**3GPP TSG- Meeting # *4952***

**, , - revision of S5-243556**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
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| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | A |  | | | | | ***Release:*** | | |  |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | It is a common mistake that the capitalization of schema elements is incorrect. To avoid this problem a more detailed description of naming shall be added. | | | | | | | | |
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| ***Summary of change:*** | | Extend the naming rule for model elements.  Add a note about finding 3GPP related abbreviations in 21.905.  Clarify the term "datatype attributes" | | | | | | | | |
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| ***Consequences if not approved:*** | | Incorrect and confusing capitalization of names. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.1, 5.1a, 5.2.1.3, 5.3.2.3, 5.3.4.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

***First change***

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [18] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [18].

**Naming attribute**:It is a class attribute that holds the class instance identifier. See attribute id of *Top\_* in TS 28.620 [6]. See examples of naming attribute in 3GPP TS 32.300 [3].

**Lower Camel Case**: The practice of writing compound words in which the words are joined without spaces and that the initial letter of all except the first word is capitalized.

EXAMPLES: ’managedNodeIdentity’ and ‘minorDetails’ are the LCC for "managed node identity" and “minor details” respectively.

**Upper Camel Case**: The practice of writing compound words in which the words are joined without spaces and that the initial letters of all words are capitalised.

EXAMPLES: ‘ManagedNodeIdentity’ and ‘MinorDetails’ are the UCC for "managed node identity" and "minor details" respectively.

**Well Known Abbreviation**: An abbreviation that can be used as the modelled element name or as a component of a modelled element name.

NOTE 1: The abbreviation, when used in such manner, is in the same document where the modelled element is defined. Most 3GPP related abbreviations can be found in TR 21.905[18].

**Manager:** IRP Manager or MnS consumer

NOTE 2: In the context of the IRP framework as defined in TS 32.102 [19], the term manager designates the IRP Manager. In the context of the SBMA framework as defined in TS 28.533 [20], the term manager designates the MnS consumer.

**Agent:** IRP Agent or MnS producer

NOTE 3: In the context of the IRP framework as defined in TS 32.102 [19], the term agent designates the IRP Agent. In the context of the SBMA framework as defined in TS 28.533 [20], the term agent designates the MnS producer.

**Data type:** Constraint on an attribute value.

**Simple type:** Data type constraining an attribute value to a scalar.

**Complex type:** Data type of a structured and/or multi-valued attribute.

**Attribute:** Information element of an object composed of an attribute name and an attribute value.

**Attribute name:** Name of an attribute.

**Attribute value:**Value of an attribute that is defined by a simple type or a complex type*.*

**Attribute field:**Attribute contained in an attribute that can contain attribute fields.

**Attribute field name:** Name of an attribute field.

**Attribute field value*:***Value of an attribute field defined by a simple type or a complex type.

**Simple attribute:** Attribute whose value is a simple type.

**Complex attribute:** Attribute whose value is a complex type.

**Structured attribute:**A kind of a complex attribute whose value contains one or more attribute fields.

**Multi-valued attribute:**A kind of a complex attribute with multiplicity > 1*.*

**Attribute element:** A single value of a multi-valued attribute.

**Attribute field element:** A single value of a multi-valued attribute field.

**Data node:** An object, an attribute, an attribute field, an attribute element, or an attribute field element.

**Attribute data node:** An attribute, an attribute field, an attribute element, or an attribute field element.

**Configuration data node:** A leaf data node, whose value is configurable, or a data node that contains at least one child data node, that is configurable.

**State data node:** A read-only leaf data node, that represents a particular aspect of the system status, and whose value is set automatically by the management system, or a data node that contains only read-only child data nodes, that represent particular aspects of the system status, and whose values are set automatically by the management system.

**Data node tree:** The collection of data nodes and their relationships.

***Next change***

## 5.1a Naming of Information Object Classes, attributes and attribute fields

Data nodes are often mapped to different modeling and programming languages (OpenApi, YANG, Java, C++, Python, etc.). To make mapping of data nodes simple their names should be usable as-is in other languages.

TS 32.300 [3] provides some rules for naming data nodes including a limitation of using only ISO/IEC 646 IRV characters. ISO 646 IRV is equivalent with the original 7-bit ASCII character set [21] for the characters referenced in this clause. Beside the rules in 32.300 the following additional stricter rules shall also be followed to ensure simple mapping:

- Names shall include only upper and lower case (7-bit) ASCII letters, digits and underscore

- Names shall start with an (7-bit) ASCII letter

- Names that are different only in capitalization shall not be used.

- Identifiers should not be longer than 64 characters.

- Names are case sensitive

In order to promote backwards compatibility, for existing datanodes, types, choices the current name may be kept even if it violates the above rules.

See Annex G for naming rules of other languages.

***Next change***

#### 5.2.1.3 Name style

An attribute name shall use the LCC style.

Well Known Abbreviation (WKA) is treated as a word if used in a name. However, WKA shall be used as defined in the specification document that originally defined the WKA (its letter case cannot be changed) except when it is the first word of a name; and if so, its first letter must be in lower case.

***Next change***

#### 5.3.2.3 Name style

The name shall use UCC style. The name shall end with an underscore if it is an abstract class in the UIM. The name must not end with an underscore if it is a concrete class.

WKA is treated as a word if used in a name. However, WKA shall be used as defined in the specification document that originally defined the WKA (its letter case cannot be changed) except when it is the first word of the name; and if so, its first letter must be in upper case.

Embedded underscore is not allowed except the name is for an Association class (see 5.4.1.)

***Next change***

#### 5.3.4.3 Name style

For <<dataType>> name, use the same style as <<InformationObjectClass>> (see 5.3.2).

For <<dataType>> attribute (used to define attribute fields), use the same style as Attribute (see 5.2.1).

***End of change***