**3GPP TSG-WG SA2 Meeting #161 *S2-2402197***

**Athens, Feb 26 – Mar 1, 2024 (revision of S2-2401629)**

**Source: China Mobile**

**Title: 5GS enhancement on On-demand broadcast of GNSS assistance data**

**Document for: Approval**

**Agenda Item: 30.2**

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: 5GS enhancement on On-demand broadcast of GNSS assistance data

Acronym: TEI19\_OBGAD

Unique identifier :

Potential target Release: Rel-19

# 1 Impacts

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

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

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

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| N/A |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
|  Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 3 Justification

In pre-R18 of eLCS, the procedures of assistance data broadcast is defined in clause 6.14 of TS 23.273, in which LMF may use Namf\_Communication\_NonUeN2MessageTransfer service to provide GNSS assistance data to RANs.



**Figure 6.14.1-1: Broadcasting Network Assistance Data**

The Network Assistance Data providing procedure may be performed periodically with a high frequency, as RTK related parameters in the GNSS assistance data needs to be updated timely, causing a heavy AMF to RAN signalling pressure (The AMF needs to transfer the signalling to a lot of gNBs). In some certain stage of deploying this feature (i.e., there are not many subscribed users in the whole PLMN, especially in earlier stage), we need to take resources/energy efficiency into consideration. Thus, on-demand of broadcasting is proposed by the operators to enhance current GNSS assistance data broadcast procedure.

This work item proposes to introduce on-demand broadcasting mechanism of GNSS assistance data between LMF and AMF.

# 4 Objective

The objective of this WID is to study the enhancement of On-demand broadcast of GNSS assistance data:

* LMF based on information received from AMF and/or UEs decide on broadcast.
* Enhance the procedure of GNSS assistance data broadcast by adding an optional subscription and notification interaction between AMF and LMF.
* Adding an optional logic to LMF to count how many UEs requested RTK AD (which RTK AD; i.e which posSIB) by using MO-LR in the area.

This work will require 0.5 TU to discuss and agree the corresponding CR(s).

# 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# | Remarks |

|  |
| --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TS 23.502 | Enhancement on AMF event exposure service for on-demand broadcast of GNSS assistance data. | SA#104(June 2024) |  |
| TS 23.273 | The interaction enhancement between AMF and LMF and analyses of UEs request to support on-demand broadcast of GNSS assistance data.  | SA#104(June 2024) |  |
|  |  |  |  |

# 6 Work item Rapporteur(s)

Aihua Li, China Mobile <liaihua@chinamobile.com>

# 7 Work item leadership

SA2

# 8 Aspects that involve other WGs

None identified.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| ZTE |
| Huawei |
| China Unicom |
| Ericsson |
| CATT |
| vivo |
| Tencent |
| SK Telecom |
| CBN |
| OPPO |
| KDDI |
| MediaTek Inc |