**3GPP TSG RAN WG1 Meeting #100bis R1-200nnnn**

**e-Meeting, April 20th – 30th, 2020**

**Title:** **[DRAFT]** LS to RAN4 on criterion of pathloss measurement failure for power control of SRS for positioning

**Response to:**

**Release:** Rel-16

**Work Item:** NR\_POS

**Source:** RAN WG1

**To:** RAN WG4

**Cc:**

**Contact Person:**

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**Attachments:**

**1. Overall Description:**

RAN1 had discussed the issue of criterion of pathloss measurement failure for power control of SRS for positioning. RAN1 agreed that the pathloss reference for SRS for positioning may be an SSB from the serving cell, an SSB from a non-serving cell, a PRS resource from a TRP of the serving cell, or a PRS resource from a TRP of a non-serving cell.

According to the descriptions in current specification 38.213, if the UE determines that *the UE is not able to accurately measure*, the UE calculates using a RS resource obtained from the SS/PBCH block of the serving cell that the UE uses to obtain MIB, as shown in the table in below. RAN1 had identified possible ambiguity in that descriptions, specifically the meaning of “*the UE is not able to accurately measure*”, It is RAN1 understanding that the criterion of pathloss measurement failure is within the scope of RAN4’s work.

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| --- |
| *--------------------------------------------Start of related Descriptions in 38.213 g10-------------------------------------*  7.3.1 UE behaviour  *-----------------------------------------------------* Uncorrelated part omitted *-----------------------------------------------------*  If a UE transmits SRS based on a configuration by IE *SRS-Positioning-Config* on active UL BWP of carrier of serving cell , the UE determines the SRS transmission power in SRS transmission occasion as  [dBm]  where,  - and are provided by *p0* and *alpha* respectively, for active UL BWP of carrier of serving cell , and SRS resource set is indicated by *SRS-ResourceSetId* from *SRS-ResourceSet*, and  - is a downlink pathloss estimate in dB calculated by the UE, as described in Clause 7.1.1 in case of an active DL BWP of a serving cell , using RS resource indexed in a serving or non-serving cell for SRS resource set [6, TS 38.214]. A configuration for RS resource index associated with SRS resource set is provided by *pathlossReferenceRS*  - if a *ssb-Index* is provided, *referenceSignalPower* is provided by *ss-PBCH-BlockPower*  - if a *dl-PRS-ResourceId* is provided, *referenceSignalPower* is provided by *dl-PRS-ResourcePower*  If the UE determines that the UE is not able to accurately measure , the UE calculates using a RS resource obtained from the SS/PBCH block of the serving cell that the UE uses to obtain *MIB*  The UE indicates a capability for a number of pathloss estimates that the UE can simultaneously maintain.  *-----------------------------------------------------* Uncorrelated part omitted *-----------------------------------------------------*  *-------------------------------------------End of related Descriptions in 38.213 g10---------------------------------------* |

**2. Actions:**

**To RAN4:**

**ACTION:** RAN1 kindly requests RAN4 to take the above information into consideration. Any feedback on the criterion of pathloss measurement failure would help RAN1 to clarify the meaning of “*the UE is not able to accurately measure*”.

**3. Date of Next TSG-RAN1 Meetings:**

TSG-RAN1 Meeting #101-e 25th May – 5th June 2020 e-meeting

TSG-RAN1 Meeting #102 24th – 28th August 2020 Toulouse, FR