**3GPP TSG-RAN WG3 Meeting #123 *R3-240524***

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

**Agenda item: 23.2**

**Source: Xiaomi, Ericsson**

**Title: (TP for BL 38.305) Support of LPHAP**

**Document for: Discussion and Decision**

# 1 Introduction

This TP is to capture the stage 2 support of preconfigured SRS with some further refinement on the wording

This TP merges the TPs in R3-240331 and R3-240094.

# 2 TP for BL 38.305 (support of LPHAP)

<<<<<<<<<<<<<<<<<<<< First Change >>>>>>>>>>>>>>>>>>>>

## 7.x Procedures for Area-specific SRS Configuration

### 7.x.1 General

To support of Low Power and High Accuracy Positioning (LPHAP) as defined in TS 23.273[35], Area-specific SRS configuration is used to enable SRS transmission by the RRC\_INACTIVE UE, within positioning validity cell list(s).

### 7.x.2 Area-specific SRS (Pre-)configuration Allocation Procedure

Figure 7.x.2-1 shows the Area-specific SRS (Pre-)Configuration Allocation procedure.



Figure 7.x.2-1: Area-specific SRS (Pre-)configuration Allocation Procedure

1. The LMF sends NRPPa Positioning Information Request to the serving gNB of the UE for Area-specific SRS (Pre-)configuration allocation. In case of Area-specific SRS configuration allocation, LMF includes the Requested SRS Transmission Characteristics including an associated Positioning Validity Area Cell List. In case of Area-specific SRS pre-configuration allocation, LMF includes a list of Requested SRS Transmission Characteristics, each with the associated Positioning Validity Area Cell List.

2. The serving gNB allocates the area-specific SRS resources, and moves the UE to RRC\_INACTIVE by sending RRCRelease message, which includes the area-specific SRS (pre-) configuration(s).

3. The serving gNB responds with the NRPPa Positioning Information Response to the LMF, including one or more SRS configuration(s), each with the associated Positioning Validity Area Cell List.

4. The LMF notifies the gNBs within the positioning validity area(s) to reserve the SRS resources.

NOTE: Step 4 may occur prior to any of steps 1 through 3.

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