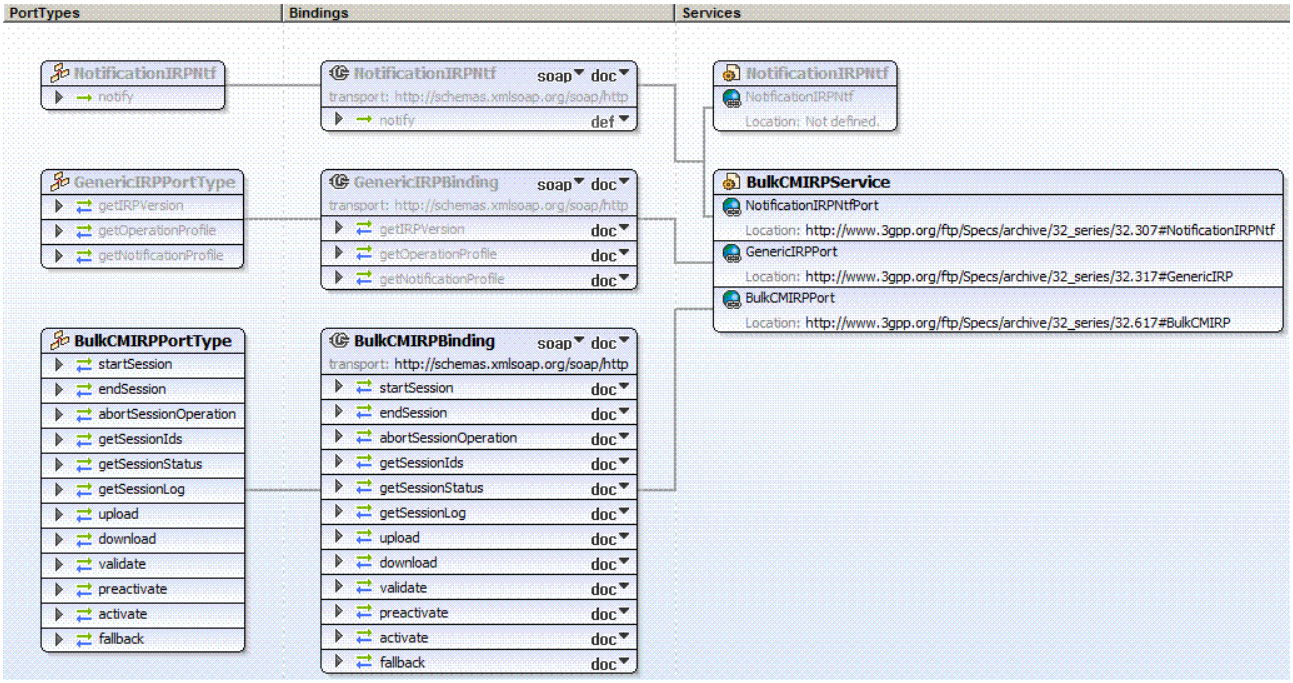

Figure 4.1: Bulk CM IRP SOAP Solution Set WSDL structure

5 Mapping

5.1 Operation and notification mapping

The Bulk CM IRP IS (3GPP TS 32.612 [4]) defines the operations and their semantics.

Table 5.1 maps the operations defined in the Bulk CM IRP IS to their equivalent types, messages, port type operation, and binding operation in this Solution Set (SS).

