

ETSI TS 132 537 V9.0.0 (2010-04)

Technical Specification

**Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Software management Integration Reference Point (IRP);
SOAP Solution Set (SS)
(3GPP TS 32.537 version 9.0.0 Release 9)**



Reference

DTS/TSGS-0532537v900

Keywords

LTE, UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

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

If you find errors in the present document, please send your comment to one of the following services:

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

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2010.
All rights reserved.

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

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

LTE™ is a Trade Mark of ETSI currently being registered

for the benefit of its Members and of the 3GPP Organizational Partners.

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

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

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

Contents

Intellectual Property Rights	2
Foreword.....	2
Foreword.....	5
Introduction	5
1 Scope	6
2 References	6
3 Definitions and abbreviations.....	7
3.1 Definitions	7
3.2 Abbreviations	7
4 Architectural features	8
4.1 General	8
5 Mapping	10
5.1 Operation and notification mapping	10
5.2 Operation parameter mapping	10
5.2.1 Operation listSwMCapabilities	11
5.2.1.1 Input parameters	11
5.2.1.2 Output parameters	11
5.2.1.3 Fault definition	11
5.2.2 Operation listSwMProfiles.....	11
5.2.2.1 Input parameters.....	11
5.2.2.2 Output parameters	11
5.2.3 Operation createSwMProfile	12
5.2.3.1 Input parameters.....	12
5.2.3.2 Output parameters	12
5.2.4 Operation deleteSwMProfile	12
5.2.4.1 Input parameters.....	12
5.2.4.1 Output parameters	13
5.2.5 Operation listSwMProcesses	13
5.2.5.1 Input parameters.....	13
5.2.5.2 Output parameters	13
5.2.6 Operation resumeSwMProcess	13
5.2.6.1 Input parameters.....	13
5.2.6.2 Output parameters	13
5.2.7 Operation swFallback	14
5.2.7.1 Input parameters.....	14
5.2.7.2 Output parameters	14
5.2.8 Operation terminateSwMProcess.....	14
5.2.8.1 Input parameters.....	14
5.2.8.2 Output parameters	15
5.2.9 Operation changeSwMProfile	15
5.2.9.1 Input parameters.....	15
5.2.9.2 Output parameters	15
5.2.10 Operation downloadNESw	16
5.2.10.1 Input parameters.....	16
5.2.10.2 Output parameters	16
5.2.10.3 Fault definition	16
5.2.11 Operation activateNESw.....	16
5.2.11.1 Input parameters.....	16
5.2.11.2 Output parameters	17
5.2.11.3 Fault definition.....	17
5.2.12 Operation installNESw.....	17
5.2.12.1 Input parameters.....	17

5.2.12.2 Output parameters 17
5.2.12.3 Fault definition 18
Annex A (normative): WSDL specifications 19
Annex B (informative): Change history 32
History 33

Foreword

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

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project: Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

32.531	Telecommunication management; Software management; Concepts and Integration Reference Point (IRP) Requirements
32.532	Telecommunication management; Software management Integration Reference Point (IRP); Information Service (IS)
32.533	Telecommunication management; Software management Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)
32.535	Telecommunication management; Software management Integration Reference Point (IRP); eXtensible Markup Language (XML) definitions
32.537:	Telecommunication management; Software management Integration Reference Point (IRP): SOAP Solution Set (SS)

Software Management, in general, provides the operator with the ability to manage effectively the software entities residing in the 3G network. Software Management function is useful especially when there is a need to manage a large number of software residing in the managed elements widely distributed geographically. The main focus is the management of new software releases and correction patches [1].

The software management operations are initiated by the operator or by functions in the Operations Systems (OSs) either on single NE or across several NEs of the 3G network.

1 Scope

The present document specifies the SOAP Solution Set for the IRP whose semantics are specified in Software management Integration Reference Point (IRP): Information Service (3GPP TS 32.532 [4]).

This Solution Set specification is related to 3GPP TS 32.532 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.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 32.101: 'Telecommunication management; Principles and high level requirements'.
- [2] 3GPP TS 32.102: 'Telecommunication management; Architecture'.
- [3] 3GPP TS 32.532: 'Telecommunication management; Software management Integration Reference Point (IRP); Information Service (IS)'
- [4] 3GPP TS 32.535: " Telecommunication management; Software management Integration Reference Point (IRP); eXtensible Markup Language (XML) file format definition"
- [5] 3GPP TS 32.311: "Telecommunication management; Generic Integration Reference Point (IRP) management; Requirements"
- [6] 3GPP TS 32.312: "Telecommunication management; Generic Integration Reference Point (IRP) management; Information Service (IS)".
- [7] 3GPP TS 32.317: "Telecommunication management; Generic Integration Reference Point (IRP) management; SOAP solution set".
- [8] 3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".
- [9] 3GPP TS 32.307: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): SOAP solution set".
- [10] W3C SOAP 1.1 specification (<http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>)
- [11] W3C XPath 1.0 specification (<http://www.w3.org/TR/1999/REC-xpath-19991116>)
- [12] W3C WSDL 1.1 specification (<http://www.w3.org/TR/2001/NOTE-wsdl-20010315>)
- [13] 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], and 3GPP TS 32.331 [5] apply.

