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**Source:** SA5 (Telecom Management)  
**Title:** R99 CR32.104, Rel-4 CR32.401 (S5-010745, S5-010746)  
**Document for:** Decision  
**Agenda Item:** 7.5.3

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Doc-1st-	Spec	CR	R	Phas	Subject	C	Versi	Versi	Doc-2nd-	Workite
SP-000638	32.104	010		R99	Correction of declaration in XML header	F	3.4.0	3.5.0	S5-000745	OAM-PM
SP-010638	32.401	001		Rel-4	Correction of declaration in XML header	A	4.0.0	4.1.0	S5-010746	OAM-PM

## CHANGE REQUEST

⌘ **32.104 CR 010** ⌘ ev **-** ⌘ Current version: **3.4.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of declaration in XML header		
<b>Source:</b>	⌘ SA5		
<b>Work item code:</b>	⌘ OAM-PM	<b>Date:</b>	⌘ 30/11/2001
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The XML measurement result file <b>header</b> is incorrectly specified in annex A.3 and in the example described in annex D.3.
<b>Summary of change:</b>	⌘ Replace the incorrect part of the !DOCTYPE declaration in the XML header with the correct tag.
<b>Consequences if not approved:</b>	⌘ XML measurement files will not be interpreted correctly by XML parsers.

<b>Clauses affected:</b>	⌘ A.3, D.3		
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input checked="" type="checkbox"/> O&M Specifications		⌘ 32.401
<b>Other comments:</b>	⌘ Correspondent changes are made in the scope of Rel-4 32.401 (S5-010746).		

## A.3 XML file format definition

The character encoding shall be a subset of UTF-8. The characters in the ASN.1 type PrintableString are allowed, i.e.:

- A-Z
- a-z
- 0-9
- <space> ' ( ) + , - . / : = ?

For encoding of the information content, XML (see Extensible Markup Language (XML) 1.0, W3C Recommendation 10-Feb-98) will be used. The XML **document type declaration** contains the mark-up declarations that provide a grammar for the measurement file format. This grammar is known as a Document Type Definition (DTD).

The DTD to be used is defined below. The type definitions and constraints for data types and values defined in the ASN.1 format, such as string sizes, shall implicitly be applied to the XML result files also. The representation of the timestamps within the XML file shall follow the “GeneralizedTime” ASN.1 type.

```
<!-- MeasDataCollection.dtd version 1.1-->
<!ELEMENT mdc (mfh , md*, mff )>
<!ELEMENT mfh (ffv, sn, st, vn, cbt) >
<!ELEMENT md (neid , mi*)>
<!ELEMENT neid (neun, nedn)>
<!ELEMENT mi (mts,gp, mt*, mv*)>
<!ELEMENT mv (moid , r*, sf? )>
<!ELEMENT mff (ts)>
<!ELEMENT ts (#PCDATA)>
<!ELEMENT sf (#PCDATA)>
<!ELEMENT r (#PCDATA)>
<!ELEMENT mt (#PCDATA)>
<!ELEMENT moid (#PCDATA)>
<!ELEMENT gp (#PCDATA)>
<!ELEMENT mts (#PCDATA)>
<!ELEMENT nedn (#PCDATA)>
<!ELEMENT neun (#PCDATA)>
<!ELEMENT cbt (#PCDATA)>
<!ELEMENT vn (#PCDATA)>
<!ELEMENT st (#PCDATA)>
<!ELEMENT sn (#PCDATA)>
<!ELEMENT ffv (#PCDATA)>

<!-- end of MeasDataCollection.dtd -->
```

The number of Measurement Result tags (r) per observed object instance tags (moid) shall always equal the number of Measurement Types (mt) tags. In case the result is a REAL value the decimal separator shall be “.”. In case the result is “NULL” then the “r” mark-up shall be empty.

The following header shall be used in actual XML measurement result files (cf. annex D for an example):

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="MeasDataCollection.xsl" ?>
<!DOCTYPE MeasDataCollection-mdc SYSTEM "MeasDataCollection.dtd" >
<mdc xmlns:HTML="http://www.w3.org/TR/REC-xml">
```

- Line 1: xml version number 1 shall be used.
- The reference to an XSL (Extensible Stylesheet Language) or CSS (Cascading Style Sheet) file in line 2 of the header is optional. It may be configured by the operator to be inserted for the purpose of presenting the XML file in

a web browser GUI. It is up to the receiver of the file to decide on the usage of this stylesheet reference, e.g. ignore it if not needed or choosing a configured default if no style sheet reference is supplied in the file.

- Line 4: A reference to the W3C Recommendation web page for XML.

Quick guide to XML notation:   ? zero or one occurrence  
 + one or more occurrences  
 \* zero or more occurrences  
 #PCDATA parsed character data

## D.3 Example of XML Measurement Report File

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="MeasDataCollection.xsl" ?>
| <!DOCTYPE MeasDataCollection-mdc SYSTEM "MeasDataCollection.dtd" >
<mdc xmlns:HTML="http://www.w3.org/TR/REC-xml">
<mfh>
<ffv>1</ffv>
<sn>System=UTRANNetwork,RNC=123</sn>
<st>RNC</st>
<vn>Telecom corp.</vn>
<cbt>20000301140000</cbt>
</mfh>
<md>
<neid>
<neun>RNC Telecomville</neun>
<nedn>System=UTRANNetwork,RNC=123</nedn>
</neid>
<mi>
<mts>20000301141430</mts>
<gp>900</gp>
<mt>attTCHSeizures</mt>
<mt>succTCHSeizures </mt>
<mt>attImmediateAssignProcs</mt>
<mt>succImmediateAssignProcs</mt>
<mv>
<moid>Cell=997</moid>
<r>234</r>
<r>345</r>
<r>567</r>
<r>789</r>
<sf>FALSE</sf>
</mv>
<mv>
<moid>Cell=998</moid>
<r>890</r>
<r>901</r>
<r>123</r>
<r>234</r>
<sf>FALSE</sf>
</mv>
<mv>
<moid>Cell=999</moid>
<r>456</r>
<r>567</r>
<r>678</r>
<r>789</r>
<sf>FALSE</sf>
</mv>
</mi>
</md>
<mf>20000301141500</mf>
</mdc >
```

