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Technical Specification

**Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Self-configuration of network elements;
Integration Reference Point (IRP): SOAP Solution Set (SS)
(3GPP TS 32.507 version 9.1.0 Release 9)**

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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
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Foreword

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Contents

Foreword

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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:

32.501:   Self-Configuration of Network Elements; Concepts and   Integration Reference Point (IRP) Requirements

32.502:   Self-Configuration of Network Elements Integration Reference Point (IRP); Information Service (IS)

32.503:   Self-Configuration of Network Elements Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)

32.505:   Self-Configuration of Network Elements Integration Reference Point (IRP);   eXtensible Markup Language (XML) file format definition

32.507:   Self-Configuration of Network Elements 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].

For the purpose of Self-Configuration of Network Elements IRP, see TS 32.501 [3]

1 Scope

The present document specifies the SOAP Solution Set for the IRP whose semantics are specified in Self-Configuration of Network Elements Integration Reference Point (IRP): Information Service (3GPP TS 32.502 [4]).

This Solution Set specification is related to 3GPP TS 32.502 V9.0.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 32.501: " Technical Specification Group Services and System Aspects; Telecommunication management; Self-Configuration of Network Elements; Concepts and Integration Reference Point (IRP) Requirements ".
[4]	3GPP TS 32.502: " Technical Specification Group Services and System Aspects; Telecommunication management; Self-Configuration of Network Elements Integration Reference Point (IRP); Information Service (IS)".
[5]	3GPP TS 32.505: " Telecommunication management; A Self-Configuration of Network Elements 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 32.501 [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
SC	Self Configuration
SS	Solution Set
WSDL	Web Service Description Language

4 Architectural features

4.1 General

The overall architectural feature of the Self-Configuration of Network Elements IRP is specified in 3GPP TS 32.502 [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.

Relevant definitions are imported from the Self-Configuration of Network Elements22 XML definitions of 3GPP TS 32.505 [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/
ScIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#SCIRPSystem
ScIRPData	http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#SCIRPData
xsc	http://www.3gpp.org/ftp/specs/archive/32_series/32.505#ScIRPIOCs
genericIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.507/schema/32317-810/GenericIRPSystem
ntfIRPNtfSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.507/schema/32507-810/notification/NotificationScNtfSystem

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.
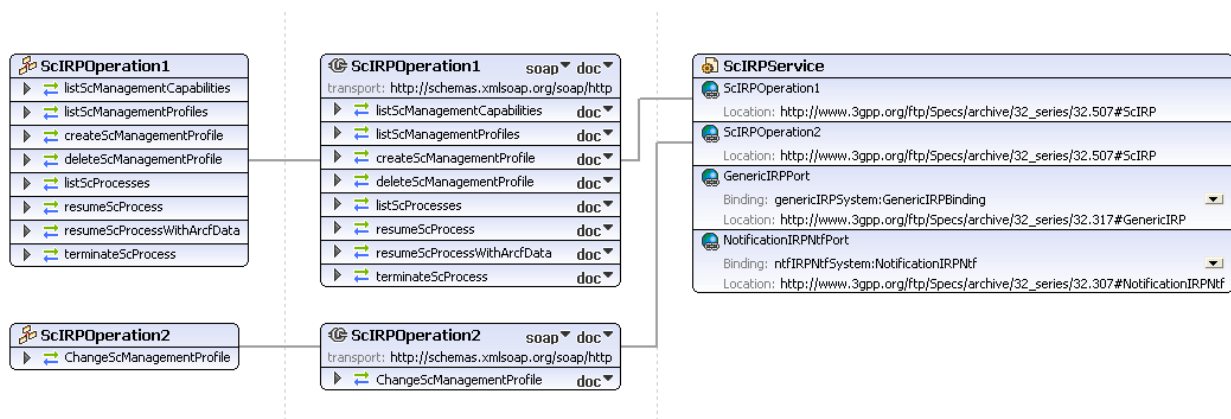

Figure 4.1: Self-Configuration of Network Elements IRP SOAP Solution Set WSDL structure

5 Mapping

5.1 Operation and notification mapping

The Self-Configuration of Network Elements IRP IS (3GPP TS 32.502 [4]) defines the operations and their semantics.