3.2 Abbreviations

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

IRP	Integration Reference Point
IS	Information Service
NL	Notification Log
NRM	Network Resource Model
SwM	Software Management
WSDL	Web Service Description Language

4 Architectural features

4.1 General

The overall architectural feature of the Software Management IRP is specified in 3GPP TS 32.532 [3]. This clause specifies features that are specific to the SOAP solution set.

The SOAP 1.1 specification [10] and WSDL 1.1 specification [12] are supported.

The SOAP 1.2 specification [13] 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 [11]). IRPAgents may throw a FilterComplexityLimit fault when a given filter is too complex.

Relevant definitions are imported from the Software Management XML definitions of 3GPP TS 32.535 [4].

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/
swMIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.537/#SWMIRPSystem
swMIRPData	http://www.3gpp.org/ftp/Specs/archive/32_series/32.537/#SWMIRPData
xswmi	http://www.3gpp.org/ftp/specs/archive/32_series/32.535/#swManagementIRPIOCs
genericIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.537/schema/32317-810/GenericIRPSystem
ntfIRPNtfSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.537/schema/32537-810/notification/NotificationSwNtfSystem

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.

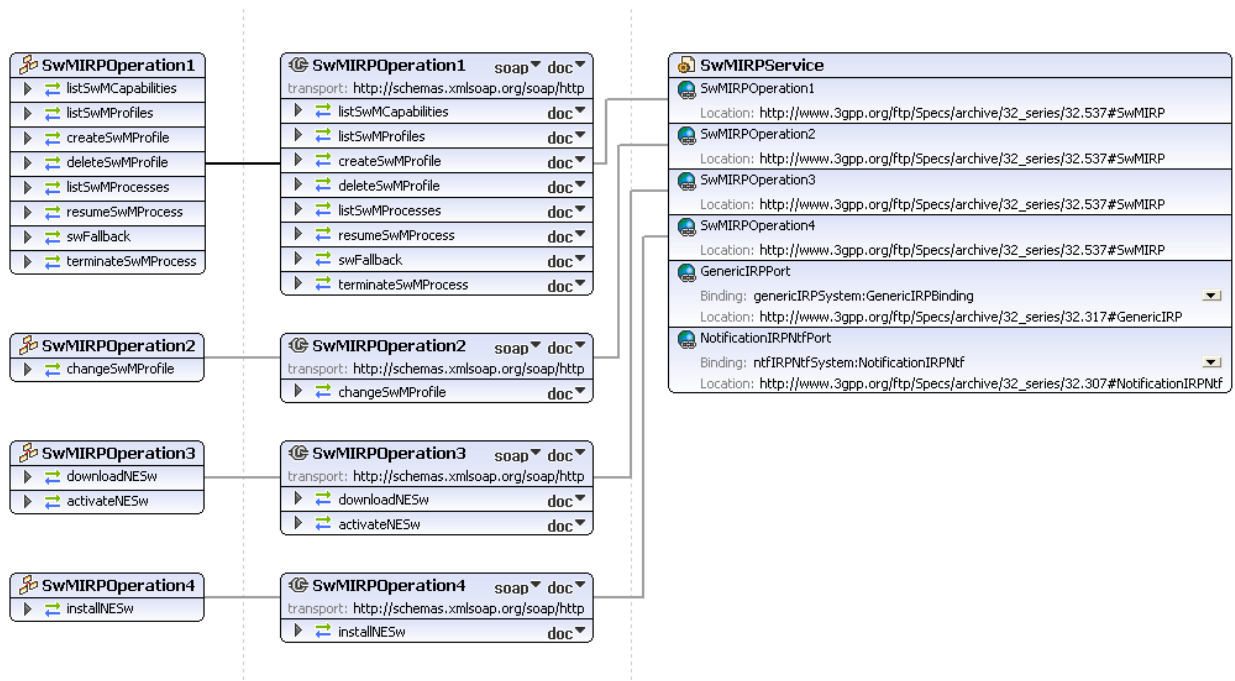


Figure 4.1: Software Management IRP SOAP Solution Set WSDL structure

5 Mapping

5.1 Operation and notification mapping

The Software Management IRP IS (3GPP TS 32.532 [3]) defines the operations and their semantics.

