ETSI TS 132 397 V9.0.0 (2010-04)

Technical Specification

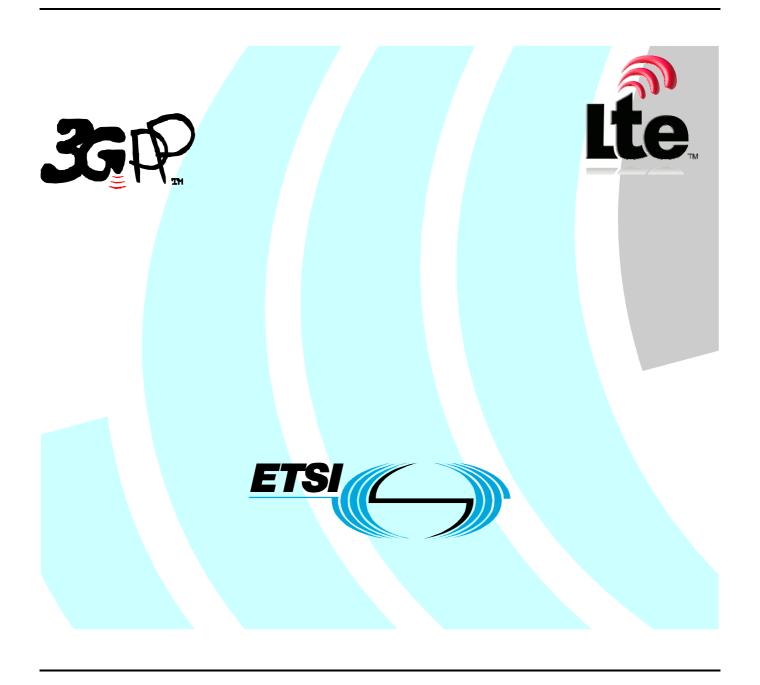# Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Telecommunication management; Delta synchronization Integration Reference Point (IRP); SOAP Solution Set (SS) (3GPP TS 32.397 version 9.0.0 Release 9)

Reference
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Foreword

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Contents

Foreword

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y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

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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; Communication Surveillance management Integration Reference Point (IRP), as identified below:

32.391: "Delta Synchronization Integration Reference Point (IRP); Requirements"

32.392: "Delta Synchronization Integration Reference Point (IRP): Information Service (IS)"

32.393: "Delta Synchronization Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)"

32.395: "Delta Synchronization Integration Reference Point (IRP): eXtensible Markup Language (XML) file format definition"

32.397: "Delta Synchronization Integration Reference Point (IRP): SOAP Solution Set (SS)"

The Itf-N interface is built up by a number of IRPs and a related Name Convention, which realise the functional capabilities over this interface. The basic structure of the IRPs is defined in 3GPP TS 32.101 [2] and 3GPP TS 32.102 [3].

IRPManagers (typically Network Management Systems) and IRPAgents (typically EMs or NEs) synchronize their data concerning alarms or configuration data. In certain scenarios this synchronization is lost or not done. This IRP provides functionality to significantly reduces the amount of data which needs to be transferred in order to re-establish synchronization.

1 Scope

The present document specifies the SOAP SS for the IRP whose semantics is specified in Delta Synchronization IRP IS (3GPP TS 32.392 [5]).

This Solution Set specification is related to 3GPP TS 32.392 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 TR 21.905: "Vocabulary for 3GPP Specifications".

[2]   3GPP TS 32.101: "Telecommunication management; Principles and high level requirements".

[3]   3GPP TS 32.102: "Telecommunication management; Architecture".

[4]   3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".

[5]   3GPP TS 32.392: "Telecommunication management; Delta Synchronization Integration Reference Point (IRP): Information Service (IS)".

[6]   3GPP TS 32.395: "Telecommunication management; Delta Synchronization Integration Reference Point (IRP); eXtensible Markup Language (XML) file format definition ".

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

[8]   W3C XPath 1.0 specification (http://www.w3.org/TR/1999/REC-xpath-19991116)

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

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

[11]

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1], 3GPP TS 32.101 [2], 3GPP TS 32.102 [3], 3GPP TS 32.150 [4] apply.   A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

IRP: See 3GPP TS 32.101 [2].