Table 5.1 also maps the notifications of the Bulk CM 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 32.612 [4]	SS: Operation for WSDL port type and WSDL binding	SS: Port of BulkCMIRPService	Qualifier
startSession	startSession (note 1)	BulkCMIRPPort	M
endSession	endSession (note 1)	BulkCMIRPPort	M
abortSessionOperation	abortSessionOperation (note 1)	BulkCMIRPPort	M
getSessionIds	getSessionIds (note 1)	BulkCMIRPPort	M
getSessionStatus	getSessionStatus (note 1)	BulkCMIRPPort	M
getSessionLog	getSessionLog (note 1)	BulkCMIRPPort	M
upload	upload (note 1)	BulkCMIRPPort	M
download	download (note 1)	BulkCMIRPPort	M
validate	validate (note 1)	BulkCMIRPPort	O
preactivate	preactivate (note 1)	BulkCMIRPPort	O
activate	activate (note 1)	BulkCMIRPPort	M
fallback	fallback (note 1)	BulkCMIRPPort	M
notifySessionStateChanged	notify (note 2)	NotificationIRPNtfPort	M
notifyGetSessionLogEnded	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 bulkCMIRPSystem:BulkCMIRPPortType and under the binding bulkCMIRPSystem:BulkCMIRPBinding.			
NOTE 2: The IS equivalent maps to an XML definition specified in 3GPP TS 32.615 [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 BulkCMIRPService 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 BulkCMIRP IOC of 3GPP TS 32.612 [4] inheriting from the ManagedGenericIRP IOC. The corresponding binding is linked to a port of the BulkCMIRPService as indicated in the table above.			

5.2 Operation parameter mapping

The Bulk CM IRP IS (3GPP TS 32.612 [4]) defines semantics of parameters carried in operations. The tables below show the mapping of these parameters, as per operation, to their equivalents defined in this SS.

5.2.1 Operation `startSession`

5.2.1.1 Input parameters

Table 5.2.1.1: Mapping from IS startSession 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
sessionId	sessionId	M

5.2.1.2 Output parameters

Table 5.2.1.2: Mapping from IS startSession 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
status	status	M

5.2.1.3 Fault definition

Table 5.2.1.3: Mapping from IS startSession 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
operation_failed	OperationFailed	M

5.2.2 Operation `endSession`

5.2.2.1 Input parameters

Table 5.2.2.1: Mapping from IS endSession 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
sessionId	sessionId	M

5.2.2.2 Output parameters

Table 5.2.2.2: Mapping from IS endSession 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
status	status	M

5.2.2.3 Fault definition

Table 5.2.2.3: Mapping from IS endSession 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
operation_failed	OperationFailed	M

5.2.3 Operation abortSessionOperation

5.2.3.1 Input parameters

Table 5.2.3.1: Mapping from IS abortSessionOperation 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
sessionId	sessionId	M

5.2.3.2 Output parameters

Table 5.2.3.2: Mapping from IS abortSessionOperation 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
status	status	M

5.2.3.3 Fault definition

Table 5.2.3.3: Mapping from IS abortSessionOperation 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
operation_failed	OperationFailed	M

5.2.4 Operation `getSessionIds`

5.2.4.1 Input parameters

None.

5.2.4.2 Output parameters

Table 5.2.4.2: Mapping from IS getSessionIds 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
sessionIdList	sessionIdList	M
status	status	M

5.2.4.3 Fault definition

Table 5.2.4.3: Mapping from IS getSessionIds 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
operation_failed	OperationFailed	M

5.2.5 Operation getSessionStatus

5.2.5.1 Input parameters

Table 5.2.5.1: Mapping from IS getSessionStatus 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
sessionId	sessionId	M

5.2.5.2 Output parameters

Table 5.2.5.2: Mapping from IS getSessionStatus 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
sessionState	sessionState	M
status	status	M

5.2.5.3 Fault definition

Table 5.2.5.3: Mapping from IS getSessionStatus 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
operation_failed	OperationFailed	M

5.2.6 Operation `getSessionLog`

5.2.6.1 Input parameters

Table 5.2.6.1: Mapping from IS getSessionLog 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
sessionId	sessionId	M
logFileReference	logFileReference	M
contentType	contentType	M

5.2.6.2 Output parameters

Table 5.2.6.2: Mapping from IS getSessionLog 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
status	status	M

5.2.6.3 Fault definition

Table 5.2.6.3: Mapping from IS getSessionLog 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
operation_failed	OperationFailed	M

5.2.7 Operation `upload`

5.2.7.1 Input parameters

Table 5.2.7.1: Mapping from IS upload 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
sessionId	sessionId	M
uploadDataFileReference	uploadDataFileReference	M
baseObjectInstance	baseObjectInstance	M
scope	scope	M
filter	filter	M