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

Table 5.1 also maps the notifications of the Software Management 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 32.532 [4]	SS: Operation for WSDL port type and WSDL binding	SS: Port of SwMIRPService	Qualifier
listSwMCapabilities	listSwMCapabilities (NOTE1)	SwMIRPOperation1	M
listSwMProfiles	listSwMProfiles (NOTE1)	SwMIRPOperation1	M
createSwMProfile	createSwMProfile (NOTE1)	SwMIRPOperation1	M
deleteSwMProfile	deleteSwMProfile (NOTE1)	SwMIRPOperation1	M
listSwMProcesses	listSwMProcesses (NOTE1)	SwMIRPOperation1	M
resumeSwMProcess	resumeSwMProcess (NOTE1)	SwMIRPOperation1	M
swFallback	swFallback (NOTE1)	SwMIRPOperation1	M
terminateSwMProcess	terminateSwMProcess (NOTE1)	SwMIRPOperation1	M
changeSwMProfile	changeSwMProfile (NOTE1)	SwMIRPOperation2	O
downloadNESw	downloadNESw (NOTE1)	SwMIRPOperation3	M
activateNESw	activateNESw (NOTE1)	SwMIRPOperation3	O
installNESw	installNESw (NOTE1)	SwMIRPOperation4	M
notifySwMProfileCreation	notifySwMProfileCreation (NOTE2)	NotificationIRPNtfPort	M
notifySwMProfileDeletion	notifySwMProfileDeletion (NOTE2)	NotificationIRPNtfPort	M
notifySwMProcessCreation	notifySwMProcessCreation (NOTE2)	NotificationIRPNtfPort	M
notifySwMProcessStage	notifySwMProcessStage (NOTE2)	NotificationIRPNtfPort	M
notifySwMProcessDeletion	notifySwMProcessDeletion (NOTE2)	NotificationIRPNtfPort	M
notifyNewSwAvailability	notifyNewSwAvailability (NOTE2)	NotificationIRPNtfPort	O
notifySwMProfileChange	notifySwMProfileChange (NOTE2)	NotificationIRPNtfPort	O
notifyDownloadNESwStatusChanged	notifyDownloadNESwStatusChanged (NOTE2)	NotificationIRPNtfPort	M
notifyInstallNESwStatusChanged	notifyInstallNESwStatusChanged (NOTE2)	NotificationIRPNtfPort	O
notifyActivateNESwStatusChanged	notifyActivateNESwStatusChanged (NOTE2)	NotificationIRPNtfPort	M
NOTE 1: The operation is under the port type SwMIRPSystem:SwMIRPPortType and under the binding SwMIRPSystem:SwMIRPBinding.			
NOTE 2: The IS equivalent maps to an XML definition specified in 3GPP TS 32.535 [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 SwMIRPService as indicated in the table above.			

5.2 Operation parameter mapping

The SwMIRP IS (3GPP TS 32.532 [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 listSwMCapabilities

5.2.1.1 Input parameters

Table 5.2.1.1: Mapping from IS listSwMCapabilities 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 listSwMCapabilities 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
capabilityList	capabilityList	M
result	result	M

5.2.1.3 Fault definition

Table 5.2.1.3: Mapping from IS listSwMCapabilities 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 listSwMProfiles

5.2.2.1 Input parameters

Table 5.2.2.1: Mapping from IS listSwMProfiles 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 listSwMProfiles 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
swMProfileList	swMProfileList	M
result	result	M

5.2.3 Operation createSwMProfile

5.2.3.1 Input parameters

Table 5.2.3.1: Mapping from IS createSwMProfile 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 createSwMProfile 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 deleteSwMProfile

5.2.4.1 Input parameters

Table 5.2.4.1: Mapping from IS deleteSwMProfile 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

5.2.4.1 Output parameters

Table 5.2.4.2: Mapping from IS `deleteSwMProfile` 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 `listSwMProcesses`

5.2.5.1 Input parameters

Table 5.2.5.1: Mapping from IS `listSwMProcesses` 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 `listSwMProcesses` 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
swMprocessList	swMprocessList	M
result	result	M

5.2.6 Operation `resumeSwMProcess`

5.2.6.1 Input parameters

Table 5.2.6.1: Mapping from IS `resumeSwMProcess` 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 `resumeSwMProcess` 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 swFallback

5.2.7.1 Input parameters

Table 5.2.7.1: Mapping from IS swFallback 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
filter	filter	M

5.2.7.2 Output parameters

Table 5.2.7.2: Mapping from IS swFallback 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
nEList	nEList	M
result	result	M

5.2.8 Operation terminateSwMProcess

5.2.8.1 Input parameters

Table 5.2.8.1: Mapping from IS terminateSwMProcess 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 terminateSwMProcess 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 changeSwMProfile

5.2.9.1 Input parameters

Table 5.2.9.1: Mapping from IS changeSwMProfile 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 5.2.9.2: Mapping from IS changeSwMProfile 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

5.2.10 Operation downloadNESw

5.2.10.1 Input parameters

Table 5.2.10.1: Mapping from IS downloadNESw 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
swToBeDownloaded	swToBeDownloaded	M
neIdentifier	neIdentifier	M

5.2.10.2 Output parameters

Table 5.2.10.2: Mapping from IS downloadNESw 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
downloadProcessId	downloadProcessId	M
result	result	M
reason	reason	O

5.2.10.3 Fault definition

Table 5.2.10.3: Mapping from IS downloadNESw 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
operationFailed	operationFailed	M
resourceLimitation	resourceLimitation	M

5.2.11 Operation activateNESw

5.2.11.1 Input parameters

Table 5.2.11.1: Mapping from IS activateNESw 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
swVersionToBeActivated	swVersionToBeActivated	M
neIdentifier	neIdentifier	M

