**3GPP TSG-CT WG4 Meeting #96C4-200852**

**E-Meeting, 24th – 28th February 2020**

**Source: Huawei**

**Title: Pseudo-CR on Correction**

**Spec: 3GPP TS 29.515**

**Agenda item: 6.1.6**

**Document for: Decision**

**1. Introduction**

None

**2. Reason for Change**

There are a lot of minor errors that is need to be fixed in the specification.

**3. Conclusions**

Fix errors.

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.515 v1.0.0

\* \* \* First Change \* \* \* \*

##### 6.1.5.2.2 Type: InputData

Table 6.1.5.2.2-1: Definition of type InputData

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| gpsi | Gpsi | O | 0..1 | Generic Public Subscription Identitfier |  |
| supi | Supi | O | 0..1 | Subscription Permanent Identifier |  |
| pseudonymOfUE | PseudonymOfUE | O | 0..1 | pseudonym of the target UE |  |
| externalClientType | ExternalClientType | M | 1 | external client type |  |
| locationQoS | LocationQoS | O | 0..1 | requested location QoS |  |
| supportedGADShapes | array(SupportedGADShapes) | O | 1..N | supported Geographical Area Description shapes |  |
| serviceIdentity | ServiceIdentity | O | 0..1 | service identity |  |
| codeWord | CodeWord | O | 0..1 | codeword |  |
| serviceCoverage | array(E164CountryCodeOfGeographicArea) | O | 1..N | a list of E.164 country codes for geographic areas [13] where the LCS client is permitted to request and receive UE location information. |  |
| ldrType | LdrType | C | 0..1 | location deferred request event type |  |
| periodicEventInfo | PeriodicEventInfo | C | 0..1 | periodic event information of the location request for a target UE |  |
| areaEventInfo | AreaEventInfo | C | 0..1 | area event information of the location request for a target UE |  |
| motionEventInfo | MotionEventInfo | C | 0..1 | motion event information of the location request for a target UE |  |
| ldrReference | LdrReference | C | 0..1 | notification correlation ID |  |
| hgmlcCallBackURI | Uri | O | 0..1 | notification target address |  |
| externalClientIdentification | ExternalClientIdentification | O | 0..1 | external LCS client identification |  |
| afId | NfInstanceId | O | 0..1 | the identification of AF that initiated location request |  |
| uePrivacyReqirements | UePrivacyReqirements | O | 0..1 | UE privacy requirement |  |
| lcsServiceType | LcsServiceType | O | 0..1 | the LCS service type |  |
| velocityRequested | VelocityRequested | O | 0..1 | velocity of the target UE is requested |  |
| priority | LcsPriority | O | 0..1 | priority of the location request |  |
| locationTypeRequested | LocationTypeRequested | O | 0..1 | Requested type of location, applicable to location immediate request |  |
| maximumAgeOfLocationEstimate | AgeOfLocationEstimate | O | 0..1 | requested maximum age of the location estimate |  |
| amfid | AmfId | O | 0..1 | the identification of serving AMF |  |

\* \* \* Next Change \* \* \* \*

##### 6.1.5.2.7 Type: UePrivacyReqirements

Table 6.1.5.2.7-1: Definition of type UePrivacyReqirements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| lpi | Lpi | O | 0..1 | When present, it shall contain the Location Privacy Indication.If absent, it indicates that the location for the UE is allowed. |  |
| uePrivacyCallSessionUnrelatedClass | UePrivacyCallSessionUnrelatedClass | O | 0..1 | When present, it shall contain Call/Session unrelated Class information for the user. |  |
| plmnOperatorClass | PlmnOperatorClass | O | 0..1 | When present, it shall contain PLMN Operator Class information for the user. |  |

\* \* \* Next Change \* \* \* \*

##### 6.1.5.2.8 Type: UePrivacyCallSessionUnrelatedClass

Table 6.1.5.2.8-1: Definition of type UePrivacyCallSessionUnrelatedClass

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name |  Data type | P | Cardinality | Description | Applicability |
| lcsPrivacyCheckAction | PrivacyCheckRelatedAction | O | 0..1 | mutual LCS privacy check option. The default value of this parameter if not presents is "LOCATION\_ALLOWED\_WITHOUT\_NOTIFICATION". |  |
| locationValidTimePeriod | ValidTimePeriod | O | 0..1 | a valid time period for the positioning |  |
| locationValidGeographicArea | array(E164CountryCodeOfGeographicArea) | O | 1..N | a valid geographic area for positioning |  |

\* \* \* Next Change \* \* \* \*

## A.2 Ngmlc\_Loction API

openapi: 3.0.0

info:

 version: '1.0.0.alpha-1'

 title: Ngmlc\_Location

 description: |

 Ngmlc\_Location Service.

