**3GPP TSG-WG SA2 Meeting #161 S2-2403515**

**Athens, Greece, 26th Feb 2024 - 1st Mar 2024**

**Source: Qualcomm, Vodafone Group Plc, Orange, KPN, CKH IOD UK, BT LIMITED, Vodafone Telekomünikasyon A.S.**

**Title: New WID on subscription control for** **reference time distribution in EPS**

**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: WID on subscription control for reference time distribution in EPS

Acronym: TEI19\_TIME\_SUB\_EPS

Unique identifier: TBD

Potential target Release: Rel-19

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

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

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
|  | Study |
|  | Normative – Stage 1 |
| X | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 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

Timing as a service refers to providing timing information to UEs as a monetizable operator service. Rel-18 enabled timing as a service for NR by introducing subscription control for timing distribution to individual UEs. This enables operators to control whether timing information is to be delivered to a particular UE.

Timing as a service is only supported for NR. This is an issue since NR coverage is still quite limited and may not be available in many areas for quite some time. This means that operators cannot offer timing as a service nation-wide but only in areas where NR connected to 5GC has been deployed, which limits opportunities for operators.

Therefore, this WID aims at enabling reference time distribution based on subscription for WB-EUTRA.

WB-EUTRA RRC already supports delivering reference time to individual UEs (see TS 36.331 clause 6.2.2). Therefore, this WID does not have any RRC impacts. The eNB does however not know whether a particular UE is subscribed for receiving timing information. Therefore, this WID aims at extending the EPS Subscription with an indication that the UE is subscribed for reference time delivery; based on this, the MME indicates to the eNB to distribute reference time to the UE; and finally, based on this indication from the MME, the eNB delivers reference time to the UE.

# 4 Objective

The following will be specified:

* WT-1: Enable reference time distribution based on subscription for WB-EUTRA:
  + EPS Subscription enhancement: Indication whether UE is subscribed for reference time distribution;
  + Based on the subscription indication for reference time distribution, MME to indicate to eNB to distribute reference time to the UE;
  + eNB to deliver reference time to a UE based on indication from MME using existing unicast RRC.

NOTE: Reference time distribution based on subscription assumes that the operator configures the eNB to not provide reference time via SIB.

## TU estimates and dependencies

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Work Tas ID | TU Estimate  (Study) | TU Estimate  (Normative) | RAN Dependency  (Yes/No/Maybe) | Inter Work Tasks Dependency |
| WT 1 |  | 0. 5 | Yes | None |

# 5 Expected Output and Time scale

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| TS 23.401 | Reference time distribution based on subscription | TSG#106 |  |
|  |  |  |  |

# 6 Work item Rapporteur(s)

Sebastian Speicher, Qualcomm (speicher AT qti DOT qualcomm DOT com)

# 7 Work item leadership

SA2

# 8 Aspects that involve other WGs

# 9 Supporting Individual Members

{At least 4 supporting Individual Members are needed. There is an expectation that these companies will provide resources to progress the work. Note that having 4 supporting companies is a necessary but not sufficient condition: the usual TSG approval process by consensus is needed for the WID approval}

|  |
| --- |
| Supporting IM name |
| Qualcomm |
| Vodafone |
| Orange |
| KPN |
| Vodafone Telekomünikasyon A.S. |
| CKH IOD UK LIMITED |
| BT |