5.2.11.2 Output parameters

Table 5.2.11.2: Mapping from IS `activateNESw` 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
<code>activateProcessId</code>	<code>activateProcessId</code>	M
<code>result</code>	<code>result</code>	M
<code>reason</code>	<code>reason</code>	O

5.2.11.3 Fault definition

Table 5.2.11.3: Mapping from IS `activateNESw` 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
<code>operationFailed</code>	<code>operationFailed</code>	M
<code>resourceLimitation</code>	<code>resourceLimitation</code>	M

5.2.12 Operation `installNESw`

5.2.12.1 Input parameters

Table 5.2.12.1: Mapping from IS `installNESw` 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
<code>swTobeInstalled</code>	<code>swTobeInstalled</code>	M
<code>neIdentifier</code>	<code>neIdentifier</code>	M

5.2.12.2 Output parameters

Table 5.2.12.2: Mapping from IS `installNESw` 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
<code>installProcessId</code>	<code>installProcessId</code>	M
<code>result</code>	<code>result</code>	M
<code>reason</code>	<code>reason</code>	O

5.2.12.3 Fault definition

Table 5.2.12.3: Mapping from IS `installNESw` 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
<code>operationFailed</code>	<code>operationFailed</code>	M
<code>resourceLimitation</code>	<code>resourceLimitation</code>	M
<code>swNotAvailable</code>	<code>swNotAvailable</code>	M

Annex A (normative): WSDL specifications

```

<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XMLSpy v2008 rel. 2 sp1 (http://www.altova.com) by glli (EMBRACE) -->
<!--
  3GPP TS 32.537 Software Management IRP SOAP Solution Set
-->
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:swMIRPSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#swMIRPSystem"
  xmlns:swMIRPData="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#swMIRPData"
  xmlns:xswmi="http://www.3gpp.org/ftp/specs/archive/32_series/32.535#swMIRPIOCs"
  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"
  targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#swMIRPSystem">
  <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"
        xmlns:xswmi="http://www.3gpp.org/ftp/specs/archive/32_series/32.535#swManagementIRPIOCs"
        targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#swMIRPData">
        <import
          namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.535#swManagementIRPIOCs"/>
        <import
          namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"/>
        <!-- The following types are defined for the SW IRP operations -->
        <complexType name="capability">
          <sequence>
            <element name="Id" type="xswmi:Id"/>
            <element name="NEInformation" type="xswmi:NEInformation"/>
            <element name="StepsAndOfferedStopPointList"
              type="xswmi:StepsAndOfferedStopPointList"/>
            <element name="OfferedFinalAdministrativeStateInformation"
              type="xswmi:OfferedFinalAdministrativeStateInformation"/>
          </sequence>
        </complexType>
        <complexType name="capabilityList">
          <sequence>
            <element name="capability" type="swMIRPData:capability"
              maxOccurs="unbounded"/>
          </sequence>
        </complexType>
        <complexType name="swMProfile">
          <sequence>
            <element name="Id" type="xswmi:Id"/>
            <element name="VersionNumber" type="xswmi:VersionNumber"/>
            <element name="NEInformation" type="xswmi:NEInformation"/>
            <element name="StepsAndSelectedStopPointList"
              type="xswmi:StepsAndSelectedStopPointList"/>
            <element name="FinalAdministrativeStateValue"
              type="xswmi:FinalAdministrativeStateValue"/>
            <element name="swVersionToBeInstalled" type="xswmi:VersionNumber"
              minOccurs="0"/>
          </sequence>

```

```

</complexType>
<complexType name="swMProfileList">
  <sequence>
    <element name="swMProfile" type="swMIRPData:swMProfile"
maxOccurs="unbounded"/>
  </sequence>
</complexType>
<complexType name="swMprocess">
  <sequence>
    <element name="Id" type="xswmi:Id"/>
    <element name="NEInformation" type="xswmi:NEInformation"/>
    <element name="ProfileId" type="xswmi:ProfileId"/>
    <element name="StepInfoList" type="xswmi:StepInfoList"/>
  </sequence>
</complexType>
<complexType name="swMprocessList">
  <sequence>
    <element name="swMprocess" type="swMIRPData:swMprocess"
maxOccurs="unbounded"/>
  </sequence>
</complexType>
<complexType name="startStepName">
  <sequence>
    <element name="startStepName" type="xswmi:NameOfStep"/>
  </sequence>
</complexType>
<complexType name="nEList">
  <sequence>
    <element name="nEIdentification" type="xswmi:Id"/>
    <element name="swFallbackStatus">
      <simpleType>
        <restriction base="string">
          <enumeration value="fallbackSuccessful"/>
          <enumeration value="fallbackUnsuccessful"/>
        </restriction>
      </simpleType>
    </element>
    <element name="VersionNumber" type="xswmi:VersionNumber"/>
  </sequence>
</complexType>
<complexType name="StepsAndSelectedStopPointListEntry">
  <sequence>
    <element name="nameOfStep" type="xswmi:NameOfStep"/>
    <element name="sequenceNumberInProgress"
type="xswmi:SequenceNumberInProgress"/>
    <element name="stopPointSetIndication" type="xswmi:StopPointSetIndication"/>
  </sequence>
</complexType>
<complexType name="StepsAndSelectedStopPointList">
  <sequence>
    <element name="stepsAndSelectedStopPointListEntry"
type="swMIRPData:StepsAndSelectedStopPointListEntry" maxOccurs="unbounded"/>
  </sequence>
</complexType>
<complexType name="SelectedFinalAdministrativeState">
  <sequence>
    <element name="SelectedFinalAdministrativeState"
type="xswmi:FinalAdministrativeStateValue" maxOccurs="3"/>
  </sequence>
</complexType>
<simpleType name="swLocation">
  <restriction base="string"/>
</simpleType>
<simpleType name="swFileSize">
  <restriction base="unsignedLong"/>
</simpleType>
<simpleType name="swFileCompression">
  <restriction base="string"/>
</simpleType>
<simpleType name="swFileFormat">