IRPAgent: See 3GPP TS 32.102 [3].

IRPManager: See 3GPP TS 32.102 [3].

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1], in 3GPP TS 32.101 [2], 3GPP TS 32.102 [3], 3GPP TS 32.150 [4], and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

IRP   Integration Reference Point
IS   Information Service
NE   Network Element
NM   Network Management

4 Architectural features

4.1 General

The overall architectural feature of the Delta Synchronisation IRP is specified in 3GPP TS 32.392 [5].   This clause specifies features that are specific to the SOAP solution set.

The SOAP 1.1 specification [7] and WSDL 1.1 specification [9] are supported.

The SOAP 1.2 specification [10] 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 [8]). IRPAgents may throw a FilterComplexityLimit fault when a given filter is too complex.

Relevant definitions are imported from the Delta Synchronisation IRP XML definitions of 3GPP TS 32.395 [6].

This specification uses a number of namespace prefixes throughout that are listed in Table 4.1. 1.

Table 4.1.1: Prefixes and Namespaces used in this specification

PREFIX	NAMESPACE
(no prefix)	http://schemas.xmlsoap.org/wsdl/
soap	http://schemas.xmlsoap.org/wsdl/soap/
deltaSynchIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchIRPSystem
deltaSynchIRPData	http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchIRPData
xn	http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm
genericIRPSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.317/schema/32317-810/GenericIRPSystem
ntfIRPNtfSystem	http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/32307-810/notification/NotificationIRPNtfSystem

The WSDL structure is depicted in Figure 4.1.1 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.
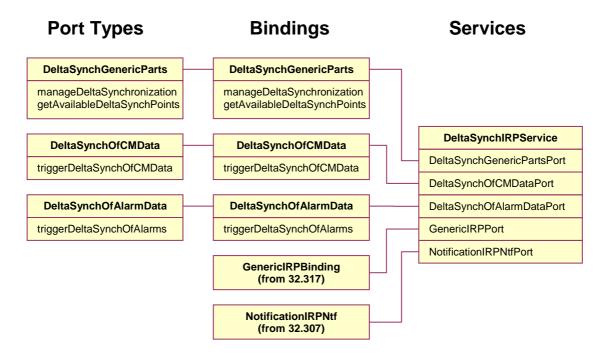
Port Types   Bindings   Services

Figure 4.1.1:   **Delta Synchronisation IRP SOAP Solution Set WSDL structure**

5   Mapping

5.1   Operation and notification mapping

The Delta Synchronisation IRP IS (3GPP TS 32.392 [5]) defines semantics of operation and notification visible across the Itf-N.   Table 5.1.1 indicates mapping of these operations and notifications to their equivalents defined in this SS.

Table 5.1.1: Mapping from IS Operation to SS Equivalents

IS Operation / Notification (3GPP TS 32.392)	SS Method	SS Port	Qualifier
manageDeltaSynchronization	manageDeltaSynchronization	DeltaSynchGenericPartsPort	M
getAvailableDeltaSynchPoints	getAvailableDeltaSynchPoints	DeltaSynchGenericPartsPort	O
triggerDeltaSynchOfCMData	triggerDeltaSynchOfCMData	DeltaSynchOfCMDataPort	O
triggerDeltaSynchOfAlarms	triggerDeltaSynchOfAlarms	DeltaSynchOfAlarmDataPort	O
notifyStatusOfDeltaSynchronization	notify (note 1)	NotificationIRPNtfPort	M
notifyNewDeltaSynchPoint	notify (note 1)	NotificationIRPNtfPort	O
NOTE 1: The IS equivalent maps to an XML definition specified in 3GPP TS 32.395 [6], 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 [11].			

5.2   Operation parameter mapping

The Delta Synchronisation IRP IS (3GPP TS 32.392 [5]) 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.