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externalDocs:

 description: 3GPP TS 29.515 V0.4.0; 5G System; Gateway Mobile Location Services; Stage 3

 url: 'http://www.3gpp.org/ftp/Specs/archive/29\_series/29.515/'

servers:

 - url: '{apiRoot}/nglmc-loc/v1'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501

security:

 - {}

 - oAuth2ClientCredentials:

 - ngmlc-loc

paths:

 /provide-location:

 post:

 summary: Request Location of an UE

 operationId: RequestLocation

 tags:

 - Request Location

 requestBody:

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/InputData'

 required: true

 responses:

 '200':

 description: Expected response to a valid request

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/LocationData'

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 '504':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/504'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 callbacks:

 EventNotify:

 '{$request.body#/hgmlcCallBackUri}':

 post:

 requestBody:

 description: UE Event Notification

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/EventNotifyData'

 responses:

 '204':

 description: Expected response to a valid notification

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 '504':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/504'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 /cancel-location:

 post:

 summary: request cancellation of periodic or triggered location

 operationId: CancelLocation

 tags:

 - Cancel Location

 requestBody:

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/CancelLocData'

 required: true

 responses:

 '204':

 description: Expected response to a successful cancellation

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 '504':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/504'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

 /location-update-notify:

 post:

 summary: provide UE location information

 operationId: ProvideLocation

 tags:

 - Provide Location

 requestBody:

 content:

 application/json:

 schema:

 $ref: '#/components/schemas/LocUpdateData'

 required: true

 responses:

 '204':

 description: Expected response to successful location context transfer

 '400':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/503'

 '504':

 $ref: 'TS29571\_CommonData.yaml#/components/responses/504'

 default:

 $ref: 'TS29571\_CommonData.yaml#/components/responses/default'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{nrfApiRoot}/oauth2/token'

 scopes:

 ngmlc-loc: Access to the Ngmlc\_Location API

 schemas:

#

# COMPLEX TYPES

#

 InputData:

 type: object

 required:

 - externalClientType

 properties:

 gpsi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'

 supi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

 pseudonymOfUE:

 $ref: '#/components/schemas/PseudonymOfUE'

 externalClientType:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/ExternalClientType'

 locationQoS:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LocationQoS'

 supportedGADShapes:

 type: array

 items:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/SupportedGADShapes'

 minItems: 1

 serviceIdentity:

 $ref: '#/components/schemas/ServiceIdentity'

 codeWord:

 $ref: '#/components/schemas/CodeWord'

 serviceCoverage:

 type: array

 items:

 $ref: '#/components/schemas/E164CountryCodeOfGeographicArea'

 minItems: 1

 ldrType:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LdrType'

 periodicEventInfo:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PeriodicEventInfo'

 areaEventInfo:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AreaEventInfo'

 motionEventInfo:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/MotionEventInfo'

 ldrReference:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LdrReference'

 hgmlcCallBackURI:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 externalClientIdentification:

 $ref: '#/components/schemas/ExternalClientIdentification'

 amfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 uePrivacyReqirements:

 $ref: '#/components/schemas/UePrivacyReqirements'

 lcsServiceType:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LcsServiceType'

 velocityRequested:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/VelocityRequested'

 priority:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LcsPriority'

 locationTypeRequested:

 $ref: '#/components/schemas/LocationTypeRequested'

 maximumAgeOfLocationEstimate:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'

 amfid:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/AmfId'

 LocationData:

 type: object

 properties:

 pseudonymOfUE:

 $ref: '#/components/schemas/PseudonymOfUE'

 gpsi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'

 supi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

 locationEstimate:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

 civicAddress:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

 ageOfLocationEstimate:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'

 positioningDataList:

 type: array

 items:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PositioningMethodAndUsage'

 minItems: 1

 gnssPositioningDataList:

 type: array

 items:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GnssPositioningMethodAndUsage'

 minItems: 1

 accuracyFulfilmentIndicator:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AccuracyFulfilmentIndicator'

 ueVelocity:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/VelocityEstimate'