```

```

    <restriction base="string"/>
  </simpleType>
  <simpleType name="swVersion">
    <restriction base="string"/>
  </simpleType>
  <complexType name="swToBeDownloaded">
    <sequence>
      <element name="swLocation" type="swMIRPData:swLocation"/>
      <element name="swFileSize" type="swMIRPData:swFileSize"/>
      <element name="swFileCompression" type="swMIRPData:swFileCompression"/>
      <element name="swFileFormat" type="swMIRPData:swFileFormat"/>
    </sequence>
  </complexType>
  <complexType name="swVersionToBeActivated">
    <sequence>
      <element name="swVersion" type="swMIRPData:swVersion"/>
    </sequence>
  </complexType>
  <complexType name="swTobeInstalled">
    <sequence>
      <element name="swLocation" type="swMIRPData:swLocation"/>
    </sequence>
  </complexType>
  <!--listSwMCapabilities Request-->
  <element name="listSwMCapabilitiesRequest">
    <complexType>
      <sequence>
        <element name="nEInformation" type="xswmi:NEInformation"/>
      </sequence>
    </complexType>
  </element>
  <!--listSwMCapabilities Response -->
  <element name="listSwMCapabilitiesResponse">
    <complexType>
      <sequence>
        <element name="result">
          <simpleType>
            <restriction base="string">
              <enumeration value="success"/>
              <enumeration value="failure"/>
              <enumeration value="stepNameNotMatch"/>
              <enumeration value="nEInformationIntersection"/>
            </restriction>
          </simpleType>
        </element>
        <element name="capabilityList" type="swMIRPData:capabilityList"/>
      </sequence>
    </complexType>
  </element>
  <!--listSwMCapabilities Fault -->
  <element name="listSwMCapabilitiesFault">
    <simpleType>
      <restriction base="string">
        <enumeration value="operationfailed"/>
      </restriction>
    </simpleType>
  </element>
  <!--listSwMProfiles Request -->
  <element name="listSwMProfilesRequest">
    <complexType>
      <sequence>
        <element name="nEInformation" type="xswmi:NEInformation"/>
      </sequence>
    </complexType>
  </element>
  <!--listSwMProfiles Response -->
  <element name="listSwMProfilesResponse">
    <complexType>
      <sequence>
        <element name="swMProfileList" type="swMIRPData:swMProfileList"/>
      </sequence>
    </complexType>
  </element>

```

```

    <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>
<!--createSwMProfile Request -->
<element name="createSwMProfileRequest">
  <complexType>
    <sequence>
      <element name="id" type="xswmi:Id" minOccurs="0"/>
      <element name="nEInformation" type="xswmi:NEInformation"/>
      <element name="swVersionToBeInstalled" type="swMIRPData:swVersion"/>
      <element name="stepsAndSelectedStopPointList"
type="swMIRPData:StepsAndSelectedStopPointList"/>
      <element name="selectedFinalAdministrativeState"
type="swMIRPData:SelectedFinalAdministrativeState"/>
    </sequence>
  </complexType>
</element>
<!--createSwMProfile Response -->
<element name="createSwMProfileResponse">
  <complexType>
    <sequence>
      <element name="id" type="xswmi: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>
<!--deleteSwMProfile Request -->
<element name="deleteSwMProfileRequest">
  <complexType>
    <sequence>
      <element name="id" type="xswmi:Id"/>
    </sequence>
  </complexType>
</element>
<!--deleteSwMProfile Response -->
<element name="deleteSwMProfileResponse">
  <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>