Table 5.2.1: Mapping from IS `manageDeltaSynchronization` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
managerReference	managerReference	M
manageDeltaSynchForAlarmData	manageDeltaSynchForAlarmData	CM
manageDeltaSynchForCMData	manageDeltaSynchForCMData	CM
status	status	M

Table 5.2.2: Mapping from IS `getAvailableDeltaSynchPoints` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
managerReference	managerReference	O
synchPointsForCMDataRequested	synchPointsForCMDataRequested	CM
synchPointsForAlarmDataRequested	synchPointsForAlarmDataRequested	CM
synchPointListForAlarms	synchPointListForAlarms	CM
synchPointListForCMData	synchPointListForCMData	CM
status	status	M

Table 5.2.3: Mapping from IS `triggerDeltaSynchOfCMData` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
managerReference	managerReference	O
dataRequested	dataRequested	O
baseMOInstance	baseMOInstance	O
scope	scope	O
synchPoint	synchPoint	M
deltaLists	deltaLists	CM
newSynchPoint	newSynchPoint	CM
status	status	M

Table 5.2.4: Mapping from IS `triggerDeltaSynchOfAlarms` parameters to SS equivalents

IS Operation parameter	SS Method parameter	Qualifier
managerReference	managerReference	M
dataRequested	dataRequested	M
baseMOInstance	baseMOInstance	O
scope	scope	O
synchPoint	synchPoint	M
deltaLists	deltaLists	CM
newSynchPoint	newSynchPoint	CM
status	status	M

5.3 Notification parameter mapping

The Delta Synchronisation IRP Notifications are defined in 32.395 [6].

Annex A (normative): WSDL specifications

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!--
   3GPP TS 32.397 Delta Synchronization IRP SOAP Solution Set
-->
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:deltaSynchIRPSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchIRPSyste
m"
xmlns:deltaSynchIRPData="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchIRPData"
xmlns:xn="http://www.3gpp.org/ftp/specs/archive/32_series/32.625#genericNrm"
xmlns:genericIRPSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.317/schema/32317-
810/GenericIRPSystem"
xmlns:ntfIRPNtfSystem="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/32307-
810/notification/NotificationIRPNtfSystem"
targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchIRPSystem">
  <import namespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.317/schema/32317-
810/GenericIRPSystem"/>
  <import namespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307/schema/32307-
810/notification/NotificationIRPNtfSystem"/>
  <types>
    <schema
targetNamespace="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchIRPData"
xmlns="http://www.w3.org/2001/XMLSchema"
xmlns:nk="http://www.3gpp.org/ftp/specs/archive/32_series/32.665#kernelNtf"
xmlns:xai="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPIOCs">
      <!-- listOfInstances Type -->
      <complexType name="listOfInstances">
        <choice>
          <sequence minOccurs="0" maxOccurs="unbounded">
            <element name="MOInstance" type="xn:dn" minOccurs="0"/>
            <element name="attributeList" minOccurs="0">
              <complexType>
                <sequence maxOccurs="unbounded">
                  <element name="attributeName" type="string"/>
                  <element name="attributeValue" type="string" minOccurs="0"/>
                </sequence>
              </complexType>
            </element>
          </sequence>
          <sequence minOccurs="0" maxOccurs="unbounded">
            <element name="fileReference" type="xn:dn"/>
          </sequence>
        </choice>
      </complexType>
      <!-- listOfAlarms Type -->
      <complexType name="listOfAlarms">
        <choice>
          <sequence>
            <element name="alarmIdList">
              <complexType>
                <sequence minOccurs="0" maxOccurs="unbounded">
                  <element ref="xai:alarmId"/>
                </sequence>
              </complexType>
            </element>
          </sequence>
          <sequence>
            <element name="alarmInformationList">
              <complexType>
                <sequence minOccurs="0" maxOccurs="unbounded">
                  <choice>
                    <element name="nonSecurityAlarm" type="xai:NonSecurityAlarm"/>
                    <element name="securityAlarm" type="xai:SecurityAlarm"/>
                  </choice>
                </sequence>
              </complexType>
            </element>
          </sequence>
          <sequence minOccurs="0" maxOccurs="unbounded">
```