5.2.7.2 Output parameters

Table 5.2.7.2: Mapping from IS upload 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
status	status	M

5.2.7.3 Fault definition

Table 5.2.7.3: Mapping from IS upload 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
operation_failed	OperationFailed	M

5.2.8 Operation `download`

5.2.8.1 Input parameters

Table 5.2.8.1: Mapping from IS download 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
sessionId	sessionId	M
downloadDataFileReference	downloadDataFileReference	M

5.2.8.2 Output parameters

Table 5.2.8.2: Mapping from IS download 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
status	status	M

5.2.8.3 Fault definition

Table 5.2.8.3: Mapping from IS download 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
operation_failed	OperationFailed	M

5.2.9 Operation `validate`

5.2.9.1 Input parameters

Table 5.2.9.1: Mapping from IS validate 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
sessionId	sessionId	M
activationMode	activationMode	O

5.2.9.2 Output parameters

Table 5.2.9.2: Mapping from IS validate 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
status	status	M

5.2.9.3 Fault definition

Table 5.2.9.3: Mapping from IS validate 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
operation_failed	OperationFailed	M

5.2.10 Operation `preactivate`

5.2.10.1 Input parameters

Table 5.2.10.1: Mapping from IS preactivate 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
sessionId	sessionId	M
verificationMode	verificationMode	O
activationMode	activationMode	O
fallbackEnabled	fallbackEnabled	M

5.2.10.2 Output parameters

Table 5.2.10.2: Mapping from IS preactivate 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
status	status	M

5.2.10.3 Fault definition

Table 5.2.10.3: Mapping from IS preactivate 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
operation_failed	OperationFailed	M

5.2.11 Operation `activate`

5.2.11.1 Input parameters

Table 5.2.11.1: Mapping from IS activate 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
sessionId	sessionId	M
activationMode	activationMode	O
fallbackEnabled	fallbackEnabled	M

5.2.11.2 Output parameters

Table 5.2.11.2: Mapping from IS activate 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
status	status	M

5.2.11.3 Fault definition

Table 5.2.11.3: Mapping from IS activate 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
operation_failed	OperationFailed	M

5.2.12 Operation `fallback`

5.2.12.1 Input parameters

Table 5.2.12.1: Mapping from IS fallback 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
sessionId	sessionId	M

5.2.12.2 Output parameters

Table 5.2.12.2: Mapping from IS fallback 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
status	status	M

5.2.12.3 Fault definition

Table 5.2.12.3: Mapping from IS fallback 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
operation_failed	OperationFailed	M

Annex A (normative): WSDL specifications

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
    3GPP TS 32.617 Bulk CM IRP SOAP Solution Set
-->
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:bulkCMIRPSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#BulkCMIRPSystem"
xmlns:bulkCMIRPData="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#BulkCMIRPData"
xmlns:xn="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"
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/32.617#BulkCMIRPSystem">
    <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/32.617#BulkCMIRPData"
xmlns="http://www.w3.org/2001/XMLSchema">
            <import namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"/>
            <!-- The following types are defined for the Bulk CM IRP operations -->
            <simpleType name="OperationStatusTwo">
                <restriction base="string">
                    <enumeration value="OperationSucceeded"/>
                    <enumeration value="OperationFailed"/>
                </restriction>
            </simpleType>
            <complexType name="SessionIdList">
                <sequence>
                    <element name="sessionId" type="string" minOccurs="0" maxOccurs="unbounded"/>
                </sequence>
            </complexType>
            <simpleType name="SessionState">
                <restriction base="string">
                    <enumeration value="Idle"/>
                    <enumeration value="UploadInProgress"/>
                    <enumeration value="UploadFailed"/>
                    <enumeration value="UploadCompleted"/>
                    <enumeration value="DownloadInProgress"/>
                    <enumeration value="DownloadFailed"/>
                    <enumeration value="DownloadCompleted"/>
                    <enumeration value="ValidationInProgress"/>
                    <enumeration value="ValidationFailed"/>
                    <enumeration value="ValidationCompleted"/>
                    <enumeration value="PreactivationInProgress"/>
                    <enumeration value="PreactivationFailed"/>
                    <enumeration value="PreactivationPartlyRealised"/>
                    <enumeration value="PreactivationCompleted"/>
                    <enumeration value="ActivationInProgress"/>
                    <enumeration value="ActivationFailed"/>
                    <enumeration value="ActivationPartlyRealised"/>
                    <enumeration value="ActivationCompleted"/>
                    <enumeration value="FallbackInProgress"/>
                    <enumeration value="FallbackFailed"/>
                    <enumeration value="FallbackPartlyRealised"/>
                    <enumeration value="FallbackCompleted"/>
                </restriction>
            </simpleType>
            <simpleType name="ContentType">
                <restriction base="string">
                    <enumeration value="CompleteLog"/>
                    <enumeration value="ErrorsOnly"/>
                </restriction>
            </simpleType>
            <simpleType name="ValueIsNotRelevant">
                <restriction base="string">
                    <enumeration value="ValueIsNotRelevant"/>
                </restriction>
            </simpleType>
            <complexType name="Scope">
            <complexType name="Scope">
                <sequence>
                    <element name="level" type="nonNegativeInteger"/>
                    <choice>
                        <element name="baseOnly" type="bulkCMIRPData:ValueIsNotRelevant"/>
```

