**3GPP TSG-CT WG1 Meeting #128-eC1-210513**

**Electronic meeting, 25 February – 5 March 2021**

**Source: CATT**

**Title: New WID:** **Enhancement to the 5GC Location Services - Phase 2**

**Document for: Endorsement**

**Agenda Item: 17.1.1**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

# Title: Enhancement to the 5GC LoCation Services-Phase 2

## Acronym: 5G\_eLCS\_ph2-CT

## Unique identifier:

Potential target Release: Rel-17

## 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **Yes** |  | X |  | X |  |
| **No** |  |  | X |  |  |
| **Don't know** | X |  |  |  | X |

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

|  |  |
| --- | --- |
|  | Feature |
| X | Building Block |
|  | *Work Task* |
|  | Study Item |

### 2.2 Parent Work Item

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| 5G\_eLCS\_ph2 | SA2 | 870001 | Enhancement to the 5GC LoCation Services-Phase 2 |

### 2.3 Other related Work Items and dependencies

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| --- |
| Other related Work Items (if any) |
| Unique ID | Title | Nature of relationship |
| 720005 | New Services and Markets Technology Enablers | This is the stage-1 normative work related to Next Generation architecture |
| 740005 | 5G System – Phase 1 | Normative work for the phase 1 of the 5G system architecture |
| 820016 | Enhancement to the 5GC LoCation Services | Normative work for 5GC LoCation Services in Rel-16 |
| 800007 | Service requirements for cyber-physical control applications in vertical domains (cyberCAV)  | Normative work for the phase 1 of the cyberCAV. |
| 860034 | NR Positioning Enhancements | This is the study of NR positioning Enhancements in Rel-17. |
| 830003 | CT aspects of Enhancement to the 5GC LoCation Services | This is the normative work of 5GC LoCation Services for phase 1 |
| 810035 | Study on Security of the enhancement to the 5GC location services | SA3 study item. |

## 3 Justification

SA had approved a work item on Enhancement of 5GC LoCation Services-Phase 2 in Rel-17 in SP-200082. This WID is to realize the CT aspects of protocol impacts for 5G\_eLCS\_ph2 based on the approved SA WID (SP-200082).

## 4 Objective

The objective of the work is to enhance the necessary CT specifications to support the stage 2 requirements on enhancement to the 5GC LoCation Services phase 2 as defined in 3GPP TS 23.273.

The following areas of work are expected to be covered but will be adjusted to the final conclusions of the SA2 normative requirements:

**CT4:**

- Possible impacts on 5G-MT-LR, 5G-MO-LR as well as 5G-NI-LR procedures, such as new LCS parameters, LCS QoS metrics, to support very low latency and very high accuracy positioning, including horizontal and vertical positioning service levels, and 5G positioning service area

**CT1:**

- Possible impacts on 5G-MT-LR, 5G-MO-LR as well as 5G-NI-LR procedures, such as new LCS parameters, LCS QoS metrics, to support very low latency and very high accuracy positioning, including horizontal and vertical positioning service levels, and 5G positioning service area

**CT3:**

- Posssible new LCS parameters exposed to support for very low latency and very high accuracy positioning

- Possible Event Exposure of location information for enhancement to the 5GC LoCation Services

## 5 Expected Output and Time scale

|  |
| --- |
| **New specifications** *{One line per specification. Create/delete lines as needed}* |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |

|  |
| --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| 29.515 | Possible impacts on GMLC services for specific services e.g. Ngmlc\_Location Service for support of very low latency and very high accuracy positioning | CT#95 (March 2022) | CT4 responsibility |
| 29.572 | Possible impacts on LMF services for specific services e.g. Nlmf\_Location Service for support of very low latency and very high accuracy positioning | CT#95 (March 2022) | CT4 responsibility |
| 24.080 | Possible impacts on supplementary services for support of very low latency and very high accuracy positioning  | CT#95 (March 2022) | CT4 responsibility |
| 29.518 | Possible impacts on AMF services for specific services e.g. Namf\_Location Service for support of very low latency and very high accuracy positioning; e.g. Namf\_Communication Service for transferring new parameters between LMF and UE, or parameters between LMF and RAN, or location related new parameters between AMFs during mobility; and e.g. Namf\_EventExposure Service may need add new parameters for location event | CT#95 (March 2022) | CT4 responsibility |
| 29.503 | Possible impacts on UDM services for LCS services e.g. Nudm\_EventExposure Service for support of very low latency and very high accuracy positioning | CT#95 (March 2022) | CT4 responsibility |
|  |  |  |  |
| 29.571 | Possible impacts to define new common data types | CT#95 (March 2022) | CT4 responsibility |
| 24.501 | Possible impacts on NAS procedures for LCS services for support of very low latency and very high accuracy positioning | CT#95 (March 2022) | CT1 responsibility |
| 24.571 | Possible impacts on LCS messages and coding to support very low latency and very high accuracy positioning | CT#95 (March 2022) | CT1 responsibility |
| 27.007 | Possible impacts on AT commands for LCS services for support of very low latency and very high accuracy positioning | CT#95 (March 2022) | CT1 responsibility |
| 29.522 | Possible impacts on NEF services for Exposure of location information for support of very low latency and very high accuracy positioning | CT#95 (March 2022) | CT3 responsibility |
| 29.122 | Possible impacts on Exposure of location information for support of very low latency and very high accuracy positioning | CT#95 (March 2022) | CT3 responsibility |

NOTE: All the above impacts are probable impacts and will be updated based on SA2 progress.

## 6 Work item Rapporteur(s)

Chenxi Bao, CATT, baochenxi@catt.cn

## 7 Work item leadership

CT4

## 8 Aspects that involve other WGs

SA3 for the Security aspects, SA5 for the Charging Aspects

## 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| CATT |
| Nokia  |
| Nokia Shanghai Bell  |
| Huawei |
| Deutsche Telekom |
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