```
                <element name="fileReference" type="xn:dn"/>
            </sequence>
        </choice>
    </complexType>
    <!-- manageDeltaSynchronization Request -->
    <element name="manageDeltaSynchronizationRequest">
        <complexType>
            <sequence>
                <element name="managerReference" type="string"/>
                <element name="manageDeltaSynchForAlarmData" minOccurs="0">
                    <simpleType>
                        <restriction base="string">
                            <enumeration value="Activate"/>
                            <enumeration value="Deactivate"/>
                        </restriction>
                    </simpleType>
                </element>
                <element name="manageDeltaSynchForCMData" minOccurs="0">
                    <simpleType>
                        <restriction base="string">
                            <enumeration value="Activate"/>
                            <enumeration value="Deactivate"/>
                        </restriction>
                    </simpleType>
                </element>
            </sequence>
        </complexType>
    </element>
    <!-- manageDeltaSynchronization Response -->
    <element name="manageDeltaSynchronizationResponse">
        <complexType>
            <sequence>
                <element name="status">
                    <simpleType>
                        <restriction base="string">
                            <enumeration value="Success"/>
                            <enumeration value="Failure"/>
                        </restriction>
                    </simpleType>
                </element>
                <element name="failureReason" minOccurs="0">
                    <simpleType>
                        <restriction base="string">
                            <enumeration value="DeltaSynchNotSupportedForCMData"/>
                            <enumeration value="DeltaSynchNotSupportedForAlarmData"/>
                            <enumeration value="operation_failed"/>
                            <enumeration value="operation_failed_invalid_input_parameter"/>
                            <enumeration value="operation_failed_internal_problem"/>
                        </restriction>
                    </simpleType>
                </element>
            </sequence>
        </complexType>
    </element>
    <!-- manageDeltaSynchronization Fault -->
    <element name="manageDeltaSynchronizationFault">
        <simpleType>
            <restriction base="string">
                <enumeration value="OperationFailed"/>
            </restriction>
        </simpleType>
    </element>
    <!-- getAvailableDeltaSynchPoints Request -->
    <element name="getAvailableDeltaSynchPointsRequest">
        <complexType>
            <sequence>
                <element name="managerReference" type="string" minOccurs="0"/>
                <element name="synchPointsForCMDataRequested" minOccurs="0"/>
                <element name="synchPointsForAlarmDataRequested" minOccurs="0"/>
            </sequence>
        </complexType>
    </element>
    <!-- getAvailableDeltaSynchPoints Response -->
    <element name="getAvailableDeltaSynchPointsResponse">
        <complexType>
            <sequence>
                <element name="synchPointListForAlarms" minOccurs="0">
                    <complexType>
```

```
                <sequence minOccurs="0" maxOccurs="unbounded">
                  <element name="synchPoint" type="dateTime"/>
                </sequence>
              </complexType>
            </element>
            <element name="synchPointListForCMData" minOccurs="0">
              <complexType>
                <sequence minOccurs="0" maxOccurs="unbounded">
                  <element name="synchPoint" type="dateTime"/>
                </sequence>
              </complexType>
            </element>
            <element name="status">
              <simpleType>
                <restriction base="string">
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                  <enumeration value="Failure"/>
                </restriction>
              </simpleType>
            </element>
            <element name="failureReason" minOccurs="0">
              <simpleType>
                <restriction base="string">
                  <enumeration value="DeltaSynchNotSupportedForCMData"/>
                  <enumeration value="DeltaSynchNotSupportedForAlarmData"/>
                  <enumeration value="DeltaSynchNotActive"/>
                  <enumeration value="DeltaSynchForCMDataDeactivated"/>
                  <enumeration value="DeltaSynchForAlarmDataDeactivated"/>
                  <enumeration value="operation_failed"/>
                  <enumeration value="operation_failed_invalid_input_parameter"/>
                  <enumeration value="operation_failed_internal_problem"/>
                </restriction>
              </simpleType>
            </element>
          </sequence>
        </complexType>
      </element>
      <!-- getAvailableDeltaSynchPoints Fault -->
      <element name="getAvailableDeltaSynchPointsFault">
        <simpleType>
          <restriction base="string">
            <enumeration value="OperationFailed"/>
          </restriction>
        </simpleType>
      </element>
      <!-- triggerDeltaSynchOfCMData Request -->
      <element name="triggerDeltaSynchOfCMDataRequest">
        <complexType>
          <sequence>
            <element name="managerReference" type="string" minOccurs="0"/>
            <element name="cmDataRequested">
              <simpleType>
                <restriction base="string">
                  <enumeration value="DNsOnly"/>
                  <enumeration value="CompleteDataSet"/>
                </restriction>
              </simpleType>
            </element>
            <element name="baseMOInstance" type="xn:dn" minOccurs="0"/>
            <element name="scope" type="nk:ScopeType" minOccurs="0"/>
            <element name="synchPoint" type="dateTime"/>
          </sequence>
        </complexType>
      </element>
      <!-- triggerDeltaSynchOfCMData Response -->
      <element name="triggerDeltaSynchOfCMDataResponse">
        <complexType>
          <sequence>
            <element name="deltaLists" minOccurs="0">
              <complexType>
                <sequence>
                  <element name="startTime" type="dateTime"/>
                  <element name="endTime" type="dateTime"/>
                  <element name="listOfCreatedInstances" type="deltaSynchIRPData:listOfInstances"/>
                  <element name="listOfChangedInstances" type="deltaSynchIRPData:listOfInstances"/>
                  <element name="listOfDeletedInstances" type="deltaSynchIRPData:listOfInstances"/>
                </sequence>
              </complexType>
```