```
                <element name="baseNthLevel" type="nonNegativeInteger"/>
            <element name="baseSubtree" type="nonNegativeInteger"/>
            <element name="baseAll" type="bulkCMIRPData:ValueIsNotRelevant"/>
        </choice>
    </sequence>
</complexType>
<simpleType name="ActivationMode">
    <restriction base="string">
        <enumeration value="LeastServiceImpact"/>
        <enumeration value="LeastElapseTime"/>
        <enumeration value="NoIndication"/>
    </restriction>
</simpleType>
<simpleType name="VerificationMode">
    <restriction base="string">
        <enumeration value="FullChecking"/>
        <enumeration value="LimitedChecking"/>
    </restriction>
</simpleType>
<simpleType name="RequiredOrNot">
    <restriction base="string">
        <enumeration value="Required"/>
        <enumeration value="NotRequired"/>
    </restriction>
</simpleType>
<!--  startSession Request-->
<element name="startSession">
    <complexType>
        <sequence>
            <element name="sessionId" type="string"/>
        </sequence>
    </complexType>
</element>
<!--  startSession Response -->
<element name="startSessionResponse">
    <complexType>
        <sequence>
            <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
        </sequence>
    </complexType>
</element>
<!--  startSession Fault -->
<element name="startSessionFault">
    <simpleType>
        <restriction base="string">
            <enumeration value="OperationFailed"/>
        </restriction>
    </simpleType>
</element>
<!-- endSession Request-->
<element name="endSession">
    <complexType>
        <sequence>
            <element name="sessionId" type="string"/>
        </sequence>
    </complexType>
</element>
<!-- endSession Response -->
<element name="endSessionResponse">
    <complexType>
        <sequence>
            <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
        </sequence>
    </complexType>
</element>
<!-- endSession Fault -->
<element name="endSessionFault">
    <simpleType>
        <restriction base="string">
            <enumeration value="OperationFailed"/>
        </restriction>
    </simpleType>
</element>
<!-- abortSessionOperation Request-->
<element name="abortSessionOperation">
    <complexType>
        <sequence>
            <element name="sessionId" type="string"/>
        </sequence>
    </complexType>
</element>
<!-- abortSessionOperation Response -->
<element name="abortSessionOperationResponse">
    <complexType>
        <sequence>
            <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
        </sequence>
    </complexType>
</element>
```

