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Technical Specification

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
Telecommunication management;
Notification Log (NL) Integration Reference Point (IRP):
eXtensible Markup Language (XML) solution definitions
(3GPP TS 32.335 version 7.1.0 Release 7)



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#### **Foreword**

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  - 1 presented to TSG for information;
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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 3<sup>rd</sup> Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; as identified below:

32.335	"Notification Log (NL) Integration Reference Point (IRP): eXtensible Markup Language (XML) solution definitions".
32.333	"Notification Log (NL) Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".
32.332	"Notification Log (NL) (NL) Integration Reference Point (IRP): Information Service (IS)".
32.331	"Notification Log (NL) Integration Reference Point (IRP): Requirements".

The present document is part of a TS-family, which describes the requirements and information model necessary for Telecommunications Management (TM). The TM principles and TM architecture are specified in 3GPP TS 32.101 [1] and 3GPP TS 32.102 [2].

A communications system is composed of a multitude of Network Elements (NE) of various types and, typically, different vendors, which inter-operate in a coordinated manner in order to satisfy the network users' communication requirements.

The occurrence of faults in an NE may cause deterioration or loss of this NE's function. Fault Management is the functional area, which allows the operator to detect the occurrence of faults in the network in real-time. Configuration Management and Performance Management are two more functional areas, which require the operator to be alerted to certain conditions in the network.

A standard general-purpose mechanism for the management of logs containing selected notifications from the network is required to provide an ability to perform historical analysis on faults and conditions, which occurred in the network. The documents series 32.33x, constituting the Notification Log IRP, sets forth such a mechanism - and the present document contains the relevant XML definition.

#### 1 Scope

The present document specifies the XML Definitions for the Notification Log IRP as it applies to Itf-N, in accordance with the requirements in 3GPP TS 32.331 [3] and Information Service definitions in 3GPP TS 32.332 [4].

This XML Definitions specification defines the XML syntax of the NL IRP XML Data File.

#### 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 32.331: "Telecommunication management; Notification Log (NL) Integration Reference Point (IRP): Requirements".
- [4] 3GPP TS 32.332: "Telecommunication management; Notification Log (NL) Integration Reference Point (IRP): Information Service (IS)".
- [5] 3GPP TS 32.342: "Telecommunication management; File Transfer (FT) Integration Reference Point (IRP); Information Service (IS)".
- [6] 3GPP TS 32.305: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): eXtensible Markup Language (XML) definitions".
- [7] 3GPP TS 32.111-5: "Telecommunication management; Fault Management; Part 5: Alarm Integration Reference Point (IRP): eXtensible Markup Language (XML) definitions".

#### 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 [3] 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
UML Unified Modelling Language

IRP Integration Reference Point
NRM Network Resource Model
XML eXtensible Markup Language

#### 4 Structure and content of NL IRP XML

The present clause defines the XML exchanged between an IRPManager and an IRPAgent as part of NL IRP IS (see 3GPP TS 32.332 [4]):

- the NL IRP XML Data File,
- NL IRP notifications.

The use of XML schemas ensures NL XML have the proper structure and to some extent the proper content, and in particular to ensure:

- for a given Notification instance, it is properly named/positioned with regard to the global naming tree;
- for a given Notification instance, only attributes of the corresponding Notification are present;
- for a given Notification attribute, its value is of the proper type.

XML definitions for other application specific notifications (e.g. Alarm IRP notifications, Notification IRP Notification Header) are defined within the respective IRP series within specification 32.xy5.

#### 4.1 Global structure

Editor's Note: To be added in future version of this specification.

#### 4.2 XML elements fileHeader and fileFooter

Editor's Note: To be added in future version of this specification.

#### 4.3 NL IRP XML File Name Conventions

For NL IRP XML File Name Conventions the generic file name definitions as specified by the FT IRP apply (see [5]).

#### 4.4 NL Interface IRP-specific XML schemas

Interface IRP-specific XML schemas with definition of corresponding XML namespace prefixes are listed by the following table:

Table 4.4: Interface IRP-specific XML schemas, corresponding 3GPP TSs and XML namespace prefixes

IRP	XML schema	3GPP TS no.	XML namespace prefix
Alarm IRP	alarmIRPnotif.xsd	32.111-5 [7]	ха
Notification IRP	notification.xsd	32.305 [6]	xe
Notification Log IRP	notificationLog.xsd	32.335	xl

Each Interface IRP-specific XML schema explicitly declares Interface IRP-specific XML element types for the related Interface IRP.