## CHANGE REQUEST

⌘ **32.401 CR 001** ⌘ ev **-** ⌘ Current version: **4.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of declaration in XML header		
<b>Source:</b>	⌘ SA5		
<b>Work item code:</b>	⌘ OAM-PM	<b>Date:</b>	⌘ 30/11/2001
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)
	<b>B</b> (addition of feature),		R97 (Release 1997)
	<b>C</b> (functional modification of feature)		R98 (Release 1998)
	<b>D</b> (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)
			REL-5 (Release 5)

<b>Reason for change:</b>	⌘ The XML measurement result file <b>header</b> is incorrectly specified in annex A.3.
<b>Summary of change:</b>	⌘ Replace the incorrect part of the !DOCTYPE declaration in the XML header with the correct tag.
<b>Consequences if not approved:</b>	⌘ XML measurement files will not be interpreted correctly by XML parsers.

<b>Clauses affected:</b>	⌘ A.3.
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications
	<input checked="" type="checkbox"/> O&M Specifications 32.104
<b>Other comments:</b>	⌘ Correspondent changes are made in the scope of R99 32.104 (S5-010745).

## A.3 XML file format definition

The character encoding shall be a subset of UTF-8. The characters in the ASN.1 type PrintableString are allowed, i.e.:

- A-Z;
- a-z;
- 0-9;
- <space> ' ( ) + , - . / : = ? '.

For encoding of the information content, XML (see Extensible Markup Language (XML) 1.0, W3C Recommendation 10-Feb-98) will be used. The XML **document type declaration** contains the mark-up declarations that provide a grammar for the measurement file format. This grammar is known as a Document Type Definition (DTD). The DTD to be used is defined below. The type definitions and constraints for data types and values defined in the ASN.1 format, such as string sizes, shall implicitly be applied to the XML result files also. The representation of the timestamps within the XML file shall follow the "GeneralizedTime" ASN.1 type.

```
<!-- MeasDataCollection.dtd version 2.0-->
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT mdc (mfh , md*, mff )>
<!ELEMENT mfh (ffv, sn, st, vn, cbt) >
<!ELEMENT md (neid , mi*)>
<!ELEMENT neid (neun, nedn, nesw?)>
<!ELEMENT mi (mts, gp, mt*, mv*)>
<!ELEMENT mv (moid , r*, sf? )>
<!ELEMENT mff (ts)>
<!ELEMENT ts (#PCDATA)>
<!ELEMENT sf (#PCDATA)>
<!ELEMENT r (#PCDATA)>
<!ATTLIST r p CDATA "">
<!ELEMENT mt (#PCDATA)>
<!ATTLIST mt p CDATA "">
<!ELEMENT moid (#PCDATA)>
<!ELEMENT gp (#PCDATA)>
<!ELEMENT mts (#PCDATA)>
<!ELEMENT nedn (#PCDATA)>
<!ELEMENT neun (#PCDATA)>
<!ELEMENT nesw (#PCDATA)>
<!ELEMENT cbt (#PCDATA)>
<!ELEMENT vn (#PCDATA)>
<!ELEMENT st (#PCDATA)>
<!ELEMENT sn (#PCDATA)>
<!ELEMENT ffv (#PCDATA)>

<!-- end of MeasDataCollection.dtd -->
```

The number of Measurement Result tags (r) per observed object instance tags (moid) shall always equal the number of Measurement Types (mt) tags. In case the result is a REAL value the decimal separator shall be ".". In case the result is "NULL" then the "r" mark-up shall be empty.

The following header shall be used in actual XML measurement result files (cf. annex D for an example):

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="MeasDataCollection.xsl" ?>
<!DOCTYPE MeasDataCollection_mdc SYSTEM "MeasDataCollection.dtd" >
<mdc xmlns:HTML="http://www.w3.org/TR/REC-xml">
```

- Line 1: xml version number 1 shall be used.
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- Line 4: A reference to the W3C Recommendation web page for XML.

Quick guide to XML notation: ? zero or one occurrence  
+ one or more occurrences  
\* zero or more occurrences  
#PCDATA parsed character data