Table 5.1 maps the operations defined in the Self-Configuration of Network Elements IRP IS to their equivalent port type and binding operations in this Solution Set (SS).

Table 5.1 also maps the notifications of the Self-Configuration of Network Elements 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 32.502 [4]	SS: Operation for WSDL port type and WSDL binding	SS: Port of SCIRPService	Qualifier
`listScManagementCapabilities`	`listScManagementCapabilities` (note 1)	SCIRPOperation1	M
`listScManagementProfiles`	`listScManagementProfiles` (note 1)	SCIRPOperation1	M
`createScManagementProfile`	`createScManagementProfile` (note1)	SCIRPOperation1	M
`deleteScManagementProfile`	`deleteScManagementProfile` (note1)	SCIRPOperation1	M
`listScProcesses`	`listScProcesses` (note1)	SCIRPOperation1	M
`resumeScProcess`	`resumeScProcess` (note1)	SCIRPOperation1	M
`resumeScProcessWithArcfData`	`resumeScProcessWithArcfData`(note1)	SCIRPOperation1	M
`terminateScProcess`	`terminateScProcess` (note1)	SCIRPOperation1	M
`changeScManagementProfile`	`changeScManagementProfile` (note1)	SCIRPOperation1	O
`notifyScManagementProfileCreation`	`notify` (note 2)	NotificationIRPNtfPort	M
`notifyScManagementProfileDeletion`	`notify` (note 2)	NotificationIRPNtfPort	M
`notifyScProcessCreation`	`notify` (note 2)	NotificationIRPNtfPort	M
`notifyScProcessStage`	`notify` (note 2)	NotificationIRPNtfPort	M
`notifyScProcessDeletion`	`notify` (note 2)	NotificationIRPNtfPort	M
`notifyNewScManagementCapabilityAvailability`	`notify` (note 2)	NotificationIRPNtfPort	M
`notifyScManagementProfileChange`	`notify` (note 2)	NotificationIRPNtfPort	O
`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 SCIRPSystem:SCIRPPortType and under the binding SCIRPSystem:SCIRPBinding.			
NOTE 2: The IS equivalent maps to an XML definition specified in 3GPP TS 32.505 [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 SCIRPService 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 SelfConfigurationIRP IOC of 3GPP TS 32.502 [4] inheriting from the ManagedGenericIRP IOC. The corresponding binding is linked to a port of the SCIRPService as indicated in the table above.			

5.2 Operation parameter mapping

The SCIRP IS (3GPP TS 32.502 [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 listScManagementCapabilities

5.2.1.1 Input parameters

Table 5.2.1.1: Mapping from IS `listScManagementCapabilities` 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
nEInformation	nEInformation	M

5.2.1.2 Output parameters

Table 5.2.1.2: Mapping from IS `listScManagementCapabilities` output 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
capabilitiesList	capabilitiesList	M
Result	Result	M

5.2.1.3 Fault definition

Table 5.2.1.3: Mapping from IS `listScManagementCapabilities` exceptions to SS equivalents

Assertion name	SS WSDL type sub-element used in corresponding input message under corresponding port type operation as indicated in Table 5.1	Qualifier
operation_failed	operation_failed	M

5.2.2 Operation listScManagementProfiles

5.2.2.1 Input parameters

Table 5.2.2.1: Mapping from IS `listScManagementProfiles` 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
nEInformation	nEInformation	M

5.2.2.2 Output parameters

Table 5.2.1.1: Mapping from IS `listScManagementProfiles` output 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
ScManagementProfileList	ScManagementProfileList	M
result	result	M

5.2.3 Operation createScManagementProfile

5.2.3.1 Input parameters

Table 5.2.3.1: Mapping from IS `createScManagementProfile` 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
id	id	O
nEInformation	nEInformation	M
swVersionToBeInstalled	swVersionToBeInstalled	M
stepsAndSelectedStopPointList	stepsAndSelectedStopPointList	M
selectedFinalAdministrativeState	selectedFinalAdministrativeState	M