```
<!-- abortSessionOperation Fault -->
<element name="abortSessionOperationFault">
    <simpleType>
        <restriction base="string">
            <enumeration value="OperationFailed"/>
        </restriction>
    </simpleType>
</element>
<!-- getSessionIds Request-->
<element name="getSessionIds"/>
<!-- getSessionIds Response -->
<element name="getSessionIdsResponse">
    <complexType>
        <sequence>
            <element name="sessionIdList" type="bulkCMIRPData:SessionIdList"/>
            <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
        </sequence>
    </complexType>
</element>
<!-- No fault message is defined for getSessionIds -->
<!-- getSessionStatus Request-->
<element name="getSessionStatus">
    <complexType>
        <sequence>
            <element name="sessionId" type="string"/>
        </sequence>
    </complexType>
</element>
<!-- getSessionStatus Response -->
<element name="getSessionStatusResponse">
    <complexType>
        <sequence>
            <element name="sessionState" type="bulkCMIRPData:SessionState"/>
            <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
        </sequence>
    </complexType>
</element>
<!-- getSessionStatus Fault -->
<element name="getSessionStatusFault">
    <simpleType>
        <restriction base="string">
            <enumeration value="OperationFailed"/>
        </restriction>
    </simpleType>
</element>
<!-- getSessionLog Request-->
<element name="getSessionLog">
    <complexType>
        <sequence>
            <element name="sessionId" type="string"/>
            <element name="logFileReference" type="string"/>
            <element name="contentType" type="bulkCMIRPData:ContentType"/>
        </sequence>
    </complexType>
</element>
<!-- getSessionLog Response -->
<element name="getSessionLogResponse">
    <complexType>
        <sequence>
            <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
        </sequence>
    </complexType>
</element>
<!-- getSessionStatus Fault -->
<element name="getSessionLogFault">
    <simpleType>
        <restriction base="string">
            <enumeration value="OperationFailed"/>
        </restriction>
    </simpleType>
</element>
<!-- upload Request-->
<element name="upload">
    <complexType>
        <sequence>
            <element name="sessionId" type="string"/>
            <element name="uploadDataFileReference" type="anyURI"/>
            <element name="baseObjectInstance" type="xn:dn"/>
            <element name="scope" type="bulkCMIRPData:Scope"/>
            <element name="filter" type="string"/>
        </sequence>
    </complexType>
</element>
<!-- upload Response -->
<element name="uploadResponse">
    <complexType>
        <sequence>
            <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
        </sequence>
```

```
            </complexType>
        </element>
        <!-- upload Fault -->
        <element name="uploadFault">
            <simpleType>
                <restriction base="string">
                    <enumeration value="OperationFailed"/>
                </restriction>
            </simpleType>
        </element>
        <!-- download Request-->
        <element name="download">
            <complexType>
                <sequence>
                    <element name="sessionId" type="string"/>
                    <element name="downloadDataFileReference" type="anyURI"/>
                </sequence>
            </complexType>
        </element>
        <!-- download Response -->
        <element name="downloadResponse">
            <complexType>
                <sequence>
                    <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
                </sequence>
            </complexType>
        </element>
        <!-- download Fault -->
        <element name="downloadFault">
            <simpleType>
                <restriction base="string">
                    <enumeration value="OperationFailed"/>
                </restriction>
            </simpleType>
        </element>
        <!-- validate Request-->
        <element name="validate">
            <complexType>
                <sequence>
                    <element name="sessionId" type="string"/>
                    <element name="activationMode" type="bulkCMIRPData:ActivationMode"
minOccurs="0"/>
                </sequence>
            </complexType>
        </element>
        <!-- validate Response -->
        <element name="validateResponse">
            <complexType>
                <sequence>
                    <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
                </sequence>
            </complexType>
        </element>
        <!-- validate Fault -->
        <element name="validateFault">
            <simpleType>
                <restriction base="string">
                    <enumeration value="OperationFailed"/>
                </restriction>
            </simpleType>
        </element>
        <!-- preactivate Request-->
        <element name="preactivate">
            <complexType>
                <sequence>
                    <element name="sessionId" type="string"/>
                    <element name="verificationMode" type="bulkCMIRPData:VerificationMode"
minOccurs="0"/>
                    <element name="activationMode" type="bulkCMIRPData:ActivationMode"
minOccurs="0"/>
                    <element name="fallbackEnabled" type="bulkCMIRPData:RequiredOrNot"/>
                </sequence>
            </complexType>
        </element>
        <!-- preactivate Response -->
        <element name="preactivateResponse">
            <complexType>
                <sequence>
                    <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
                </sequence>
            </complexType>
        </element>
        <!-- preactivate Fault -->
        <element name="preactivateFault">
            <simpleType>
                <restriction base="string">
                    <enumeration value="OperationFailed"/>
                </restriction>
            </simpleType>
```

