**3GPP TSG-RAN WG1 Meeting #105-eR1-210xxxx**

**e-Meeting, May 10th – May 27th, 2021**

**Title: [DRAFT]** LS on the description of RRC parameter p0-AlphaSets and PRACH configuration in Rel-16

**Response to:**

**Release:** Rel-16

**Work Item:** NR\_2step\_RACH-Core

**Source:** ZTE [RAN1]

**To:** 3GPP TSG-RAN WG2

**CC:**

**Contact Person:**

#### Name: Li Tian

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**Attachments:** None

**1. Overall Description:**

RAN1 found out that the description of *p0-AlphaSets* in RRC spec is not aligned with RAN1 description in 38.213, since *p0-AlphaSets* should only be applied for normal PUSCH (i.e. not for msg3 or MsgA PUSCH). Currently the RRC spec only says “except msg3” which may cause ambiguity that this parameter can be also applied to MsgA PUSCH. Furthermore, P0-nominal was supported to use both P0-nominal for msg3 PUSCH or msgA PUSCH in 38.213 which is wrongly described in the field description here as well.

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| ***p0-AlphaSets***  configuration {p0-pusch, alpha} sets for PUSCH (except msg3), i.e., {{p0,alpha,index1}, {p0,alpha,index2},...} (see TS 38.213 [13], clause 7.1). When no set is configured, the UE uses the P0-nominal for msg3 PUSCH, P0-UE is set to 0 and alpha is set according to msg3-Alpha configured for msg3 PUSCH. |

With that, RAN1 suggest to make the following change (marked in red) on the description of *p0-AlphaSets* parameter in RRC specification for Rel-16.

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| ***p0-AlphaSets***  configuration {p0-pusch, alpha} sets for PUSCH (except msg3 and msgA), i.e., {{p0,alpha,index1}, {p0,alpha,index2},...} (see TS 38.213 [13], clause 7.1). When no set is configured, the UE uses the P0-nominal for msg3 PUSCH or for msgA PUSCH, P0-UE is set to 0 and alpha is set according to msg3-Alpha configured for msg3 PUSCH. |

On top of above, RAN1 also discusses whether 2-step RACH only operation in initial BWP is supported or not and whether 4-step RACH can be absent in all BWPs or should be always configured in initial BWP, following alternatives are discussed in RAN1:

* Alt 1: 4-step RACH can be absent on all BWPs in Rel-16
* Alt 2: 4-step RACH should be configured at least on the initial BWP in Rel-16

RAN1 needs RAN2 to further discuss and decide which alternative to go with, other alternatives are not precluded.

**2. Actions:**

**To RAN2:**

**ACTION:** RAN1 respectfully ask RAN2 to take the above into account and inform RAN1 on the decision of the alternatives regarding the 4-step RACH configuration.

**4. Date of Next TSG-RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #106-e 16 Aug. – 27 Aug. 2021 Electronic Meeting

TSG-RAN WG1 Meeting #106-bis-e 11 Oct. – 19 Oct. 2021 Electronic Meeting