Additionally, XML schema notification.xsd (see [06]) also provides global XML declarations and definitions for the support of:

- Notification header XML element type declaration

#### 4.5 NL IRP XML File Content Definitions

#### 4.5.1 NL IRP XML Data File

The structure of the Notification Log IRP XML Data File is shown in graphical depiction below:

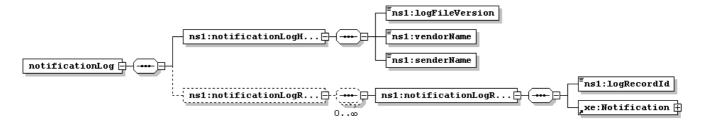


Figure 4.5.1: Structure of the Notification Log IRP XML Data File

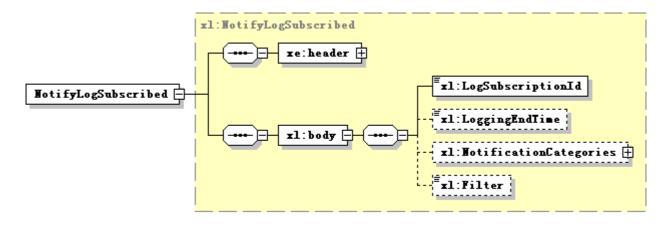
The notificationLogRecords element holds the instances of the notification records that are imported from the Notification Format XML schema. Note that Notification Header XML definitions are provided in [6].

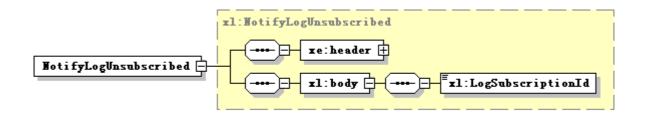
The Notification Log IRP XML Data File is a simple instance based construct. The XML schema for the Notification Log IRP XML Data File is defined in Annex A.

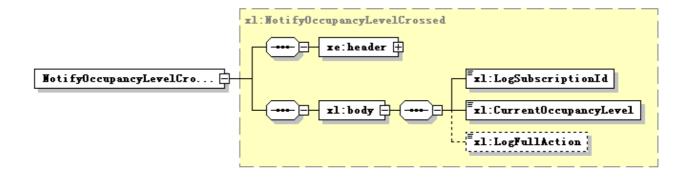
#### 4.6 NL IRP Notification XML Definitions

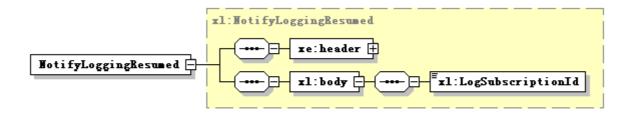
This clause provides XML definitions of Notification Log IRP notifications as defined in 3GPP TS 32.332 [4].

The structure of the NotificationLogIRP Notification XML Definitions is shown in graphical depiction below:









The use of XML schema key word "sequence" to support IS-defined set (not sequence) is for the purpose of XML processor efficiency. This shall not imply the use of "sequence" in other technology.

# Annex A (normative): Configuration data file base XML schema (file name "notificationLog.xsd")

```
<?xml version="1.0" encoding="UTF-8"?>
    3GPP TS 32.335 Notification Log IRP
    3GPP Notification Log IRP XML Solution Definition, Schema Definition
   notificationLog.xsd
targetNamespace="http://www.3gpp.org/ftp/specs/archive/32 series/32.335#notificationLog"
elementFormDefault="qualified"
attributeFormDefault="unqualified"
xmlns="http://www.w3.org/2001/XMLSchema"
xmlns:xe="http://www.3gpp.org/ftp/specs/archive/32 series/32.305#notification"
xmlns:xa="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
  <import namespace="http://www.3gpp.org/ftp/specs/archive/32 series/32.305#notification"/>
 <element name="notificationLog">
        <complexType>
            <sequence>
                <element name="notificationLogHeader" minOccurs="1" maxOccurs="1">
                    <complexType>
                        <sequence>
                            <element name="logFileVersion" type="string" minOccurs="1"</pre>
maxOccurs="1"/>
                            <element name="vendorName" type="string" minOccurs="1" maxOccurs="1"/>
                            <element name="senderName" type="string" minOccurs="1" maxOccurs="1"/>
                        </sequence>
                    </complexType>
                </element>
                <element name="notificationLogRecords" minOccurs="0">
                    <complexType>
                        <sequence minOccurs="0" maxOccurs="unbounded">
                            <element name="notificationLogRecord">
                                <complexType>
                                    <sequence>
                                         <element name="logRecordId" type="string"/>
                                         <element ref="xe:Notification"/>
                                    </sequence>
                                </complexType>
                            </element>
                        </sequence>
                    </complexType>
                </element>
            </sequence>
        </complexType>
    </element>
</schema>
```