```
            </element>
            <!-- activate Request-->
            <element name="activate">
                <complexType>
                    <sequence>
                        <element name="sessionId" type="string"/>
                        <element name="activationMode" type="bulkCMIRPData:ActivationMode"
minOccurs="0"/>
                        <element name="fallbackEnabled" type="bulkCMIRPData:RequiredOrNot"/>
                    </sequence>
                </complexType>
            </element>
            <!-- activate Response -->
            <element name="activateResponse">
                <complexType>
                    <sequence>
                        <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
                    </sequence>
                </complexType>
            </element>
            <!-- activate Fault -->
            <element name="activateFault">
                <simpleType>
                    <restriction base="string">
                        <enumeration value="OperationFailed"/>
                    </restriction>
                </simpleType>
            </element>
            <!-- fallback Request-->
            <element name="fallback">
                <complexType>
                    <sequence>
                        <element name="sessionId" type="string"/>
                    </sequence>
                </complexType>
            </element>
            <!-- fallback Response -->
            <element name="fallbackResponse">
                <complexType>
                    <sequence>
                        <element name="status" type="bulkCMIRPData:OperationStatusTwo"/>
                    </sequence>
                </complexType>
            </element>
            <!-- fallback Fault -->
            <element name="fallbackFault">
                <simpleType>
                    <restriction base="string">
                        <enumeration value="OperationFailed"/>
                    </restriction>
                </simpleType>
            </element>
        </schema>
    </types>
    <message name="startSession">
        <part name="parameter" element="bulkCMIRPData:startSession"/>
    </message>
    <message name="startSessionResponse">
        <part name="parameter" element="bulkCMIRPData:startSessionResponse"/>
    </message>
    <message name="startSessionFault">
        <part name="parameter" element="bulkCMIRPData:startSessionFault"/>
    </message>
    <message name="endSession">
        <part name="parameter" element="bulkCMIRPData:endSession"/>
    </message>
    <message name="endSessionResponse">
        <part name="parameter" element="bulkCMIRPData:endSessionResponse"/>
    </message>
    <message name="endSessionFault">
        <part name="parameter" element="bulkCMIRPData:endSessionFault"/>
    </message>
    <message name="abortSessionOperation">
        <part name="parameter" element="bulkCMIRPData:abortSessionOperation"/>
    </message>
    <message name="abortSessionOperationResponse">
        <part name="parameter" element="bulkCMIRPData:abortSessionOperationResponse"/>
    </message>
    <message name="abortSessionOperationFault">
        <part name="parameter" element="bulkCMIRPData:abortSessionOperationFault"/>
    </message>
    <message name="getSessionIds">
        <part name="parameter" element="bulkCMIRPData:getSessionIds"/>
    </message>
    <message name="getSessionIdsResponse">
        <part name="parameter" element="bulkCMIRPData:getSessionIdsResponse"/>
    </message>
    <message name="getSessionStatus">
        <part name="parameter" element="bulkCMIRPData:getSessionStatus"/>
```

