# ETSI TS 132 345 V9.0.0 (2010-01)

*Technical Specification*

# Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Telecommunication management; File Transfer (FT) Integration Reference Point (IRP); eXtensible Markup Language (XML) definitions (3GPP TS 32.345 version 9.0.0 Release 9)

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# Foreword

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

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# 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:

32.341:        "File Transfer (FT) Integration Reference Point (IRP): Requirements".

32.342:        "File Transfer (FT) Integration Reference Point (IRP): Information Service (IS)".

32.343:        "File Transfer (FT) Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)".

**32.345:        "File Transfer (FT) Integration Reference Point (IRP): eXtensible Markup Language (XML) definitions".**

32.347:        "File Transfer (FT) Integration Reference Point (IRP): SOAP Solution Set (SS)".

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

Network Elements (NEs) under management, element managers as well as network managers generate various management information stored in file format. This IRP is addressing how these files are exchanged through Itf-N as well as certain aspects of file management and maintenance. It is anticipated that all management functions (e.g. PM, Call Trace, CM) as well as associated IRPs making reuse of capabilities provided by this File Transfer IRP.

# 1      Scope

The present document specifies the XML Definitions for the File Transfer IRP (FTIRP) as it applies to Itf-N, in accordance with FT IRP IS definitions [3], for usage with the SOAP Solution Set [6] as well as Notification Log IRP XML Definitions [4].

This specification is related to 3GPP TS 32.342 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 32.342: "File Transfer (FT) Integration Reference Point (IRP): Information Service (IS)".

[4]          3GPP TS 32.335: "Telecommunication management; Notification Log (NL) Integration Reference Point (IRP): eXtensible Markup Language (XML) solution definitions".

[5]          3GPP TS 32.331: "Telecommunication management; Notification Log (NL) Integration Reference Point (IRP): Requirements".

[6]          3GPP TS 32.347: "File Transfer (FT) Integration Reference Point (IRP): SOAP Solution Set (SS)".

# 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:

| | |
|---|---|
| FT | File Transfer |
| FTIRP | File Transfer IRP |
| IRP | Integration Reference Point |
| IS | Information Service |
| NL | Notification Log |
| NRM | Network Resource Model |
| UML | Unified Modelling Language |
| XML | eXtensible Markup Language |

# 4 FT IRP XML Definitions

## 4.1 FT IRP notifications XML definition structure

This section provides XML definitions of FT IRP notifications as defined in 3GPP TS 32.342 [3].