```
              </element>
              <element name="newSynchPoint" type="dateTime" minOccurs="0"/>
              <element name="status">
                <simpleType>
                  <restriction base="string">
                    <enumeration value="Success"/>
                    <enumeration value="Failure"/>
                  </restriction>
                </simpleType>
              </element>
              <element name="failureReason" minOccurs="0">
                <simpleType>
                  <restriction base="string">
                    <enumeration value="SynchrPointTooLongAgo"/>
                    <enumeration value="TooManyChangesFullSynchronizationRecommended"/>
                    <enumeration value="SynchPointUnknown"/>
                    <enumeration value="DeltaSynchNotSupportedForCMData"/>
                    <enumeration value="DeltaSynchForCMDataDeactivated"/>
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                    <enumeration value="operation_failed_invalid_input_parameter"/>
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value="operation_failed_unsupported_optional_input_parameter_managerReference"/>
                    <enumeration
value="operation_failed_unsupported_optional_input_parameter_baseMOInstance"/>
                    <enumeration value="operation_failed_unsupported_optional_input_parameter_scope"/>
                    <enumeration value="operation_failed_internal_problem"/>
                  </restriction>
                </simpleType>
              </element>
            </sequence>
          </complexType>
        </element>
        <!-- triggerDeltaSynchOfCMData Fault -->
        <element name="triggerDeltaSynchOfCMDataFault">
          <simpleType>
            <restriction base="string">
              <enumeration value="OperationFailed"/>
            </restriction>
          </simpleType>
        </element>
        <!-- triggerDeltaSynchOfAlarms Request -->
        <element name="triggerDeltaSynchOfAlarmsRequest">
          <complexType>
            <sequence>
              <element name="managerReference" type="string" minOccurs="0"/>
              <element name="alarmDataRequested">
                <simpleType>
                  <restriction base="string">
                    <enumeration value="AlarmIdsOnly"/>
                    <enumeration value="CompleteAlarmInformation"/>
                  </restriction>
                </simpleType>
              </element>
              <element name="baseMOInstance" type="xn:dn" minOccurs="0"/>
              <element name="scope" type="nk:ScopeType" minOccurs="0"/>
              <element name="synchPoint" type="dateTime"/>
            </sequence>
          </complexType>
        </element>
        <!-- triggerDeltaSynchOfAlarms Response -->
        <element name="triggerDeltaSynchOfAlarmsResponse">
          <complexType>
            <sequence>
              <element name="deltaLists" minOccurs="0">
                <complexType>
                  <sequence>
                    <element name="startTime" type="dateTime"/>
                    <element name="endTime" type="dateTime"/>
                    <element name="listOfNewAlarms" type="deltaSynchIRPData:listOfAlarms"/>
                    <element name="listOfChangedAlarms" type="deltaSynchIRPData:listOfAlarms"/>
                    <element name="listOfDeletedAlarms" type="deltaSynchIRPData:listOfAlarms"/>
                  </sequence>
                </complexType>
              </element>
              <element name="newSynchPoint" type="dateTime"/>
              <element name="status">
                <simpleType>
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```

```
                            <enumeration value="Success"/>
                            <enumeration value="Failure"/>
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                  </element>
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                            <enumeration value="SynchPointUnknown"/>
                            <enumeration value="DeltaSynchNotSupportedForAlarmData"/>