5.2.3.2 Output parameters

Table 5.2.3.2: Mapping from IS `createScManagementProfile` output 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
id	id	CM
result	result	M

5.2.4 Operation deleteScManagementProfile

5.2.4.1 Input parameters

Table 5.2.4.1: Mapping from IS `deleteScManagementProfile` 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
id	id	M

5.2.4.2 Output parameters

Table 5.2.4.2: Mapping from IS `deleteScManagementProfile` output 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
result	result	M

5.2.5 Operation `listScProcesses`

5.2.5.1 Input parameters

Table 5.2.5.1: Mapping from IS `listScProcesses` 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
nEIdentification	nEIdentification	O

5.2.5.2 Output parameters

Table 5.2.5.2: Mapping from IS `listScProcesses` output 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
ScManagementprocessList	ScManagementprocessList	M
result	result	M

5.2.6 Operation `resumeScProcess`

5.2.6.1 Input parameters

Table 5.2.6.1: Mapping from IS `resumeScProcess` 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
id	id	M
startStepName	startStepName	M

5.2.6.2 Output parameters

Table 5.2.6.2: Mapping from IS `resumeScProcess` output 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
result	result	M

5.2.7 Operation resumeScProcessWithArcfData

5.2.7.1 Input parameters

Table 5.2.7.1: Mapping from IS `resumeScProcessWithArcfData` 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
valuesOfNeededRadioParameter	valuesOfNeededRadioParameter	M
fileLocation	fileLocation	M

5.2.7.2 Output parameters

Table 5.2.7.2: Mapping from IS `resumeScProcessWithArcfData` output 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
validationErrorInfo	validationErrorInfo	CM

5.2.8 Operation `terminateScProcess`

5.2.8.1 Input parameters

Table 5.2.8.1: Mapping from IS `terminateScProcess` 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
id	id	M

5.2.8.2 Output parameters

Table 5.2.8.2: Mapping from IS `terminateScProcess` output 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
result	result	M

5.2.9 Operation changeScManagementProfile

5.2.9.1 Input parameters

Table 5.2.9.1: Mapping from IS `changeScManagementProfile` 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
id	id	M
nEInformation	nEInformation	M
swVersionToBeInstalled	swVersionToBeInstalled	M
stepsAndSelectedStopPointList	stepsAndSelectedStopPointList	M
selectedFinalAdministrativeState	selectedFinalAdministrativeState	M

5.2.9.2 Output parameters

Table 5.2.9.1: Mapping from IS `changeScManagementProfile` 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
result	result	M
versionNumber	versionNumber	M
conflictingProfileId	conflictingProfileId	C *)

Annex A (normative):
WSDL specifications

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
   3GPP TS 32.507 Self Configuration IRP SOAP Solution Set
-->
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:ScIRPSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#ScIRPSystem"
xmlns:ScIRPData="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#ScIRPData"
xmlns:xsc="http://www.3gpp.org/ftp/specs/archive/32_series/32.505#scIRPIOCs"
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/323
17-810/GenericIRPSystem"
xmlns:ntfIRPNtfSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/3230
7-810/notification/NotificationIRPNtfSystem" xmlns:ns="http://www.w3.org/2001/XMLSchema"
xmlns:ns1="http://schemas.xmlsoap.org/soap/encoding/"
targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#ScIRPSystem">
   <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 xmlns="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#ScIRPData">
         <import
namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.505#scIRPIOCs"/>
         <import
namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"/>
         <!-- The following types are defined for the SC IRP operations -->
         <simpleType name="NEInformation">
            <restriction base="string"/>
         </simpleType>
         <simpleType name="Id">
            <restriction base="xn:dn"/>
         </simpleType>
         <simpleType name="radioParameterName">
            <restriction base="string"/>
         </simpleType>
         <simpleType name="radioParameterValue">
            <restriction/>
         </simpleType>
         <simpleType name="FileLocation">
            <restriction base="string"/>
         </simpleType>
         <complexType name="capability">
            <sequence>
               <element name="Id" type="ScIRPData:Id"/>
               <element name="NEInformation" type="ScIRPData:NEInformation"/>
               <element name="StepsAndOfferedStopPointList"
type="xsc:StepsAndOfferedStopPointList"/>
               <element name="OfferedFinalAdministrativeStateInformation"
type="xsc:OfferedFinalAdministrativeStateInformation"/>
            </sequence>
         </complexType>
         <complexType name="capabilitiesList">
            <sequence>
               <element name="capability" type="ScIRPData:capability"
maxOccurs="unbounded"/>
            </sequence>
```