 CancelLocData:

 type: object

 properties:

 gpsi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'

 supi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

 pseudonymOfUE:

 $ref: '#/components/schemas/PseudonymOfUE'

 hgmlcAddress:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 ldrReference:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LdrReference'

 lmfIdentification:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LMFIdentification'

 amfId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 LocUpdateData:

 type: object

 properties:

 gpsi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'

 supi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

 pseudonymOfUE:

 $ref: '#/components/schemas/PseudonymOfUE'

 locationRequestType:

 $ref: '#/components/schemas/LocationRequestType'

 locationEstimate:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

 ageOfLocationEstimate:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'

 accuracyFulfilmentIndicator:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AccuracyFulfilmentIndicator'

 civicAddress:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

 locationQoS:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LocationQoS'

 afId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 hgmlcAddress:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Uri'

 serviceIdentity:

 $ref: '#/components/schemas/ServiceIdentity'

 EventNotifyData:

 type: object

 required:

 - eventNotifyDataType

 - ldrReference

 properties:

 gpsi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'

 supi:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/Supi'

 ldrReference:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LdrReference'

 eventNotifyDataType:

 $ref: '#/components/schemas/EventNotifyDataType'

 locationEstimate:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GeographicArea'

 civicAddress:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/CivicAddress'

 ageOfLocationEstimate:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/AgeOfLocationEstimate'

 positioningDataList:

 type: array

 items:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/PositioningMethodAndUsage'

 minItems: 1

 gnssPositioningDataList:

 type: array

 items:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/GnssPositioningMethodAndUsage'

 minItems: 1

 lmfIdentification:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/LMFIdentification'

 afId:

 $ref: 'TS29571\_CommonData.yaml#/components/schemas/NfInstanceId'

 terminationCause:

 $ref: 'TS29572\_Nlmf\_Location.yaml#/components/schemas/TerminationCause'

 UePrivacyReqirements:

 type: object

 properties:

 lpi:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/Lpi'

 uePrivacyCallSessionUnrelatedClass:

 $ref: '#/components/schemas/UePrivacyCallSessionUnrelatedClass'

 plmnOperatorClass:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/PlmnOperatorClass'

 UePrivacyCallSessionUnrelatedClass:

 type: object

 properties:

 lcsPrivacyCheckAction:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/PrivacyCheckRelatedAction'

 locationValidTimePeriod:

 $ref: 'TS29503\_Nudm\_SDM.yaml#/components/schemas/ValidTimePeriod'

 locationValidGeographicArea:

 type: array

 items:

 $ref: '#/components/schemas/E164CountryCodeOfGeographicArea'

 minItems: 1

#

# SIMPLE TYPES

#

 ServiceIdentity:

 type: string

 ExternalClientIdentification:

 type: string

 CodeWord:

 type: string

 E164CountryCodeOfGeographicArea:

 type: string

 PseudonymOfUE:

 type: string

#

# ENUMS

#

 PseudonymIndicator:

 anyOf:

 - type: string

 enum:

 - PSEUDONYM\_REQUESTED

 - PSEUDONYM\_NOT\_REQUESTED

 - type: string

 LocationRequestType:

 anyOf:

 - type: string

 enum:

 - NI-LR

 - MT-LR

 - MO-LR

 - type: string

 LocationTypeRequested:

 anyOf:

 - type: string

 enum:

 - CURRENT\_LOCATION

 - CURRENT\_OR\_LAST\_KNOWN\_LOCATION

 - INITIAL\_LOCATION

 - NOTIFICATION\_VERIFICATION\_ONLY

 - type: string

 EventNotifyDataType:

 anyOf:

 - type: string

 enum:

 - UE\_AVAILABLE

 - PERIODIC

 - ENTERING\_INTO\_AREA

 - LEAVING\_FROM\_AREA

 - BEING\_INSIDE\_AREA

 - MOTION

 - MAXIMUM\_INTERVAL\_EXPIRATION\_EVENT

 - LOCATION\_CANCELLATION\_EVENT

 - ACTIVATION\_OF\_DEFERRED\_LOCATION

 - type: string

\* \* \* End of Changes \* \* \* \*