3GPP TSG RAN WG2 Meeting #113bis-e R2-210xxxx

Electronic, 12th Apr – 20th Apr 2021

**Title:** **[Draft]** LS on multiple TACs per PLMN

**Response to:**

**Release:** Release 17

**Work Item:** NR\_NTN\_solutions-Core

**Source: Huawei [to be** RAN2**]**

**To:** CT1, SA2

**Cc:** RAN3

**Contact person:** Xun TANG

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**Send any reply LS to:** 3GPP Liaisons Coordinator, <mailto:3GPPLiaison@etsi.org>

**Attachments:** None

# 1 Overall description

Since SA2 stated in S2-2004688 that “Earth-fixed Tracking Areas are assumed”, RAN3 agreed that “Tracking Area is coupled with geographical area” in RAN3#109, then in RAN2#113 it was further agreed that “the network may broadcast more than one TACs per PLMN in a cell” in order to support Tracking Area management in NTN, e.g. Earth-moving scenario.

To follow the principle “the AS shall report tracking area information to the NAS” specified in TS 38.304, currently there are two options in RAN2:

* Option 1: AS still reports only one TAC for one PLMN even if more than one TACs per PLMN are broadcasted in a NTN cell.
* Option 2: AS indicates all received TAC(s) for one PLMN to NAS layer.

RAN2 would like to inform CT1 that RAN2’s preference is option 2, and the reason is that it’s not clear to RAN2 how to implement option 1, i.e. how to select the reported TAC for one PLMN when multiple TACs are broadcasted for this PLMN in a NTN cell. And RAN2 also assumes UE does not do Tracking Area Update if one of the currently broadcasted TAC belongs to UE’s registration area.

RAN2 would also like to ask the following question to CT1:

* Is option 2, i.e. “AS indicates all received TAC(s) for one PLMN to NAS layer”, feasible from NAS layer perspective?

# 2 Actions

**To CT1:**

**ACTION:** CT1 is kindly requested to take RAN2’s consideration into account and provide feedback.

**To SA2:**

**ACTION:** SA2 is kindly requested to take RAN2’s consideration into account.

# 3 Dates of next TSG RAN WG2 meetings

TSG RAN WG2 Meeting #114-e 19 May – 27 May 2021, Electronic