```
            </complexType>
            <complexType name="ScProfile">
               <sequence>
                  <element name="Id" type="ScIRPData:Id"/>
                  <element name="VersionNumber" type="xsc:VersionNumber"/>
                  <element name="NEInformation" type="ScIRPData:NEInformation"/>
                  <element name="StepsAndSelectedStopPointList"
type="xsc:StepsAndSelectedStopPointList"/>
                  <element name="FinalAdministrativeStateValue"
type="xsc:FinalAdministrativeStateValue"/>
                  <element name="swVersionToBeInstalled" type=" xsc:VersionNumber"
minOccurs="0"/>
               </sequence>
            </complexType>
            <complexType name="ScProfileList">
               <sequence>
                  <element name="ScProfile" type=" ScIRPData:ScProfile"
maxOccurs="unbounded"/>
               </sequence>
            </complexType>
            <complexType name="ScProcess">
               <sequence>
                  <element name="Id" type="ScIRPData:Id"/>
                  <element name="NEInformation" type="ScIRPData:NEInformation"/>
                  <element name="ProfileId" type="xsc:ProfileId"/>
                  <element name="StepInfoList" type="xsc:StepInfoList"/>
               </sequence>
            </complexType>
            <complexType name="ScProcessList">
               <sequence>
                  <element name="ScProcess" type="ScIRPData:ScProcess" maxOccurs="unbounded"/>
               </sequence>
            </complexType>
            <complexType name="startStepName">
               <sequence>
                  <element name="startStepName" type="string"/>
               </sequence>
            </complexType>
            <complexType name="listOfNeededRadioParameters">
               <sequence>
                  <element name="radioParameterName" type="ScIRPData:radioParameterName"/>
                  <element name="radioParameterValue" type="ScIRPData:radioParameterValue"/>
               </sequence>
            </complexType>
            <complexType name="valuesOfNeededRadioParameter">
               <sequence>
                  <element name="listOfNeededRadioParameters"
type="ScIRPData:listOfNeededRadioParameters"/>
               </sequence>
            </complexType>
            <!--listScManagementCapabilities Request-->
            <element name="listScManagementCapabilitiesRequest">
               <complexType>
                  <sequence>
                     <element name="nEInformation" type="ScIRPData:NEInformation"/>
                  </sequence>
               </complexType>
            </element>
            <!--listScManagementCapabilities Response -->
            <element name="listScManagementCapabilitiesResponse">
               <complexType>
                  <sequence>
                     <element name="capabilitiesList" type="ScIRPData:capabilitiesList"/>
                     <element name="Result">
                        <simpleType>
                           <restriction base="string">
                              <enumeration value="success"/>
                              <enumeration value="failure"/>
                              <enumeration value="stepNameNotMatch"/>
                              <enumeration value="nEInformationIntersection"/>
```