```
    </message>
    <message name="getSessionStatusResponse">
        <part name="parameter" element="bulkCMIRPData:getSessionStatusResponse"/>
    </message>
    <message name="getSessionStatusFault">
        <part name="parameter" element="bulkCMIRPData:getSessionStatusFault"/>
    </message>
    <message name="getSessionLog">
        <part name="parameter" element="bulkCMIRPData:getSessionLog"/>
    </message>
    <message name="getSessionLogResponse">
        <part name="parameter" element="bulkCMIRPData:getSessionLogResponse"/>
    </message>
    <message name="getSessionLogFault">
        <part name="parameter" element="bulkCMIRPData:getSessionLogFault"/>
    </message>
    <message name="upload">
        <part name="parameter" element="bulkCMIRPData:upload"/>
    </message>
    <message name="uploadResponse">
        <part name="parameter" element="bulkCMIRPData:uploadResponse"/>
    </message>
    <message name="uploadFault">
        <part name="parameter" element="bulkCMIRPData:uploadFault"/>
    </message>
    <message name="download">
        <part name="parameter" element="bulkCMIRPData:download"/>
    </message>
    <message name="downloadResponse">
        <part name="parameter" element="bulkCMIRPData:downloadResponse"/>
    </message>
    <message name="downloadFault">
        <part name="parameter" element="bulkCMIRPData:downloadFault"/>
    </message>
    <message name="validate">
        <part name="parameter" element="bulkCMIRPData:validate"/>
    </message>
    <message name="validateResponse">
        <part name="parameter" element="bulkCMIRPData:validateResponse"/>
    </message>
    <message name="validateFault">
        <part name="parameter" element="bulkCMIRPData:validateFault"/>
    </message>
    <message name="preactivate">
        <part name="parameter" element="bulkCMIRPData:preactivate"/>
    </message>
    <message name="preactivateResponse">
        <part name="parameter" element="bulkCMIRPData:preactivateResponse"/>
    </message>
    <message name="preactivateFault">
        <part name="parameter" element="bulkCMIRPData:preactivateFault"/>
    </message>
    <message name="activate">
        <part name="parameter" element="bulkCMIRPData:activate"/>
    </message>
    <message name="activateResponse">
        <part name="parameter" element="bulkCMIRPData:activateResponse"/>
    </message>
    <message name="activateFault">
        <part name="parameter" element="bulkCMIRPData:activateFault"/>
    </message>
    <message name="fallback">
        <part name="parameter" element="bulkCMIRPData:fallback"/>
    </message>
    <message name="fallbackResponse">
        <part name="parameter" element="bulkCMIRPData:fallbackResponse"/>
    </message>
    <message name="fallbackFault">
        <part name="parameter" element="bulkCMIRPData:fallbackFault"/>
    </message>
    <portType name="BulkCMIRPPortType">
        <operation name="startSession">
            <input message="bulkCMIRPSystem:startSession"/>
            <output message="bulkCMIRPSystem:startSessionResponse"/>
            <fault name="startSessionFault" message="bulkCMIRPSystem:startSessionFault"/>
        </operation>
        <operation name="endSession">
            <input message="bulkCMIRPSystem:endSession"/>
            <output message="bulkCMIRPSystem:endSessionResponse"/>
            <fault name="endSessionFault" message="bulkCMIRPSystem:endSessionFault"/>
        </operation>
        <operation name="abortSessionOperation">
            <input message="bulkCMIRPSystem:abortSessionOperation"/>
            <output message="bulkCMIRPSystem:abortSessionOperationResponse"/>
            <fault name="abortSessionOperationFault"
message="bulkCMIRPSystem:abortSessionOperationFault"/>
        </operation>
        <operation name="getSessionIds">
            <input message="bulkCMIRPSystem:getSessionIds"/>
```

