**3GPP TSG RAN WG1#106-e R1-21xxxxx**

**e-Meeting, 16th – 27th August, 2021**

**Title: [DRAFT]** LS to RAN2 on default value for rb-Offset

**Release:** Rel-16

**Work Item:** NR\_unlic

**Source: Moderator (Ericsson)** (->TSG RAN WG1)

**To:** TSG RAN WG2

**Contact person:** Stephen Grant

 stephen.grant@ericsson.com

# 1 Overall description

In RAN2 specification 38.331 within the *ControlResourceSet* IE, the parameter *rb-Offset* introduced in Rel-16 is defined. The parameter has the following field description which provides a default value in case the parameter is not configured:

|  |
| --- |
| ***rb-Offset***Indicates the RB level offset in units of RB from the first RB of the first 6RB group to the first RB of BWP (see 38.213 [13], clause 10.1). When the field is absent, the UE applies the value 0. |

RAN1 has identified an incompatibility between the default value definition in 38.331 and RAN1 specification 38.213. The issue can be seen from the following text extract from Section 10.1:

For each CORESET in a DL BWP of a serving cell, a respective *frequencyDomainResources* provides a bitmap

- if a CORESET is not associated with any search space set configured with *freqMonitorLocations*, the bits of the bitmap have a one-to-one mapping with non-overlapping groups of 6 consecutive PRBs, in ascending order of the PRB index in the DL BWP bandwidth of $N\_{RB}^{BWP}$ PRBs with starting common RB position $N\_{BWP}^{start}$, where the first common RB of the first group of 6 PRBs has common RB index $6⋅\left⌈N\_{BWP}^{start}/6\right⌉$ if *rb-Offset* is not provided, or the first common RB of the first group of 6 PRBs has common RB index $N\_{BWP}^{start}+N\_{RB}^{offset}$ where $N\_{RB}^{offset}$ is provided by *rb-Offset.*

In this text extract, the UE behavior is specified both for the case when the parameter *rb-Offset* is not provided (cyan highlighted text) and when the parameter *rb-Offset* is provided (yellow highlighted text). The issue is that for a Rel-15 UE or a Rel-16 UE not configured with a search space set configured with the Rel-16 parameter *freqMonitorLocations*, the cyan text will not be executed since the physical layer is always provided a value for *rb-Offset* due to the default value definition in 38.331.

RAN1 has discussed both RAN1 and RAN2-centric solutions, and has agreed that it would be more straightforward for RAN2 to make a change to 38.331 to resolve the incompatibility. The RAN2-centric solution that RAN1 discussed is the following; however, RAN1 acknowledges that the final decision is up to RAN2.

|  |
| --- |
| ***rb-Offset***Indicates the RB level offset in units of RB from the first RB of the first 6RB group to the first RB of BWP (see 38.213 [13], clause 10.1). ~~When the field is absent, the UE applies the value 0.~~ |

# 2 Actions

**To TSG RAN WG4**

**ACTION:** RAN1 respectfully requests RAN2 to implement a suitable correction to 38.331 to remove incompatibility between RAN1 and RAN2 specs with respect to the Rel-16 parameter *rb-Offset*.

# 3 Dates of next TSG RAN WG1 meetings

TSG RAN WG1 Meeting #106bis-e 11 – 19 October 2021 Online

TSG RAN WG1 Meeting #107-e 11 – 19 November 2021 Online