```
                  </restriction>
               </simpleType>
            </element>
         </sequence>
      </complexType>
   </element>
   <!--listScManagementCapabilities Fault -->
   <element name="listScManagementCapabilitiesFault">
      <simpleType>
         <restriction base="string">
            <enumeration value="operationfailed"/>
         </restriction>
      </simpleType>
   </element>
   <!--listScManagementProfiles  Request -->
   <element name="listScManagementProfilesRequest">
      <complexType>
         <sequence>
            <element name="nEInformation" type="ScIRPData:NEInformation"/>
         </sequence>
      </complexType>
   </element>
   <!--listScManagementProfiles  Response -->
   <element name="listScManagementProfilesResponse">
      <complexType>
         <sequence>
            <element name="ScProfileList" type="ScIRPData:ScProfileList"/>
            <element name="Result">
               <simpleType>
                  <restriction base="string">
                     <enumeration value="success"/>
                     <enumeration value="failure"/>
                     <enumeration value="stepNameNotMatch"/>
                     <enumeration value="nEInformationIntersection"/>
                  </restriction>
               </simpleType>
            </element>
         </sequence>
      </complexType>
   </element>
   <!--createScManagementProfile Request -->
   <element name="createScManagementProfileRequest">
      <complexType>
         <sequence>
            <element name="id" type="ScIRPData:Id" minOccurs="0"/>
            <element name="nEInformation" type="ScIRPData:NEInformation"/>
            <element name="swVersionToBeInstalled" type="xsc:VersionNumber"/>
            <element name="stepsAndSelectedStopPointList"
type="xsc:StepsAndSelectedStopPointList"/>
            <element name="selectedFinalAdministrativeState"
type="xsc:FinalAdministrativeStateValue"/>
         </sequence>
      </complexType>
   </element>
   <!--createScManagementProfile Response -->
   <element name="createScManagementProfileResponse">
      <complexType>
         <sequence>
            <element name="id" type="ScIRPData:Id" minOccurs="0"/>
            <element name="Result">
               <simpleType>
                  <restriction base="string">
                     <enumeration value="Success"/>
                     <enumeration value="Failure"/>
                     <enumeration value="nEInformationIntersection"/>
                     <enumeration value="notAllowedBecauseOfOngoingSwmActivity"/>
                  </restriction>
               </simpleType>
            </element>
         </sequence>
```

```
            </complexType>
         </element>
         <!--deleteScManagementProfile Request -->
         <element name="deleteScManagementProfileRequest">
            <complexType>
               <sequence>
                  <element name="id" type="ScIRPData:Id"/>
               </sequence>
            </complexType>
         </element>
         <!--deleteScManagementProfile Response -->
         <element name="deleteScManagementProfileResponse">
            <complexType>
               <sequence>
                  <element name="Result">
                     <simpleType>
                        <restriction base="string">
                           <enumeration value="success"/>
                           <enumeration value="failure"/>
                           <enumeration value="stepNameNotMatch"/>
                           <enumeration value="nEInformationIntersection"/>
                        </restriction>
                     </simpleType>
                  </element>
               </sequence>
            </complexType>
         </element>
         <!--listScProcesses Request -->
         <element name="listScProcessesRequest">
            <complexType>
               <sequence>
                  <element name="nEIdentification" type="ScIRPData:NEInformation"
minOccurs="0"/>
               </sequence>
            </complexType>
         </element>
         <!--listScProcesses Response -->
         <element name="listScProcessesResponse">
            <complexType>
               <sequence>
                  <element name="ScProcessList" type="ScIRPData:ScProcessList"/>
                  <element name="Result">
                     <simpleType>
                        <restriction base="string">
                           <enumeration value="success"/>
                           <enumeration value="failure"/>
                           <enumeration value="stepNameNotMatch"/>
                           <enumeration value="nEInformationIntersection"/>
                        </restriction>
                     </simpleType>
                  </element>
               </sequence>
            </complexType>
         </element>
         <!--resumeScProcess Request -->
         <element name="resumeScProcessRequest">
            <complexType>
               <sequence>
                  <element name="id" type="ScIRPData:Id"/>
                  <element name="startStepName" type="ScIRPData:startStepName"/>
               </sequence>
            </complexType>
         </element>
         <!--resumeScProcess Response -->
         <element name="resumeScProcessResponse">
            <complexType>
               <sequence>
                  <element name="Result">
                     <simpleType>
                        <restriction base="string">
```

