**Rel-18 TEI agreements by RAN1#113**

1. Periodicity of the scheduling request

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| Agreement  Introduce 5 and 10 slot periodicities to the periodicityAndOffset in SchedulingRequestResourceConfig for 120 kHz and 5 slot for 30 kHz SCS  Sent LS to RAN2 about the introduction of these parameters - Mattias (Ericsson)  **Decision:** The draft LS [R1-2302152](file:///C:\Users\5173832\AppData\Local\Temp\Docs\R1-2302152.zip) is endorsed in principle with removing repeated “in” the action. Final LS is approved in [R1-2302187](file:///C:\Users\5173832\AppData\Local\Temp\Docs\R1-2302187.zip). |

1. 1-symbol PRS

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| Agreement  Introduce 1-symbol PRS with legacy comb sizes.   * UE expects the suitable expected RSTD windows provided by LMF such that peak ambiguity is addressed. Otherwise no measurement accuracy requirements are expected to be met. * Not to define RAN4 RRM requirement, including core/performance in Rel-18 * Send an LS to RAN2 and RAN3 to ask necessary signalling enhancements   **Decision:** The draft LS [R1-2302200](file:///C:\Users\5173832\AppData\Local\Temp\Docs\R1-2302200.zip) is endorsed in principle. Final LS is approved in [R1-2302201](file:///C:\Users\5173832\AppData\Local\Temp\Docs\R1-2302201.zip).  **Agreement**  Send the following to RAN2 in response to R1-2304328. Final LS in R1-2306212.   |  | | --- | | RAN1 would like to thank RAN2’s reply R2-2304510(R1-2304328) on 1-symbol PRS.  With regard to RAN2’s question, RAN1 thinks the changes to DL PRS configuration used for RTT-based Propagation Delay Compensation are needed. In addition, RAN1 proposes the following note to be added in the *numSymbols* field description:   * Note: The UE does not expect to be configured for PDC with a PRS with *numSymbols* equals to n1 unless an SSB index is provided as a Type-C or Type-C & Type-D QCL source, or another PRS resource with *numSymbols* more than 1 is provided as QCL source.   Furthermore, RAN1 does not expect RRM requirements to be defined for 1-symbol PRS in PDC. | |

1. Multi-PUSCH scheduling with single DCI

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| Agreement  Introduce UE feature(s) for multi-PUSCH scheduling with single DCI 0\_1 for non-contiguous slots in FR1 for all defined SCSs   * Note: there is no RAN1 impact |

1. Enhancement for HARQ multiplexing on PUSCH

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| **Agreement**  If UCI multiplexing of different priorities is not enabled, the restriction on scheduling PDSCH after UL grant is removed for the case of PUSCH with repetitions except the first repetition   * UE generates Type-1 HARQ-ACK codebook according to the existing specification with the modification of setting the actual ‘ACK/NACK’ value corresponding to PDSCH(s) scheduled after the UL grant. * UE generates Type-2/3 HARQ-ACK codebook according to the existing specification.   + For Type-2 CB, UL DAI is used for generating HARQ CB. * This feature is subject to separate UE capabilities for type-1, type-2, and type-3 codebooks. * RRC parameter(s) to configure the function of scheduling PDSCH after a UL DCI format and multiplexing associated HARQ on a PUSCH repetition except the first repetition are introduced in Rel-18. * Note: the number of PUSCH repetitions can be scheduled/configured by gNB. * Note: same principle of current specification which UL DAI in UL grant is applied to each PUSCH repetition is reused. * The timeline specified in TS 38.213 Clause 9.2.5 are satisfied, i.e. between the last PDSCH and PUCCH, between the last PDCCH among UL grant /DL grant(s) and the earliest PUCCH or PUSCH * Additional UE capabilities are introduced to support the following functions (UE will be configured by gNB to use the following features via RRC)   + HARQ-ACK codebook size change on a PUCCH slot   + PUCCH resource change on a PUCCH slot |

1. Pathloss RS for Type 1 CG-PUSCH

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| **Agreement**  Rel-18 TEI proposal on pathloss RS for Type 1 CG-PUSCH is agreed. Relevant TP for clause 7.1.1 in TS 38.213 is endorsed in principle   * Note: Corresponding UE capability and RRC configuration will be introduced and discussed in future meetings.  |  | | --- | | 7.1.1 UE behaviour  ……  **<Unchanged parts are omitted>**  - For a PUSCH transmission configured by *ConfiguredGrantConfig,* if *rrc-ConfiguredUplinkGrant* is included in *ConfiguredGrantConfig*,   * if the UE is provided [*enablePL-RS-UpdateForType1CG-PUSCH-SRS*]*,* the UE determines a RS resource index *qd* from the value of *PUSCH-PathlossReferenceRS-Id* that is mapped to the *sri-PUSCH-PowerControlId* indicated by the *srs-ResourceIndicator* value included in *rrc-ConfiguredUplinkGrant* * if the UE is not provided [*enablePL-RS-UpdateForType1CG-PUSCH-SRS*]*,* a RS resource index *qd* is provided by a value of *pathlossReferenceIndex* included in *rrc-ConfiguredUplinkGrant* where the RS resource is either on serving cell *c* or, if provided, on a serving cell indicated by a value of *pathlossReferenceLinking* * ……   **<Unchanged parts are omitted>** | |