```
            <output message="bulkCMIRPSystem:getSessionIdsResponse"/>
        </operation>
        <operation name="getSessionStatus">
            <input message="bulkCMIRPSystem:getSessionStatus"/>
            <output message="bulkCMIRPSystem:getSessionStatusResponse"/>
            <fault name="getSessionStatusFault" message="bulkCMIRPSystem:getSessionStatusFault"/>
        </operation>
        <operation name="getSessionLog">
            <input message="bulkCMIRPSystem:getSessionLog"/>
            <output message="bulkCMIRPSystem:getSessionLogResponse"/>
            <fault name="getSessionLogFault" message="bulkCMIRPSystem:getSessionLogFault"/>
        </operation>
        <operation name="upload">
            <input message="bulkCMIRPSystem:upload"/>
            <output message="bulkCMIRPSystem:uploadResponse"/>
            <fault name="uploadFault" message="bulkCMIRPSystem:uploadFault"/>
        </operation>
        <operation name="download">
            <input message="bulkCMIRPSystem:download"/>
            <output message="bulkCMIRPSystem:downloadResponse"/>
            <fault name="downloadFault" message="bulkCMIRPSystem:downloadFault"/>
        </operation>
        <operation name="validate">
            <input message="bulkCMIRPSystem:validate"/>
            <output message="bulkCMIRPSystem:validateResponse"/>
            <fault name="validateFault" message="bulkCMIRPSystem:validateFault"/>
        </operation>
        <operation name="preactivate">
            <input message="bulkCMIRPSystem:preactivate"/>
            <output message="bulkCMIRPSystem:preactivateResponse"/>
            <fault name="preactivateFault" message="bulkCMIRPSystem:preactivateFault"/>
        </operation>
        <operation name="activate">
            <input message="bulkCMIRPSystem:activate"/>
            <output message="bulkCMIRPSystem:activateResponse"/>
            <fault name="activateFault" message="bulkCMIRPSystem:activateFault"/>
        </operation>
        <operation name="fallback">
            <input message="bulkCMIRPSystem:fallback"/>
            <output message="bulkCMIRPSystem:fallbackResponse"/>
            <fault name="fallbackFault" message="bulkCMIRPSystem:fallbackFault"/>
        </operation>
    </portType>
    <binding name="BulkCMIRPBinding" type="bulkCMIRPSystem:BulkCMIRPPortType">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <operation name="startSession">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#startSession" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="startSessionFault">
                <soap:fault name="startSessionFault" use="literal"/>
            </fault>
        </operation>
        <operation name="endSession">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#endSession" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="endSessionFault">
                <soap:fault name="endSessionFault" use="literal"/>
            </fault>
        </operation>
        <operation name="abortSessionOperation">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#abortSessionOperation"
style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="abortSessionOperationFault">
                <soap:fault name="abortSessionOperationFault" use="literal"/>
            </fault>
        </operation>
        <operation name="getSessionIds">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#getSessionIds" style="document"/>
            <input>
```

```
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <!-- No fault message for this operation -->
        </operation>
        <operation name="getSessionStatus">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#getSessionStatus"
style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="getSessionStatusFault">
                <soap:fault name="getSessionStatusFault" use="literal"/>
            </fault>
        </operation>
        <operation name="getSessionLog">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#getSessionLog" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="getSessionLogFault">
                <soap:fault name="getSessionLogFault" use="literal"/>
            </fault>
        </operation>
        <operation name="upload">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#upload" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="uploadFault">
                <soap:fault name="uploadFault" use="literal"/>
            </fault>
        </operation>
        <operation name="download">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#download" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="downloadFault">
                <soap:fault name="downloadFault" use="literal"/>
            </fault>
        </operation>
        <operation name="validate">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#validate" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="validateFault">
                <soap:fault name="validateFault" use="literal"/>
            </fault>
        </operation>
        <operation name="preactivate">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#preactivate" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="preactivateFault">
                <soap:fault name="preactivateFault" use="literal"/>
            </fault>
        </operation>
        <operation name="activate">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#activate" style="document"/>
```

```
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="activateFault">
                <soap:fault name="activateFault" use="literal"/>
            </fault>
        </operation>
        <operation name="fallback">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#fallback" style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="fallbackFault">
                <soap:fault name="fallbackFault" use="literal"/>
            </fault>
        </operation>
    </binding>
    <service name="BulkCMIRPService">
        <port name="BulkCMIRPPort" binding="bulkCMIRPSystem:BulkCMIRPBinding">
            <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.617#BulkCMIRP"/>
        </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): Alarm IRP 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/32.617/schema/32617-810-wsdl.zip

Annex C (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Mar 2009	SP-43	SP-090070	--	--	Presentation to SA for information and approval	1.0.0	8.0.0
Dec 209	SP-46	SP-090718	001	--	Increase the linked IS version by the CR for IS to clarify scope parameters for upload operation	8.0.0	8.1.0

History

Document history		
V8.0.0	April 2009	Publication
V8.1.0	January 2010	Publication