```
                              <enumeration value="success"/>
                              <enumeration value="failure"/>
                              <enumeration value="stepNameNotMatch"/>
                              <enumeration value="nEInformationIntersection"/>
                          </restriction>
                      </simpleType>
                  </element>
              </sequence>
          </complexType>
      </element>
      <!--resumeScProcessWithArcfData Request -->
      <element name="resumeScProcessWithArcfDataRequest">
          <complexType>
              <sequence>
                  <element name="valuesOfNeededRadioParameter"
type="ScIRPData:valuesOfNeededRadioParameter"/>
                  <element name="fileLocation" type="ScIRPData:FileLocation"/>
              </sequence>
          </complexType>
      </element>
      <!--resumeScProcessWithArcfData Response -->
      <element name="resumeScProcessWithArcfDataResponse">
          <complexType>
              <sequence>
                  <element name="validationErrorInfo">
                      <simpleType>
                          <restriction base="string">
                              <enumeration value="ParameterNotSupported"/>
                              <enumeration value="InvalidParameter"/>
                              <enumeration value="ValueNotSupported"/>
                              <enumeration value="MissingParameterValue"/>
                              <enumeration value="ConflictingParamterValue"/>
                              <enumeration value="SemanticsError"/>
                              <enumeration value="OtherError "/>
                          </restriction>
                      </simpleType>
                  </element>
              </sequence>
          </complexType>
      </element>
      <!--terminateScProcess Request -->
      <element name="terminateScProcessRequest">
          <complexType>
              <sequence>
                  <element name="id" type="ScIRPData:Id"/>
              </sequence>
          </complexType>
      </element>
      <!--terminateScProcess Response -->
      <element name="terminateScProcessResponse">
          <complexType>
              <sequence>
                  <element name="Result">
                      <simpleType>
                          <restriction base="string">
                              <enumeration value="success"/>
                              <enumeration value="failure"/>
                              <enumeration value="stepNameNotMatch"/>
                              <enumeration value="nEInformationIntersection"/>
                          </restriction>
                      </simpleType>
                  </element>
              </sequence>
          </complexType>
      </element>
      <!--ChangeScManagementProfile Request -->
      <element name="ChangeScManagementProfileRequest">
          <complexType>
              <sequence>
                  <element name="id" type="ScIRPData:Id"/>
```

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```
                    <element name="nEInformation" type="ScIRPData:NEInformation"/>
                    <element name="swVersionToBeInstalled" type="xsc:VersionNumber"/>
                    <element name="stepsAndSelectedStopPointList"
type="xsc:StepsAndSelectedStopPointList"/>
                    <element name="selectedFinalAdministrativeState"
type="xsc:FinalAdministrativeStateValue"/>
                </sequence>
            </complexType>
        </element>
        <!--ChangeScManagementProfile Response -->
        <element name="ChangeScManagementProfileResponse">
            <complexType>
                <sequence>
                    <element name="Result">
                        <simpleType>
                            <restriction base="string">
                                <enumeration value="Success"/>
                                <enumeration value="Failure"/>
                                <enumeration value="nEInformationIntersection"/>
                                <enumeration value="notAllowedBecauseOfOngoingSwmActivity"/>
                            </restriction>
                        </simpleType>
                    </element>
                    <element name="versionNumber" type="xsc:VersionNumber"/>
                    <element name="conflictingProfileId" minOccurs="0">
                        <simpleType>
                            <restriction base="string">
                                <enumeration value="swMprofileId"/>
                                <enumeration value="swMprofileAId"/>
                                <enumeration value="swMprofileBId"/>
                                <enumeration value="empty"/>
