



3GPP TSG RAN Meeting #90-e
Electronic Meeting, December 7 - 11, 2020

RP-202552

Agenda item: 9.8.19

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Proposal to extend R17 FeRRM WI scope

Background on R17 FeRRM scope

- In RP-202022, some status of the discussion has been duplicated as below,
 - The following 3 topics have clear majority support with no significant technical concerns. The wording for the objectives requires finer retuning.
 - Topic 2.5 SRS antenna port switching (support: 14, concerns: 0)
 - Topic 2.11: HO with PSCell (support: 11, concerns: 0)
 - Topic 2.13: PUCCH SCell activation/deactivation (support: 10, concerns: 0)
 - The following 2 topics have received reasonable number of supports which is significantly higher than the concerns.
 - Topic 5.1: CMTC for CSI-RS L3 measurement (support: 7, concerns: 2)
 - Topic 2.15: TCI switching enhancement in REL-17 (support: 6, concerns: 3)
 - The following 3 topics remain as controversial with split opinions
 - Topic 2.14: IDLE mode requirement for SMTC2-LP (support: 3, concerns: 3)
 - Topic 2.4: RLM enhancement requirement (support: 3, concerns: 4)
 - Topic 5.2: Synchronization assumption for CSI-RS L3 measurement (support: 3, concerns: 4)
 - Topic 5.4: Dedicated CSI-RS measurement engine (support: 2, concerns: 2)
 - It is recommended to
 - Agree to introduce topic 2.5, 2.11 and 2.13 in RRM WID. The detailed objectives are subject to finer retuning
 - Due to clear majority view, further discuss topic 5.1 and 2.15 in intermediate round.
- Eventually, the top 3 topics have been captured in the formal WI scope of R17 FeRRM; however, we think the topic 5.1 and topic 2.15 is also worthwhile to be included in R17 scope.



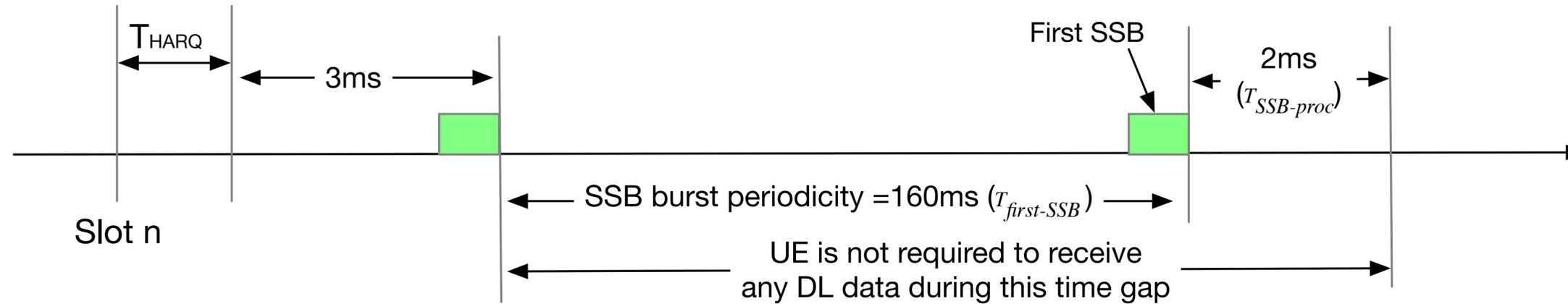
Proposal 1 | Add CMTC for CSI-RS L3 measurement to FeRRM scope

- Background
 - So far the timing limitation for CSI-RS L3 measurement is specified as a requirement applicability in RAN4, but it's not a real systematic solution for network and UE to configure and perform L3 CSI-RS measurement, respectively.
 - In our understanding, it's desirable to introduce clear timing window for L3 CSI-RS measurement, like SMTC for SSB based L3 measurement.
- Working scope
 - CMTC for CSI-RS L3 measurement [RAN4, RAN2]
 - RRM requirement based on CMTC for CSI-RS L3 measurement
 - Signalling design for CMTC of CSI-RS L3 measurement

Proposal 2 | Add TCI switching enhancement to FeRRM scope

■ Background

- In Rel-16 TCI switching requirement, there was a time gap from “slot $n + T_{HARQ} + (3 \text{ ms}) / NR \text{ slot length}$ ” to “slot $n + T_{HARQ} + (3 \text{ ms} + T_{OK} * (T_{first-SSB} + T_{SSB-proc})) / NR \text{ slot length}$ ”. Since UE is not required to receive DL data during this time gap, it will probably impact the throughput performance in case the first SSB arrives 160ms later (analyzed in R4-2006616). RAN4 to further discuss if UE behavior can be enhanced to receive DL data during the time gap of $T_{first-SSB}$ in Rel-17.



■ Working scope

- TCI switching enhancement in REL-17 [RAN4, RAN1]
 - Work on the feasibility of enhancement to maintain the UE reception and transmission during the period (or part of period) of MAC CE based TCI switching
 - Work on the feasibility of enhancement to maintain the UE reception and transmission during the period (or part of period) of RRC based TCI switching

Proposal 3 | Collision between SSB/CSI-RS based L1 and CSI-RS L3

- Background

- In RAN4 #97e meeting, one conclusion has been made on collision between SSB/CSI-RS based L1 and CSI-RS based L3 measurements in approved WF R4-2017223:
 - Do not define CSI-RS measurement requirements in Rel-16 for the collision between CSI-RS based L3 measurement of neighbor cell and serving cell measurement for SSB/CSI-RS based RLM/BFD or other SSB/CSI-RS based L1 measurements
- The measurement requirement of CSI-RS based L3 measurement shall be clarified in R17 in case of collision between SSB/CSI-RS based L1 and CSI-RS based L3

- Working scope

- Measurement requirement for collision between SSB/CSI-RS based L1 and CSI-RS based L3 in REL-17 [RAN4]
 - CSI-RS L3 measurement requirement in case of collision between SSB/CSI-RS based L1 and CSI-RS based L3 measurements
 - SSB/CSI-RS based L1 measurement requirement in case of collision between SSB/CSI-RS based L1 and CSI-RS based L3 measurements