# Annex B (normative): NotificationLogIRP Notification XML schema (file name "ntfLogNotif.xsd")

```
<?xml version="1.0" encoding="UTF-8"?>
    3GPP TS 32.335 NotificationLogIRP Notification XML Schema
   ntfLogIRPNotif.xsd
<schema xmlns:xl="http://www.3gpp.org/ftp/specs/archive/32_series/32.335#ntfLogIRPNotif"</pre>
xmlns:xe="http://www.3gpp.org/ftp/specs/archive/32 series/32.305#notification"
xmlns="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.335#ntfLogIRPNotif"
elementFormDefault="qualified" attributeFormDefault="unqualified">
    <import namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.305#notification"/>
    <simpleType name="LogSubscriptionId">
        <restriction base="string">
            <minLength value="1"/>
        </restriction>
    </simpleType>
    <simpleType name="CurrentOccupancyLevel">
        <restriction base="short">
            <maxInclusive value="100"/>
            <minInclusive value="0"/>
        </restriction>
    </simpleType>
    <simpleType name="LogFullAction">
        <restriction base="string">
            <enumeration value="Wrap"/>
            <enumeration value="Halt"/>
        </restriction>
    </simpleType>
    <complexType name="NotificationCategories">
        <sequence>
            <element name="IRPVersion" type="string" maxOccurs="unbounded"/>
    </complexType>
    <complexType name="NotifyLogSubscribed">
        <complexContent>
            <extension base="xe:Notification">
                <sequence>
                    <element name="body">
                        <complexType>
                             <sequence>
                                 <element name="LogSubscriptionId" type="x1:LogSubscriptionId"/>
                                <element name="LoggingEndTime" type="dateTime" minOccurs="0"/>
                                <element name="NotificationCategories"</pre>
type="xl:NotificationCategories" minOccurs="0"/>
                                <element name="Filter" type="string" minOccurs="0"/>
                            </sequence>
                        </complexType>
                    </element>
                </sequence>
            </extension>
        </complexContent>
    </complexType>
    <complexType name="NotifyLogUnsubscribed">
        <complexContent>
            <extension base="xe:Notification">
                <sequence>
                    <element name="body">
                        <complexType>
                                <element name="LogSubscriptionId" type="xl:LogSubscriptionId"/>
                            </sequence>
                        </complexType>
                    </element>
                </sequence>
            </extension>
        </complexContent>
    </complexType>
    <complexType name="NotifyOccupancyLevelCrossed">
```

```
<complexContent>
             <extension base="xe:Notification">
                 <sequence>
                      <element name="body">
                          <complexType>
                              <sequence>
                                   <element name="LogSubscriptionId" type="xl:LogSubscriptionId"/>
                                   <element name="CurrentOccupancyLevel"</pre>
type="xl:CurrentOccupancyLevel"/>
                                   <element name="LogFullAction" type="xl:LogFullAction"</pre>
minOccurs="0"/>
                              </sequence>
                          </complexType>
                      </element>
                 </sequence>
             </extension>
         </complexContent>
    </complexType>
    <complexType name="NotifyLoggingResumed">
         <complexContent>
             <extension base="xe:Notification">
                 <sequence>
                      <element name="body">
                          <complexType>
                              <sequence>
                                   <element name="LogSubscriptionId" type="xl:LogSubscriptionId"/>
                              </sequence>
                          </complexType>
                      </element>
                 </sequence>
             </extension>
         </complexContent>
    </complexType>
    <element name="NotifyLogSubscribed" type="xl:NotifyLogSubscribed"/>
    <element name="NotifyLogUnsubscribed" type="x1:NotifyLogUnsubscribed"/>
<element name="NotifyOccupancyLevelCrossed" type="x1:NotifyOccupancyLevelCrossed"/>
    <element name="NotifyLogqingResumed" type="xl:NotifyLogqingResumed"/>
</schema>
```