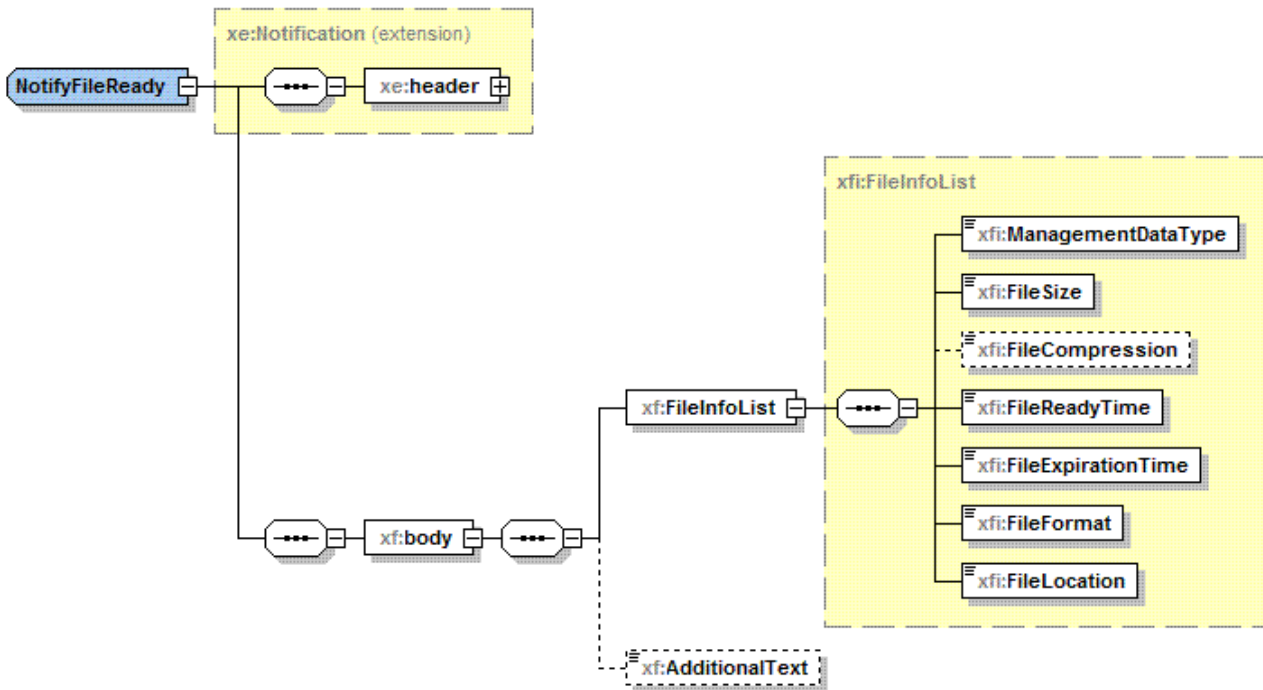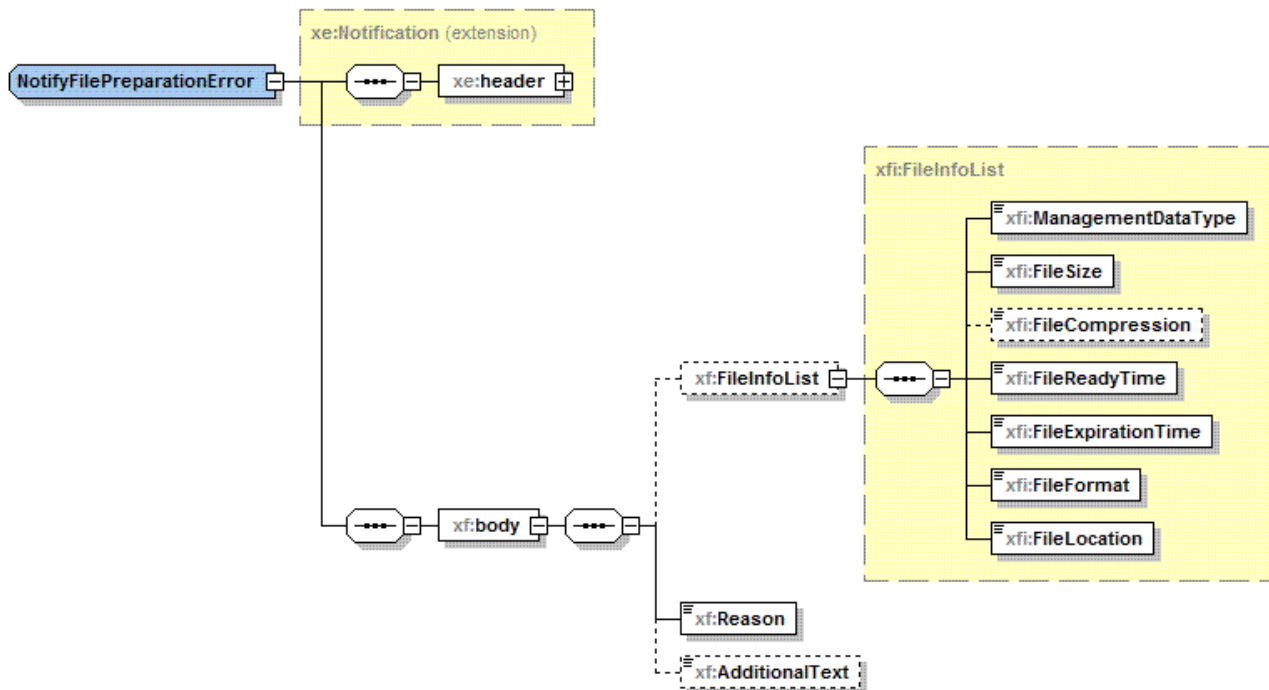
**Figure 1**



**Figure 2**

NOTE: 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.

