**3GPP TSG-CT WG4 Meeting #99eC4-204abc**

**E-Meeting, 18th – 28th June 2020 *was* C4-204304**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.572** | **CR** | **0077** | **rev** | **1** | **Current version:** | **16.3.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correct mismatch on GeographicArea between table and yaml | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GS\_Ph1-CT | | | | |  | ***Date:*** | | | 2020-08-11 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The definitions of GeographicArea in table is mutually exclusive alternatives, but "anyOf" is used as key word in definition of GeographicArea in yaml. The inconsistency between definitions of GeographicArea in table and yaml is confusing. But the inconsistency like this was introduced by existing definition of data model Point and data model PointUncertaintyCircle, a PointUncertaintyCircle by definition will always pass the validation with both PointUncertaintyCircle and Point, which breaks the requirement of "oneOf" and fail the validation of GeographicArea,see agreed C4-190498 (CR 0022). Some clarification need to be added to explain the situation in order to avoid the confusion from inconsistency between definitions of GeographicArea in table and yaml. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Corrected the definition of GeographicArea in yaml file of openAPI Nlmf\_Location, namely changed the key word anyOf to oneOf. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The consistency between definition of GeographicArea in yaml of Nlmf\_Location API and table Table 6.1.6.2.5-1 is consufing, and may lead to interpretations and implementations which may raise trouble in interoperability between different vendors. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.6.2.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 won't introduce any impact in the OpenAPI specification files. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev1:   1. Reverted the changes in A.2 (i.e., change anyOf to oneOf) and added a note in Table 6.1.6.2.5-1. 2. Revised the content on cover sheet to keep in line with new change. | | | | | | | | |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Information\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## A.2 Nlmf\_Location API

openapi: 3.0.0

***(… text not shown for clarity …)***

GeographicArea:

anyOf:

- $ref: '#/components/schemas/Point'

- $ref: '#/components/schemas/PointUncertaintyCircle'

- $ref: '#/components/schemas/PointUncertaintyEllipse'

- $ref: '#/components/schemas/Polygon'

- $ref: '#/components/schemas/PointAltitude'

- $ref: '#/components/schemas/PointAltitudeUncertainty'

- $ref: '#/components/schemas/EllipsoidArc'

***(… text not shown for clarity …)***

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*The start of changes\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

##### 6.1.6.2.5 Type: GeographicArea

Table 6.1.6.2.5-1: Definition of type GeographicArea as a list of mutually exclusive alternatives

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | Cardinality | Discriminator property name | Discriminator mapping | Description |
| Point | 1 | shape | POINT | Geographical area consisting of a single point, represented by its longitude and latitude. |
| PointUncertaintyCircle | 1 | shape | POINT\_UNCERTAINTY\_CIRCLE | Geographical area consisting of a point and an uncertainty value. |
| PointUncertaintyEllipse | 1 | shape | POINT\_UNCERTAINTY\_ELLIPSE | Geographical area consisting of a point, plus an uncertainty ellipse and a confidence value. |
| Polygon | 1 | shape | POLYGON | Geographical area consisting of a list of points (between 3 to 15 points). |
| PointAltitude | 1 | shape | POINT\_ALTITUDE | Geographical area consisting of a point and an altitude value. |
| PointAltitudeUncertainty | 1 | shape | POINT\_ALTITUDE\_UNCERTAINTY | Geographical area consisting of a point, an altitude value and an uncertainty value. |
| EllipsoidArc | 1 | shape | ELLIPSOID\_ARC | Geographical are consisting of an ellipsoid arc. |
| NOTE: The "anyOf" keyword (instead of “oneOf” keyword which is normally used for mutually exclusive alternatives) is used for GeographicArea type in yaml file to avoid validation failure of OpenAPI. According to current definition, a PointUncertaintyCircle object will always pass the validation with both PointUncertaintyCircle and Point, which fails the qualification of “oneOf” keyword. | | | | |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*The end of changes\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*