**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 \* \* \* \*