# Annex C (informative): NL IRP XML Example Notification

This annex provides an XML example notification, demonstrating the use of and the embedding into the NL IRP XML Notification Format. This example makes use of the Alarm IRP XML Schema for Notification.

```
<?xml version="1.0" encoding="UTF-8"?>
<notificationLog xmlns="http://www.3gpp.org/ftp/specs/archive/32 series/32.335#notificationLog"</pre>
xmlns:xe="http://www.3gpp.org/ftp/specs/archive/32 series/32.305#notification"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.3gpp.org/ftp/specs/archive/32_series/32.335#notificationLog
NotificationLog.xsd" >
    <notificationLogHeader>
        <logFileVersion>32.335 V7.1</logFileVersion>
        <vendorName>Text</vendorName>
        <senderName>Text</senderName>
    </notificationLogHeader>
    <notificationLogRecords>
        <notificationLogRecord>
            <le><logRecordId>1001</logRecordId>
            <xe:Notification xsi:type="NotifyNewSecurityAlarm"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
xsi:schemaLocation="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif
alarmIRPNotif.xsd">
                <xe:header>
                    <xe:objectInstance>String</xe:objectInstance>
                    <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                </xe:header>
                    oprobableCause>Indeterminate/probableCause>
                    <perceivedSeverity>Critical</perceivedSeverity>
                    <alarmType>Communications Alarm
                    <correlatedNotifications>
                        <correlatedNotification>
                            <source>String</source>
                            <notificationIdSet>
                                <notificationId>2147483647</notificationId>
                            </notificationIdSet>
                        </correlatedNotification>
                    </correlatedNotifications>
                    <additionalText>String</additionalText>
                    <additionalInformation>String</additionalInformation>
                </body>
            </xe:Notification>
        </notificationLogRecord>
        <notificationLogRecord>
            <logRecordId>String</logRecordId>
            <xe:Notification xsi:type="NotifyNewAlarm"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
                <xe:header>
                    <xe:objectInstance>String</xe:objectInstance>
                    <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                <body>
                    oprobableCause>Indeterminate/probableCause>
                    <perceivedSeverity>Critical</perceivedSeverity>
                    <alarmType>Communications Alarm
                    <alarmId>String</alarmId>
                    <specificProblem>String</specificProblem>
                    <correlatedNotifications>
                        <correlatedNotification>
                            <source>String</source>
                            <notificationIdSet>
                                <notificationId>2147483647</notificationId>
                            </notificationIdSet>
                        </correlatedNotification>
                    </correlatedNotifications>
```