                            <enumeration value="DeltaSynchForAlarmsNotActive"/>
                            <enumeration value="operation_failed"/>
                            <enumeration value="operation_failed_invalid_input_parameter"/>
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value="operation_failed_unsupported_optional_input_parameter_managerReference"/>
                            <enumeration
value="operation_failed_unsupported_optional_input_parameter_baseMOInstance"/>
                            <enumeration value="operation_failed_unsupported_optional_input_parameter_scope"/>
                            <enumeration value="operation_failed_internal_problem"/>
                          </restriction>
                      </simpleType>
                  </element>
                </sequence>
              </complexType>
          </element>
          <!-- triggerDeltaSynchOfAlarms Fault -->
          <element name="triggerDeltaSynchOfAlarmsFault">
              <simpleType>
                <restriction base="string">
                    <enumeration value="OperationFailed"/>
                </restriction>
              </simpleType>
          </element>
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  </types>
  <message name="manageDeltaSynchronizationRequest">
    <part name="parameter" element="deltaSynchIRPData:manageDeltaSynchronizationRequest"/>
  </message>
  <message name="manageDeltaSynchronizationResponse">
    <part name="parameter" element="deltaSynchIRPData:manageDeltaSynchronizationResponse"/>
  </message>
  <message name="manageDeltaSynchronizationFault">
    <part name="parameter" element="deltaSynchIRPData:manageDeltaSynchronizationFault"/>
  </message>
  <message name="getAvailableDeltaSynchPointsRequest">
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  </message>
  <message name="getAvailableDeltaSynchPointsResponse">
    <part name="parameter" element="deltaSynchIRPData:getAvailableDeltaSynchPointsResponse"/>
  </message>
  <message name="getAvailableDeltaSynchPointsFault">
    <part name="parameter" element="deltaSynchIRPData:getAvailableDeltaSynchPointsFault"/>
  </message>
  <message name="triggerDeltaSynchOfCMDataRequest">
    <part name="parameter" element="deltaSynchIRPData:triggerDeltaSynchOfCMDataRequest"/>
  </message>
  <message name="triggerDeltaSynchOfCMDataResponse">
    <part name="parameter" element="deltaSynchIRPData:triggerDeltaSynchOfCMDataResponse"/>
  </message>
  <message name="triggerDeltaSynchOfCMDataFault">
    <part name="parameter" element="deltaSynchIRPData:triggerDeltaSynchOfCMDataFault"/>
  </message>
  <message name="triggerDeltaSynchOfAlarmsRequest">
    <part name="parameter" element="deltaSynchIRPData:triggerDeltaSynchOfAlarmsRequest"/>
  </message>
  <message name="triggerDeltaSynchOfAlarmsResponse">
    <part name="parameter" element="deltaSynchIRPData:triggerDeltaSynchOfAlarmsResponse"/>
  </message>
  <message name="triggerDeltaSynchOfAlarmsFault">
    <part name="parameter" element="deltaSynchIRPData:triggerDeltaSynchOfAlarmsFault"/>
  </message>
  <portType name="DeltaSynchGenericParts">
    <operation name="manageDeltaSynchronization">
      <input message="deltaSynchIRPSystem:manageDeltaSynchronizationRequest"/>
      <output message="deltaSynchIRPSystem:manageDeltaSynchronizationResponse"/>
```

```
            <fault name="manageDeltaSynchronizationFault"
message="deltaSynchIRPSystem:manageDeltaSynchronizationFault"/>
        </operation>
        <operation name="getAvailableDeltaSynchPoints">
            <input message="deltaSynchIRPSystem:getAvailableDeltaSynchPointsRequest"/>
            <output message="deltaSynchIRPSystem:getAvailableDeltaSynchPointsResponse"/>
            <fault name="getAvailableDeltaSynchPointsFault"
message="deltaSynchIRPSystem:getAvailableDeltaSynchPointsFault"/>
        </operation>
    </portType>
    <portType name="DeltaSynchOfCMData">
        <operation name="triggerDeltaSynchOfCMData">
            <input message="deltaSynchIRPSystem:triggerDeltaSynchOfCMDataRequest"/>
            <output message="deltaSynchIRPSystem:triggerDeltaSynchOfCMDataResponse"/>
