3GPP TSG-RAN2 Meeting #116e-bis R2-210xxxx

e-Meeting, 16th-27th August 2021

Source: Email discussion Rapporteur (Ericsson)

Title: [Post116-e][514][RACH partitioning] Signaling design (Ericsson)

Agenda item: x.y.x

Document for: Discussion and Decision

# Introduction

This document contains summary of **detailed** input to the email discussion as detailed below:

* [Post116-e][514][RACH partitioning] Signaling design (Ericsson)
* Discussion points on details/principles yet to be defined
* A running CR (based on current status) that also incorporates the above when some kind of direction can be made; maybe with a few, preferable very few, alternatives.
* Deadline: Long

Deadline for company comments and responses to technical isses: 15th December, 12:00 am UTC.

The Rapporteur will attempt to summarize and make updates to the running CR based on progress and consensus.

# General

In a draft running CR for RA partitioning a first draft proposed signalling structure have been implemented.

In the below table, please fill in applicable **detailed** comments, if any, on the draft running CR for RA partitioning.

Note that current agreements made for RA partitioning can be found as an Annex in the draft running CR.

🡪 *Minor comments related to the running CR can be made directly in the CR itself*. However, for discussion points where companies would to present more complex comments or suggestions, the below table should be used.

Suggestion: In the below companies should aim for a technical discussion, not only single view input in order to progress outstanding design principals/details.

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| Company | Section/Item or IE, etc | Detailed comment with motivation | Example code, procedure |
| Intel#1 | RACH-ConfigCommon | We noticed tha feaureCombination-r17 is in 2 places: One in the RACH-ConfigCommon-r17 and another in the featureCombinationPreambles-r17. We think that only the one in the featureCombinationPreambles-r17 is needed when the RACH resource configured is for both RO sharing case and non-RO sharing cases.  For the non-RO sharing case, the featureCombinationPreambles-r17 just provides the featureCombination-r17 | Remove the IE featureCombination-r17 in the RACH-ConfigCommon-r17 |
| Intel#2 | FeatureCombinationPreambles-r17 | With the change in Intel#1, the featureCombination-r17 can be made mandatory in FeatureCombinationPreambles-r17. Currently, it is unclear the expected behaviour if this field is absent with the configuration of featureCombinationPreambles-r17 | Remove OPTIONAL for featureCombination-r17 |
| Intel#3 | featureCombinationPreambles-r17 added to RACH-ConfigCommon and RACH-ConfigCommonTwoStepRA | Our understanding is that this new addition can also be applied to legacy 2-step and 4-step RACH configuration. Is this the intended/correct understanding?  If so, the preamble partitioning for the other feature combination has to come after the end of the preamble partitioning of the legacy 2-step RACH.  If this still needs further discussion, please add an editor note. |  |
| Intel#4 | featureCombinationPreambles-r17 added to RACH-ConfigCommon and RACH-ConfigCommonTwoStepRA | For the additional RACH configuration, we assume that the preamble partitioning will start with the 4-step RACH and will be partitioned with the group A + B of the first feature combination to the group A + B of the last feature combination configured for the 4-step RACH configuration. The preamble partitioning for 2-step RACH will then start from the end of the of the last feature combination configured for the 4-step RACH configuration and the preamble partitioning for the feature combination configured for 2-step RACH will follow as like the 4-step case (i.e. partitioned with the group A + B of the first feature combination to the group A + B of the last feature combination configured for the 2-step RACH configuration).  If this still needs further discussion, please add an editor note. | Summarizing the RACH partitioning in the case of shared RO among feature/feature combinations of e.g. F1, F2, F1+F2 with 2-step and 4-step RACH also sharing the RO will be like the following: |
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# Summary and proposals

TBD

# Annex (contact details for email discussions)

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