<backedUpStatus>true</backedUpStatus>

```
<backupObject>String</backupObject>
                    <trendIndication>Less Severe</trendIndication>
                    <thresholdInfo>
                        <attributeId>String</attributeId>
                        <observedValue>3.14159E0</observedValue>
                        <thresholdLevel>
                            <indication>Up</indication>
                            <low>3.14159E0</low>
                            <high>3.14159E0</high>
                        </thresholdLevel>
                        <armTime>2001-12-17T09:30:47.0Z</armTime>
                    </thresholdInfo>
                    <stateChangeDefinition>
                        <stateValueChange>
                            <attributeName>Administrative State</attributeName>
                            <oldValue>
                                 <administrativeState>locked</administrativeState>
                            </oldValue>
                            <newValue>
                                <administrativeState>unlocked</administrativeState>
                            </newValue>
                        </stateValueChange>
                        <stateValueChange>
                            <attributeName>Usage State</attributeName>
                            <oldValue>
                                 <usageState>idle</usageState>
                            </oldValue>
                            <newValue>
                                <usageState>busy</usageState>
                            </newValue>
                                                             </stateValueChange>
                    </stateChangeDefinition>
                    <monitoredAttributes>
                        <attribueValue>
                            <attributeName>String</attributeName>
                            <attributeValue>Text</attributeValue>
                        </attribueValue>
                    </monitoredAttributes>
                    cproposedRepairActions>String/proposedRepairActions>
                    <additionalText>String</additionalText>
                    <additionalInformation>String</additionalInformation>
                </body>
            </xe:Notification>
        </notificationLogRecord>
        <notificationLogRecord>
            <logRecordId/>
            <xe:Notification xsi:type="NotifyAckStateChanged"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32 series/32.111-5#alarmIRPNotif"
                <xe:header>
                    <xe:objectInstance>String</xe:objectInstance>
                    <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                </xe:header>
                <body>
                    cprobableCause>Indeterminate/probableCause>
                    <perceivedSeverity>Critical</perceivedSeverity>
                    <alarmType>Communications Alarm
                    <alarmId>String</alarmId>
                    <ackState>Acknowledged</ackState>
                    <ackUserId>String</ackUserId>
                    <ackSystemId>String</ackSystemId>
                </body>
            </xe:Notification>
        </notificationLogRecord>
        <notificationLogRecord>
            <logRecordId/>
            <xe:Notification xsi:type="NotifyAlarmListRebuilt"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
                    <xe:objectInstance>String</xe:objectInstance>
                    <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                </re>
                <body>
```

```
</reason>
                   <alarmListAlignmentRequirement>Alignment
Required</alarmListAlignmentRequirement>
               </body>
           </xe:Notification>
        </notificationLogRecord>
        <notificationLogRecord>
           <logRecordId/>
            <xe:Notification xsi:type="NotifyChangedAlarm"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
               <xe:header>
                    <xe:objectInstance>String</xe:objectInstance>
                    <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                </re>
                <body>
                   oprobableCause>Indeterminate/probableCause>
                    <perceivedSeverity>Critical</perceivedSeverity>
                    <alarmType>Communications Alarm
                    <alarmId>String</alarmId>
               </hody>
           </xe:Notification>
        </notificationLogRecord>
        <notificationLogRecord>
           <loqRecordId/>
            <xe:Notification xsi:type="NotifyClearedAlarm"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
               <xe:header>
                   <xe:objectInstance>String</xe:objectInstance>
                   <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                </xe:header>
                <body>
                    oprobableCause>Indeterminate/probableCause>
                    <perceivedSeverity>Critical</perceivedSeverity>
                   <alarmType>Communications Alarm
                   <alarmId>String</alarmId>
                    <correlatedNotifications>
                       <correlatedNotification>
                           <source>String</source>
                           <notificationIdSet>
                               <notificationId>2147483647</notificationId>
                               <notificationId>2147483647</notificationId>
                           </notificationIdSet>
                       </correlatedNotification>
                       <correlatedNotification>
                           <source>String</source>
                           <notificationIdSet>
                               <notificationId>2147483647</notificationId>
                               <notificationId>2147483647</notificationId>
                           </notificationIdSet>
                       </correlatedNotification>
                    </correlatedNotifications>
                   <clearUserId>String</clearUserId>
                    <clearSystemId>String</clearSystemId>
                </body>
           </xe:Notification>
        </notificationLogRecord>
        <notificationLogRecord>
            <logRecordId/>
            <xe:Notification xsi:type="NotifyComments"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
               <xe:header>
                    <xe:objectInstance>String</xe:objectInstance>
                    <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                </xe:header>
                   <alarmType>Communications Alarm
                    oprobableCause>Indeterminate/probableCause>
```

```
<perceivedSeverity>Critical</perceivedSeverity>
                        <comment>
                            <commentDate>2001-12-17T09:30:47.0Z</commentDate>
                            <commentText>String</commentText>
                            <userId>String</userId>
                            <systemId>String</systemId>
                        </comment>
                    </comments>
                    <alarmId>String</alarmId>
                </body>
            </xe:Notification>
        </notificationLogRecord>
        <notificationLogRecord>
            <logRecordId/>
            <xe:Notification xsi:type="NotifyPotentialFaultyAlarmList"</pre>
xmlns="http://www.3gpp.org/ftp/specs/archive/32_series/32.111-5#alarmIRPNotif"
                <xe:header>
                    <xe:objectInstance>String</xe:objectInstance>
                    <xe:notificationId>2147483647</xe:notificationId>
                    <xe:eventTime>2001-12-17T09:30:47.0Z</xe:eventTime>
                    <xe:systemDN>String</xe:systemDN>
                    <xe:notificationType>String</xe:notificationType>
                </xe:header>
                <body>
                    <reason>
                        cpredefined>Agent NE Communications Error</predefined>
                    </reason>
                </body>
            </xe:Notification>
        </notificationLogRecord>
  </notificationLogRecords>
</notificationLog>
```

# Annex D (informative): NL IRP XML schema electronic files

The electronic files corresponding to the normative XML schemas defined in the present document are available in native form in the following archive:

http://www.3gpp.org/ftp/specs/archive/32\_series/32.335/schema/32335-710-XMLSchema.zip

## Annex E (informative): Change history

	Change history							
Date	TSG#	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
Sep 2004	SA_25	SP-040564			Submitted to TSG SA#25 for Information		1.0.0	
Jun 2005	SA_28	SP-050291		-	Submitted to TSG SA#28 for Approval		2.0.0	6.0.0
Mar 2006	SA_31	SP-060091	0001		Correct a validating error in notificationLog.xsd	F	6.0.0	6.1.0
Dec 2006	SA_34	SP-060709	0002	-	Correct XML schema	F	6.1.0	6.2.0
Mar 2007	SA_35	SP-070046	0003		Add Notification XML definition in NotificationLogIRP	В	6.2.0	7.0.0
Jun 2007	SA_40	SP-080328	0004	-	Correction of the Notification Log XML example	F	7.0.0	7.1.0

### History

Document history			
V7.0.0	March 2007	Publication	
V7.1.0 July 2008		Publication	