**3GPP TSG-RAN5 Meeting #91-eR5-213282r2**

**Electronic Meeting, 17th May – 28th May 2021**

**Title:** LSon FR2 relative power tolerance

**Source:** TSG RAN WG5

**To:** TSG RAN WG4

**Cc:**

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**1. Overall Description:**

According to TS 38.101-2, relative power tolerance core requirements for FR2 Standalone defines under NOTE 2 in Table 6.3.4.3-2 that, for a target power level value P (PUMAX ≥ P > Pint), for PUSCH to PUSCH transitions with the allocated resource blocks fixed in frequency and no transmission gaps other than those generated by downlink subframes, guard periods: for a power step ΔP = 1 dB, the relative power tolerance for transmission is ± 1.0 dB.

However, such core requirement is not defined for a target power level P such that Pint ≥ P ≥ Pmin.

RAN5 also uses those requirements to define the achievable Uplink power window required in many test cases other than relative power control.

Additionally, FR2 relative power control tolerance indicates that for a test pattern that is either monotonically increasing or monotonically decreasing power sweep over the range specified for Tables 6.3.4.3-2 and 6.3.4.3-2, 3 exceptions are allowed.

It is not clear to RAN5 whether 3 exceptions are for the whole dynamic range addressed in both tables 6 6.3.4.3-2 and 6.3.4.3-2 or whether 3 exceptions are allowed for each table.

Consequently, RAN5 is finding it challenging to define test procedure for this core requirement taking into high FR2 measurement uncertainties for UL power control measurements and getting the core requirement only applicable when the power of the target and reference subframes belong to the same power range (either PUMAX ≥ P > Pint or Pint ≥ P ≥ Pmin). As an example, the available dynamic range for testing the 1 dB TPC tolerance may be as low as ~6dB (12 dB – 2\*TT) due to the test tolerances.

**2. Actions:**

**To:** TSG RAN WG4

**ACTION:** RAN5 kindly asks RAN4 group to:

* clarify which should be the value of relative power tolerance for PUSCH to PUSCH transitions for a power step ΔP=1dB for the case Pint ≥ P ≥ Pmin.
* clarify whether 3 exceptions are allowed for the whole dynamic range addressed in both tables 6 6.3.4.3-2 and 6.3.4.3-2 or whether 3 exceptions are allowed for each table.
* consider the possibility of combining the 2 power ranges into one.

**3. Date of Next TSG-RAN WG5 Meetings:**

TSG-RAN5 Meeting#92 16th – 27th Aug 2021 Electronic Meeting

TSG-RAN5 Meeting#93 8th – 19th Nov 2021 Electronic Meeting