            <fault name="triggerDeltaSynchOfCMDataFault"
message="deltaSynchIRPSystem:triggerDeltaSynchOfCMDataFault"/>
        </operation>
    </portType>
    <portType name="DeltaSynchOfAlarmData">
        <operation name="triggerDeltaSynchOfAlarms">
            <input message="deltaSynchIRPSystem:triggerDeltaSynchOfAlarmsRequest"/>
            <output message="deltaSynchIRPSystem:triggerDeltaSynchOfAlarmsResponse"/>
            <fault name="triggerDeltaSynchOfAlarmsFault"
message="deltaSynchIRPSystem:triggerDeltaSynchOfAlarmsFault"/>
        </operation>
    </portType>
    <binding name="DeltaSynchGenericParts" type="deltaSynchIRPSystem:DeltaSynchGenericParts">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <operation name="manageDeltaSynchronization">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#manageDeltaSynchronization"
style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="manageDeltaSynchronizationFault">
                <soap:fault name="manageDeltaSynchronizationFault" use="literal"/>
            </fault>
        </operation>
        <operation name="getAvailableDeltaSynchPoints">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#getAvailableDeltaSynchPoints"
style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="getAvailableDeltaSynchPointsFault">
                <soap:fault name="getAvailableDeltaSynchPointsFault" use="literal"/>
            </fault>
        </operation>
    </binding>
    <binding name="DeltaSynchOfCMData" type="deltaSynchIRPSystem:DeltaSynchOfCMData">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <operation name="triggerDeltaSynchOfCMData">
            <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#triggerDeltaSynchOfCMData"
style="document"/>
            <input>
                <soap:body use="literal"/>
            </input>
            <output>
                <soap:body use="literal"/>
            </output>
            <fault name="triggerDeltaSynchOfCMDataFault">
                <soap:fault name="triggerDeltaSynchOfCMDataFault" use="literal"/>
            </fault>
        </operation>
    </binding>
    <binding name="DeltaSynchOfAlarmData" type="deltaSynchIRPSystem:DeltaSynchOfAlarmData">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <operation name="triggerDeltaSynchOfAlarms">
```

```
      <soap:operation
soapAction="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#triggerDeltaSynchOfAlarms"
style="document"/>
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="triggerDeltaSynchOfAlarmsFault">
        <soap:fault name="triggerDeltaSynchOfAlarmsFault" use="literal"/>
      </fault>
    </operation>
  </binding>
  <service name="DeltaSynchIRPService">
    <port name="DeltaSynchGenericPartsPort" binding="deltaSynchIRPSystem:DeltaSynchGenericParts">
      <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchGenericParts"/>
    </port>
    <port name="DeltaSynchOfCMDataPort" binding="deltaSynchIRPSystem:DeltaSynchOfCMData">
      <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchOfCMData"/>
    </port>
    <port name="DeltaSynchOfAlarmDataPort" binding="deltaSynchIRPSystem:DeltaSynchOfAlarmData">
      <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.397#DeltaSynchOfAlarmData"/>
    </port>
    <port name="GenericIRPPort" binding="genericIRPSystem:GenericIRPBinding">
      <soap:address location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.317#GenericIRP"/>
    </port>
    <port name="NotificationIRPNtfPort" binding="ntfIRPNtfSystem:NotificationIRPNtf">
      <soap:address
location="http://www.3gpp.org/ftp/Specs/archive/32_series/32.307#NotificationIRPNtf"/>
    </port>
  </service>
</definitions>
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Annex B (informative):
Change history

Change history								
Date	TSG #	TSG Doc.	CR	R	Subject/Comment	Cat	Old	New
2009-12	SA#46	SP-090730	--	--	Presentation to SA for Information	--	--	1.0.0
2010-03	SA#47	SP-100049	--	--	Presentation to SA for Approval	--	1.0.0	2.0.0
2010-03	--	--	--	--	Publication of SA approved version	--	2.0.0	9.0.0

History

Document history		
V9.0.0	April 2010	Publication