```

```

<!--listSwMProcesses Request -->
<element name="listSwMProcessesRequest">
  <complexType>
    <sequence>
      <element name="nEIdentification" type="xswmi:Id" minOccurs="0"/>
    </sequence>
  </complexType>
</element>
<!--listSwMProcesses Response -->
<element name="listSwMProcessesResponse">
  <complexType>
    <sequence>
      <element name="swMprocessList" type="swMIRPData:swMprocessList"/>
      <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>
<!--resumeSwMProcess Request -->
<element name="resumeSwMProcessRequest">
  <complexType>
    <sequence>
      <element name="id" type="xswmi:Id"/>
      <element name="startStepName" type="swMIRPData:startStepName"/>
    </sequence>
  </complexType>
</element>
<!--resumeSwMProcess Response -->
<element name="resumeSwMProcessResponse">
  <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>
<!--swFallback Request -->
<element name="swFallbackRequest">
  <complexType>
    <sequence>
      <element name="filter" type="string"/>
    </sequence>
  </complexType>
</element>
<!--swFallback Response -->
<element name="swFallbackResponse">
  <complexType>
    <sequence>
      <element name="nEList" type="swMIRPData:nEList"/>
      <element name="result">
        <simpleType>
          <restriction base="string">
            <enumeration value="Success"/>
            <enumeration value="Partly successful"/>
          </restriction>
        </simpleType>
      </element>
    </sequence>
  </complexType>
</element>

```



```

        <enumeration value="Failure"/>
      </restriction>
    </simpleType>
  </element>
</sequence>
</complexType>
</element>
<!-- terminateSwMProcess Request -->
<element name="terminateSwMProcessRequest">
  <complexType>
    <sequence>
      <element name="id" type="xswmi:Id"/>
    </sequence>
  </complexType>
</element>
<!-- terminateSwMProcess Response -->
<element name="terminateSwMProcessResponse">
  <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>
<!-- changeSwMProfile Request -->
<element name="changeSwMProfileRequest">
  <complexType>
    <sequence>
      <element name="id" type="xswmi:Id"/>
      <element name="nEInformation" type="xswmi:NEInformation"/>
      <element name="swVersionTobeInstalled"
type="swMIRPData:swTobeInstalled"/>
      <element name="stepsAndSelectedStopPointList"
type="swMIRPData:StepsAndSelectedStopPointList"/>
      <element name="selectedFinalAdministrativeState"
type="swMIRPData:SelectedFinalAdministrativeState"/>
    </sequence>
  </complexType>
</element>
<!-- changeSwMProfile Response -->
<element name="changeSwMProfileResponse">
  <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="xswmi: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>

```

```

        </simpleType>
      </element>
    </sequence>
  </complexType>
</element>
<!--downloadNESw Request -->
<element name="downloadNESwRequest">
  <complexType>
    <sequence>
      <element name="swToBeDownloaded" type="swMIRPData:swToBeDownloaded"/>
      <element name="neIdentifier" type="xswmi:Id"/>
    </sequence>
  </complexType>
</element>
<!--downloadNESw Response -->
<element name="downloadNESwResponse">
  <complexType>
    <sequence>
      <element name="downloadProcessId" type="integer"/>
      <element name="result">
        <simpleType>
          <restriction base="string">
            <enumeration value="requestAccepted"/>
            <enumeration value="requestFailed"/>
            <enumeration value="notAllowedBecauseOfOngoingSwmActivity"/>
          </restriction>
        </simpleType>
      </element>
      <element name="reason" minOccurs="0">
        <simpleType>
          <restriction base="string"/>
        </simpleType>
      </element>
    </sequence>
  </complexType>
</element>
<!--downloadNESw Fault -->
<element name="downloadNESwFault">
  <simpleType>
    <restriction base="string">
      <enumeration value="operationFailed"/>
      <enumeration value="resourceLimitation"/>
    </restriction>
  </simpleType>
</element>
<!--installNESw Request -->
<element name="installNESwRequest">
  <complexType>
    <sequence>
      <element name="swTobeInstalled" type="swMIRPData:swTobeInstalled"/>
      <element name="neIdentifier" type="xswmi:Id"/>
    </sequence>
  </complexType>
</element>
<!--installNESw Response -->
<element name="installNESwResponse">
  <complexType>
    <sequence>
      <element name="installProcessId" type="integer"/>
      <element name="result">
        <simpleType>
          <restriction base="string">
            <enumeration value="requestAccepted"/>
            <enumeration value="requestFailed"/>
            <enumeration value="notAllowedBecauseOfOngoingSwmActivity"/>
          </restriction>
        </simpleType>
      </element>
      <element name="reason" minOccurs="0">
        <simpleType>

