**3GPP TSG RAN WG1 Meeting #107-e** **R1-211xxxx**

**Nov 11th – Nov 19th, 2021**

**Agenda item: 8.2**

**Source: Rapporteur (Qualcomm Incorporated)**

**Title: Comments collection for RRC parameters for extending NR to 52.6-71GHz**

**Document for: Discussion and Decision**

# Introduction

This paper is a place holder to collect comments for RRC parameters for 60GHz work item. The RRC parameters are captured in the excel sheet in the same folder.

# Comments

## Initial access aspects

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| Company | View |
| Samsung | Just one minor comment: Row 2 and Row 3 should also be “depends on locations” for column N, since SubcarrierSpacing-r17 can be either cell-specific or UE-specific depending on which IE includes such parameter. |
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## PDCCH monitoring enhancements

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| Company | View |
| Samsung | For Row 14, it’s better to copy the whole agreement from RAN1 in Column P. Understand the agreement is long, but it’s better to keep the original agreement for consistency and more accurate information delivery to RAN2. |
| Intel | Row 14, multiSlotMonitoring-OptionalCombinations is a capability and belongs in the UE feature list not in RRC list. Suggest removing this from the RRC list. |

## Enhancements for PUCCH formats 0/1/4

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## Beam management for new SCSs

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## PDSCH/PUSCH enhancements

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| Company | View |
| vivo | There was one agreement (copied below) we made in last meeting not captured into RRC parameter list of RAN1#106bis-e yet.  Agreement:  For NR operation with 480 kHz and/or 960 kHz SCS, the value range of k1 indicated in RRC is -1 ~ 127 for DCI format 1\_1 and 0 ~ 127 for DCI format 1\_2.  Comment 1:  Need to add new IE or extend range of existing IE (up to RAN2) and the value range of *DL-DataToUL-ACK-r17* inside *PUCCH-Config* is (-1 .. 127) applicable to 480 and 960 kHz  Comment 2:  Need to add new IE or extend range of existing IE (up to RAN2) and the value range of *DL-DataToUL-ACK-DCI-1-2-r17* inside *PUCCH-Config* is (0 .. 127) applicable to 480 and 960 kHz |
| DOCOMO | Based on the latest status in this meeting, a new RRC parameter for time domain bundling for Type 1 HARQ-ACK CB needs to be introduced.  **Agreement**  For multi-PDSCH scheduling with a single DCI   * Introduce a new RRC parameter, e.g., *enableTimeDomainHARQ-Bundling*, to enable time domain bundling operation for type-1 HARQ-ACK codebook per serving cell.   + If the RRC parameter enables time domain bundling operation,     - To determine the set of candidate PDSCH reception occasions,       * A row index is removed if at least one symbol of every PDSCH associated with the row index is configured as semi-static UL. (NOTE: This is similar to the case of slot aggregated PDSCH in Rel-16)       * Pruning procedure in Rel-16 is performed based on the last configured SLIV of each row index.     - Logical AND operation is applied across all valid PDSCHs associated with a determined candidate PDSCH reception occasion, at least for 1-TB case.     - FFS: UE does not expect the last scheduled SLIV overlaps with a semi-static UL symbol when parameter *enableTimeDomainHARQ-Bundling* is configured |
| Intel | Agree with DoCoMo that the RRC parameter *enableTimeDomainHARQ-Bundling* should be captured for Type-1 codebook. Further, there is another RRC parameter *numberOfHARQ-BundlingGroups* that is agreed for Type2 codebook.  **Agreement**  For multi-PDSCH scheduling with a single DCI   * Introduce a new RRC parameter, e.g., *numberOfHARQ-BundlingGroups*, to configure the number of HARQ bundling groups with value range {1, 2, 4} for type-2 HARQ-ACK codebook per serving cell.   + … |
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## Channel access mechanism

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| Company | View |
| Qualcomm | Given the following agreement:  **Agreement**  For Non-Fallback DCI formats, for FR2-2 operation, for the configuration of the ChannelAccess-CPext field in DCI to indicate the channel access type only, new tables are introduced indicating channel access types for FR2-2, with entries “Type 1 channel access in 4.4.1 of 37.213”, “Type 2 channel access in 4.4.2 of 37.213” and “Type 3 channel access in 4.4.3 of 37.213”.  For existing IE UL-AccessConfigListDCI-0-1-r16 and UL-AccessConfigListDCI-1-1-r16, we will need to change the range for them to SEQUENCE (SIZE (1..3)) OF INTEGER (0..2) |
| DOCOMO | We agree with Qualcomm. Maybe IE UL-AccessConfigListDCI-0-1-r17 and UL-AccessConfigListDCI-1-1-r17 can be define with SEQUENCE (SIZE (1..3)) OF INTEGER (0..2), which we also believe is up to RAN2. |

## Others

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