## 4.2 FT IRP XML Schema for notifications

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!--
    3GPP TS 32.345 FTIRP Notification XML Schema
    fTIRPNotif.xsd
-->
<schema xmlns:xf="http://www.3gpp.org/ftp/specs/archive/32_series/32.345#fTIRPNotif"
xmlns:xfi="http://www.3gpp.org/ftp/specs/archive/32_series/32.345#fTIRPIOCs"
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/32.345#fTIRPNotif"
elementFormDefault="qualified" attributeFormDefault="unqualified">
    <import namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.345#fTIRPIOCs"/>
    <import namespace="http://www.3gpp.org/ftp/specs/archive/32_series/32.305#notification"/>
    <simpleType name="Reason">
        <restriction base="string">
            <enumeration value="errorInPreparation"/>
            <enumeration value="hardDiskFull"/>
            <enumeration value="hardDiskFailure"/>
            <enumeration value="tooManyFiles"/>
            <enumeration value="collectionTimeOut"/>
            <enumeration value="incompleteTruncatedFile"/>
            <enumeration value="corruptedFile"/>
            <enumeration value="lowMemory"/>
            <enumeration value="dataNotAvailable"/>
        </restriction>
    </simpleType>
    <complexType name="NotifyFileReady">
     <complexContent>
        <extension base="xe:Notification">
            <sequence>
                <element name="body">
                    <complexType>
                        <sequence>
                        <element name="FileInfoList" type="xfi:FileInfoList" maxOccurs="unbounded"/>
                        <element name="AdditionalText" type="string" minOccurs="0"/>
                        </sequence>
                    </complexType>
                </element>
            </sequence>
        </extension>
     </complexContent>
    </complexType>
    <complexType name="NotifyFilePreparationError">
        <complexContent>
            <extension base="xe:Notification">
                <sequence>
                    <element name="body">
                        <complexType>
                            <sequence>
                                <element name="FileInfoList" type="xfi:FileInfoList" minOccurs="0"/>
                                <element name="Reason" type="xf:Reason"/>
                                <element name="AdditionalText" type="string" minOccurs="0"/>
                            </sequence>
                        </complexType>
                    </element>
                </sequence>
            </extension>
        </complexContent>
    </complexType>
    <element name="NotifyFileReady" type="xf:NotifyFileReady"/>
    <element name="NotifyFilePreparationError" type="xf:NotifyFilePreparationError"/>
</schema>
```

## 4.3 FT IRP XML Schema for IOCs

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!--
    3GPP TS 32.345 FTIRP Notification XML Schema
    fTIRPIOCs.xsd
-->
<schema xmlns:xfi="http://www.3gpp.org/ftp/specs/archive/32_series/32.345#fTIRPIOCs"
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/32.345#fTIRPIOCs"
elementFormDefault="qualified" attributeFormDefault="unqualified">
    <simpleType name="FileFormat">
        <restriction base="string">
            <enumeration value="ASN1"/>
            <enumeration value="XML-schema"/>
        </restriction>
    </simpleType>
    <simpleType name="ManagementDataType">
        <restriction base="string">
            <enumeration value="CG"/>
            <enumeration value="CM"/>
            <enumeration value="CT"/>
            <enumeration value="IM"/>
            <enumeration value="NL"/>
            <enumeration value="OT"/>
            <enumeration value="PM"/>
            <enumeration value="TE"/>
        </restriction>
    </simpleType>
    <complexType name="FileInfoList">
        <sequence>
            <element name="ManagementDataType" type="xfi:ManagementDataType"/>
            <element name="FileSize" type="unsignedLong"/>
            <element name="FileCompression" type="string" minOccurs="0"/>
            <element name="FileReadyTime" type="dateTime"/>
            <element name="FileExpirationTime" type="dateTime"/>
            <element name="FileFormat" type="xfi:FileFormat"/>
            <element name="FileLocation" type="string"/>
        </sequence>
    </complexType>
    <!-- Attributes of the AvailableFileDescriptor IOC -->
    <element name="managementDataType" type="xfi:ManagementDataType"/>
    <element name="fileSize" type="unsignedLong"/>
    <element name="fileCompression" type="string"/>
    <element name="fileReadyTime" type="dateTime"/>
    <element name="fileExpirationTime" type="dateTime"/>
    <element name="fileFormat" type="xfi:FileFormat"/>
    <element name="fileLocation" type="string"/>
</schema>
```

# Annex A (informative):
# Void

# Annex B (informative): Change history

<table>
<tr><th colspan="9">Change history</th></tr>
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<tr><td>Dec 2008</td><td>SA_42</td><td>SP-080845</td><td>0001</td><td>-</td><td>Change the schema definition for the NotifyFileReady Notification - Alignment with IS</td><td>F</td><td>7.0.0</td><td>7.1.0</td></tr>
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# History

| Document history | | |
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| V9.0.0 | January 2010 | Publication |
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