```

```

        <restriction base="string"/>
      </simpleType>
    </element>
  </sequence>
</complexType>
</element>
<!--installNESw Fault -->
<element name="installNESwFault">
  <simpleType>
    <restriction base="string">
      <enumeration value="operationFailed"/>
      <enumeration value="resourceLimitation"/>
      <enumeration value="swNotAvailable"/>
    </restriction>
  </simpleType>
</element>
<!--activateNESw Request -->
<element name="activateNESwRequest">
  <complexType>
    <sequence>
      <element name="swVersionToBeActivated"
type="swMIRPData:swVersionToBeActivated"/>
      <element name="neIdentifier" type="xswmi:Id"/>
    </sequence>
  </complexType>
</element>
<!--activateNESw Response -->
<element name="activateNESwResponse">
  <complexType>
    <sequence>
      <element name="activateProcessId" type="integer"/>
      <element name="result">
        <simpleType>
          <restriction base="string">
            <enumeration value="requestAccepted"/>
            <enumeration value="requestFailed"/>
            <enumeration value="notAllowedBecauseOfOngoingSwmActivity"/>
          </restriction>
        </simpleType>
      </element>
      <element name="reason" minOccurs="0">
        <simpleType>
          <restriction base="string"/>
        </simpleType>
      </element>
    </sequence>
  </complexType>
</element>
<!--activateNESw Fault -->
<element name="activateNESwFault">
  <simpleType>
    <restriction base="string">
      <enumeration value="operationFailed"/>
      <enumeration value="resourceLimitation"/>
    </restriction>
  </simpleType>
</element>
</schema>
</types>
<message name="listSwMCapabilitiesRequest">
  <part name="parameter" element="swMIRPData:listSwMCapabilitiesRequest"/>
</message>
<message name="listSwMCapabilitiesResponse">
  <part name="parameter" element="swMIRPData:listSwMCapabilitiesResponse"/>
</message>
<message name="listSwMCapabilitiesFault">
  <part name="parameter" element="swMIRPData:listSwMCapabilitiesFault"/>
</message>
<message name="listSwMProfilesRequest">
  <part name="parameter" element="swMIRPData:listSwMProfilesRequest"/>

```

```
</message>
<message name="listSwMProfilesResponse">
  <part name="parameter" element="swMIRPData:listSwMProfilesResponse"/>
</message>
<message name="createSwMProfileRequest">
  <part name="parameter" element="swMIRPData:createSwMProfileRequest"/>
</message>
<message name="createSwMProfileResponse">
  <part name="parameter" element="swMIRPData:createSwMProfileResponse"/>
</message>
<message name="deleteSwMProfileRequest">
  <part name="parameter" element="swMIRPData:deleteSwMProfileRequest"/>
</message>
<message name="deleteSwMProfileResponse">
  <part name="parameter" element="swMIRPData:deleteSwMProfileResponse"/>
</message>
<message name="listSwMProcessesRequest">
  <part name="parameter" element="swMIRPData:listSwMProcessesRequest"/>
</message>
<message name="listSwMProcessesResponse">
  <part name="parameter" element="swMIRPData:listSwMProcessesResponse"/>
</message>
<message name="resumeSwMProcessRequest">
  <part name="parameter" element="swMIRPData:resumeSwMProcessRequest"/>
</message>
<message name="resumeSwMProcessResponse">
  <part name="parameter" element="swMIRPData:resumeSwMProcessResponse"/>
</message>
<message name="swFallbackRequest">
  <part name="parameter" element="swMIRPData:swFallbackRequest"/>
</message>
<message name="swFallbackResponse">
  <part name="parameter" element="swMIRPData:swFallbackResponse"/>
</message>
<message name="terminateSwMProcessRequest">
  <part name="parameter" element="swMIRPData:terminateSwMProcessRequest"/>
</message>
<message name="terminateSwMProcessResponse">
  <part name="parameter" element="swMIRPData:terminateSwMProcessResponse"/>
</message>
<message name="changeSwMProfileRequest">
  <part name="parameter" element="swMIRPData:changeSwMProfileRequest"/>
</message>
<message name="changeSwMProfileResponse">
  <part name="parameter" element="swMIRPData:changeSwMProfileResponse"/>
</message>
<message name="downloadNESwRequest">
  <part name="parameter" element="swMIRPData:downloadNESwRequest"/>
</message>
<message name="downloadNESwResponse">
  <part name="parameter" element="swMIRPData:downloadNESwResponse"/>
</message>
<message name="downloadNESwFault">
  <part name="parameter" element="swMIRPData:downloadNESwFault"/>
</message>
<message name="installNESwRequest">
  <part name="parameter" element="swMIRPData:installNESwRequest"/>
</message>
<message name="installNESwResponse">
  <part name="parameter" element="swMIRPData:installNESwResponse"/>
</message>
<message name="installNESwFault">
  <part name="parameter" element="swMIRPData:installNESwFault"/>
</message>
<message name="activateNESwRequest">
  <part name="parameter" element="swMIRPData:activateNESwRequest"/>
</message>
<message name="activateNESwResponse">
  <part name="parameter" element="swMIRPData:activateNESwResponse"/>
</message>
```

```

<message name="activateNESwFault">
  <part name="parameter" element="swMIRPData:activateNESwFault"/>
</message>
<portType name="SwMIRPOperation1">
  <operation name="listSwMCapabilities">
    <input message="swMIRPSystem:listSwMCapabilitiesRequest"/>
    <output message="swMIRPSystem:listSwMCapabilitiesResponse"/>
    <fault name="listSwMCapabilitiesFault"
message="swMIRPSystem:listSwMCapabilitiesFault"/>
  </operation>
  <operation name="listSwMProfiles">
    <input message="swMIRPSystem:listSwMProfilesRequest"/>
    <output message="swMIRPSystem:listSwMProfilesResponse"/>
  </operation>
  <operation name="createSwMProfile">
    <input message="swMIRPSystem:createSwMProfileRequest"/>
    <output message="swMIRPSystem:createSwMProfileResponse"/>
  </operation>
  <operation name="deleteSwMProfile">
    <input message="swMIRPSystem:deleteSwMProfileRequest"/>
    <output message="swMIRPSystem:deleteSwMProfileResponse"/>
  </operation>
  <operation name="listSwMProcesses">
    <input message="swMIRPSystem:listSwMProcessesRequest"/>
    <output message="swMIRPSystem:listSwMProcessesResponse"/>
  </operation>
  <operation name="resumeSwMProcess">
    <input message="swMIRPSystem:resumeSwMProcessRequest"/>
    <output message="swMIRPSystem:resumeSwMProcessResponse"/>
  </operation>
  <operation name="swFallback">
    <input message="swMIRPSystem:swFallbackRequest"/>
    <output message="swMIRPSystem:swFallbackResponse"/>
  </operation>
  <operation name="terminateSwMProcess">
    <input message="swMIRPSystem:terminateSwMProcessRequest"/>
    <output message="swMIRPSystem:terminateSwMProcessResponse"/>
  </operation>
</portType>
<portType name="SwMIRPOperation2">
  <operation name="changeSwMProfile">
    <input message="swMIRPSystem:changeSwMProfileRequest"/>
    <output message="swMIRPSystem:changeSwMProfileResponse"/>
  </operation>
</portType>
<portType name="SwMIRPOperation3">
  <operation name="downloadNESw">
    <input message="swMIRPSystem:downloadNESwRequest"/>
    <output message="swMIRPSystem:downloadNESwResponse"/>
    <fault name="downloadNESwFault" message="swMIRPSystem:downloadNESwFault"/>
  </operation>
  <operation name="activateNESw">
    <input message="swMIRPSystem:activateNESwRequest"/>
    <output message="swMIRPSystem:activateNESwResponse"/>
    <fault name="activateNESwFault" message="swMIRPSystem:activateNESwFault"/>
  </operation>
</portType>
<portType name="SwMIRPOperation4">
  <operation name="installNESw">
    <input message="swMIRPSystem:installNESwRequest"/>
    <output message="swMIRPSystem:installNESwResponse"/>
    <fault name="installNESwFault" message="swMIRPSystem:installNESwFault"/>
  </operation>
</portType>
<binding name="SwMIRPOperation1" type="swMIRPSystem:SwMIRPOperation1">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="listSwMCapabilities">
    <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#listSwMCapabilities"
style="document"/>