                            </restriction>
                        </simpleType>
                    </element>
                </sequence>
            </complexType>
        </element>
    </schema>
</types>
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    <part name="parameter" element="ScIRPData:listScManagementCapabilitiesRequest"/>
</message>
<message name="listScManagementCapabilitiesResponse">
    <part name="parameter" element="ScIRPData:listScManagementCapabilitiesResponse"/>
</message>
<message name="listScManagementCapabilitiesFault">
    <part name="parameter" element="ScIRPData:listScManagementCapabilitiesFault"/>
</message>
<message name="listScManagementProfilesRequest">
    <part name="parameter" element="ScIRPData:listScManagementProfilesRequest"/>
</message>
<message name="listScManagementProfilesResponse">
    <part name="parameter" element="ScIRPData:listScManagementProfilesResponse"/>
</message>
<message name="createScManagementProfileRequest">
    <part name="parameter" element="ScIRPData:createScManagementProfileRequest"/>
</message>
<message name="createScManagementProfileResponse">
    <part name="parameter" element="ScIRPData:createScManagementProfileResponse"/>
</message>
<message name="deleteScManagementProfileRequest">
    <part name="parameter" element="ScIRPData:deleteScManagementProfileRequest"/>
</message>
<message name="deleteScManagementProfileResponse">
    <part name="parameter" element="ScIRPData:deleteScManagementProfileResponse"/>
</message>
<message name="listScProcessesRequest">
    <part name="parameter" element="ScIRPData:listScProcessesRequest"/>
</message>
<message name="listScProcessesResponse">
```

```
        <part name="parameter" element="ScIRPData:listScProcessesResponse"/>
      </message>
      <message name="resumeScProcessRequest">
        <part name="parameter" element="ScIRPData:resumeScProcessRequest"/>
      </message>
      <message name="resumeScProcessResponse">
        <part name="parameter" element="ScIRPData:resumeScProcessResponse"/>
      </message>
      <message name="terminateScProcessRequest">
        <part name="parameter" element="ScIRPData:terminateScProcessRequest"/>
      </message>
      <message name="terminateScProcessResponse">
        <part name="parameter" element="ScIRPData:terminateScProcessResponse"/>
      </message>
      <message name="resumeScProcessWithArcfDataRequest">
        <part name="parameter" element="ScIRPData:resumeScProcessWithArcfDataRequest"/>
      </message>
      <message name="resumeScProcessWithArcfDataResponse">
        <part name="parameter" element="ScIRPData:resumeScProcessWithArcfDataResponse"/>
      </message>
      <message name="ChangeScManagementProfileRequest">
        <part name="parameter" element="ScIRPData:ChangeScManagementProfileRequest"/>
      </message>
      <message name="ChangeScManagementProfileResponse">
        <part name="parameter" element="ScIRPData:ChangeScManagementProfileResponse"/>
      </message>
      <portType name="ScIRPOperation1">
        <operation name="listScManagementCapabilities">
          <input message="ScIRPSystem:listScManagementCapabilitiesRequest"/>
          <output message="ScIRPSystem:listScManagementCapabilitiesResponse"/>
          <fault name="listScManagementCapabilitiesFault"
message="ScIRPSystem:listScManagementCapabilitiesFault"/>
        </operation>
        <operation name="listScManagementProfiles">
          <input message="ScIRPSystem:listScManagementProfilesRequest"/>
          <output message="ScIRPSystem:listScManagementProfilesResponse"/>
        </operation>
        <operation name="createScManagementProfile">
          <input message="ScIRPSystem:createScManagementProfileRequest"/>
          <output message="ScIRPSystem:createScManagementProfileResponse"/>
        </operation>
        <operation name="deleteScManagementProfile">
          <input message="ScIRPSystem:deleteScManagementProfileRequest"/>
          <output message="ScIRPSystem:deleteScManagementProfileResponse"/>
        </operation>
        <operation name="listScProcesses">
          <input message="ScIRPSystem:listScProcessesRequest"/>
          <output message="ScIRPSystem:listScProcessesResponse"/>
        </operation>
        <operation name="resumeScProcess">
          <input message="ScIRPSystem:resumeScProcessRequest"/>
          <output message="ScIRPSystem:resumeScProcessResponse"/>
        </operation>
        <operation name="resumeScProcessWithArcfData">
          <input message="ScIRPSystem:resumeScProcessWithArcfDataRequest"/>
          <output message="ScIRPSystem:resumeScProcessWithArcfDataResponse"/>
        </operation>
        <operation name="terminateScProcess">
          <input message="ScIRPSystem:terminateScProcessRequest"/>