```

```

    <input>
      <soap:body use="literal"/>
    </input>
  </output>
  <soap:body use="literal"/>
</output>
<fault name="listSwMCapabilitiesFault"/>
</operation>
<operation name="listSwMProfiles">
  <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#listSwMProfiles"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
</operation>
<operation name="createSwMProfile">
  <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#createSwMProfile"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
</operation>
<operation name="deleteSwMProfile">
  <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#deleteSwMProfile"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
</operation>
<operation name="listSwMProcesses">
  <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#listSwMProcesses"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
</operation>
<operation name="resumeSwMProcess">
  <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#resumeSwMProcess"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>
  <output>
    <soap:body use="literal"/>
  </output>
</operation>
<operation name="swFallback">
  <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#swFallback"
style="document"/>
  <input>
    <soap:body use="literal"/>
  </input>

```

```

        <output>
          <soap:body use="literal"/>
        </output>
      </operation>
    <operation name="terminateSwMProcess">
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#terminateSwMProcess"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
    </operation>
  </binding>
  <binding name="SwMIRPOperation2" type="swMIRPSystem:SwMIRPOperation2">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="changeSwMProfile">
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#changeSwMProfile"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
    </operation>
  </binding>
  <binding name="SwMIRPOperation3" type="swMIRPSystem:SwMIRPOperation3">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="downloadNESw">
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#downloadNESw"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="downloadNESwFault"/>
    </operation>
    <operation name="activateNESw">
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#activateNESw"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="activateNESwFault"/>
    </operation>
  </binding>
  <binding name="SwMIRPOperation4" type="swMIRPSystem:SwMIRPOperation4">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="installNESw">
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#installNESw"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="installNESwFault"/>
    </operation>
  </binding>

```

```
</operation>
</binding>
<service name="SwMIRPService">
  <port name="SwMIRPOperation1" binding="swMIRPSystem:SwMIRPOperation1">
    <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#SwMIRP"/>
    </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="SwMIRPOperation2" binding="swMIRPSystem:SwMIRPOperation2">
          <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#SwMIRP"/>
          </port>
          <port name="SwMIRPOperation3" binding="swMIRPSystem:SwMIRPOperation3">
            <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#SwMIRP"/>
            </port>
            <port name="SwMIRPOperation4" binding="swMIRPSystem:SwMIRPOperation4">
              <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.537#SwMIRP"/>
              </port>
            </service>
          </definitions>
```

Annex B (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Mar 2010	SA#47	SP-100054	--	--	Presentation to SA for information and approval	--	1.0.0
Mar 2010	--	--	--	--	Publication of SA approved version	1.0.0	9.0.0

History

Document history		
V9.0.0	April 2010	Publication