          <output message="ScIRPSystem:terminateScProcessResponse"/>
        </operation>
      </portType>
      <portType name="ScIRPOperation2">
        <operation name="ChangeScManagementProfile">
          <input message="ScIRPSystem:ChangeScManagementProfileRequest"/>
          <output message="ScIRPSystem:ChangeScManagementProfileResponse"/>
        </operation>
      </portType>
      <binding name="ScIRPOperation1" type="ScIRPSystem:ScIRPOperation1">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
```

```
        <operation name="listScManagementCapabilities">
           <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#listScManagementCapabi
lities" style="document"/>
           <input>
              <soap:body use="literal"/>
           </input>
           <output>
              <soap:body use="literal"/>
           </output>
           <fault name="listScManagementCapabilitiesFault"/>
        </operation>
        <operation name="listScManagementProfiles">
           <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#listScManagementProfil
es" style="document"/>
           <input>
              <soap:body use="literal"/>
           </input>
           <output>
              <soap:body use="literal"/>
           </output>
        </operation>
        <operation name="createScManagementProfile">
           <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#createScManagementProf
ile" style="document"/>
           <input>
              <soap:body use="literal"/>
           </input>
           <output>
              <soap:body use="literal"/>
           </output>
        </operation>
        <operation name="deleteScManagementProfile">
           <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#deleteScManagementProf
ile" style="document"/>
           <input>
              <soap:body use="literal"/>
           </input>
           <output>
              <soap:body use="literal"/>
           </output>
        </operation>
        <operation name="listScProcesses">
           <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#listScProcesses"
style="document"/>
           <input>
              <soap:body use="literal"/>
           </input>
           <output>
              <soap:body use="literal"/>
           </output>
        </operation>
        <operation name="resumeScProcess">
           <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#resumeScProcess"
style="document"/>
           <input>
              <soap:body use="literal"/>
           </input>
           <output>
              <soap:body use="literal"/>
           </output>
        </operation>
        <operation name="resumeScProcessWithArcfData">
```

```
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#resumeScProcessWithArc
fData" style="document"/>
            <input>
               <soap:body use="literal"/>
            </input>
            <output>
               <soap:body use="literal"/>
            </output>
         </operation>
         <operation name="terminateScProcess">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#terminateScProcess"
style="document"/>
            <input>
               <soap:body use="literal"/>
            </input>
            <output>
               <soap:body use="literal"/>
            </output>
         </operation>
      </binding>
      <binding name="ScIRPOperation2" type="ScIRPSystem:ScIRPOperation2">
         <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
         <operation name="ChangeScManagementProfile">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#ChangeScManagementProf
ile" style="document"/>
            <input>
               <soap:body use="literal"/>
            </input>
            <output>
               <soap:body use="literal"/>
            </output>
         </operation>
      </binding>
      <service name="ScIRPService">
         <port name="ScIRPOperation1" binding="ScIRPSystem:ScIRPOperation1">
            <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#ScIRP"/>
         </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>
         <port name="ScIRPOperation2" binding="ScIRPSystem:ScIRPOperation2">
            <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.507#ScIRP"/>
         </port>
      </service>
</definitions>
```

Annex B (informative): Change history

Change history								
Date	TSG #	TSG Doc.	CR	R	Subject/Comment	Cat	Old	New
Dec 2009	SA#46	SP-090856	--	--	Presentation to SA for information	--	---	1.0.0
Mar 2010	SA#47	SP-100051	--	--	Presentation to SA for approval	--	1.0.0	2.0.0
Mar 2010	--	--	--	--	Publication of SA approved version	--	2.0.0	9.0.0
Jun 2010	SA#48	SP-100261	001	-	Alignment of SOAP SS with TS 32.507 for ARCF	B	9.0.0	9.1.0

History

Document history		
V9.0.0	April 2010	Publication
V9.1.0	July 2010	Publication