3GPP TSG-RAN WG2 Meeting #125 draft-R2-2401550

Athens, Greece, Feb. 26th – Mar. 1st, 2024

Source: Session Chair (ZTE)

Title: Report from *Further NR coverage enhancements* session

**Status of At-Meeting Email Discussions**

* [AT125][800][CE\_enh] Organisational (Session chair: ZTE)

 Scope:

* Share plans and list ongoing email discussions and their status
* Share meeting notes for any comments

Status: Ongoing

* [AT125][801][CE\_enh] Discuss the eREDCAP and REDCAP switching for CFRA (LG)

 Intended outcome: Agreeable details for handling of eREDCAP to REDCAP switching for CFRA

 Deadline: Thursday Feb 29th (TBD)

Status: Concluded

* [AT125][802][CE\_enh] Check the max number of additionalRach-ConfigList (Ericsson)

 Intended outcome: Agreeable value for the max number of addtionalRach-ConfigList

 Deadline: Thursday Feb 29th (TBD)

Status: Concluded

* [AT125][803][CE\_enh] Details of ra-ssb-OccasionMaskIndex for CFRA with Msg1 repetition (Samsung)

 Intended outcome: Agreeable Details of ra-ssb-OccasionMaskIndex for CFRA with Msg1 repetition

 Deadline: Thursday Feb 29th (TBD)

Status: Concluded

**Summary of Post-Meeting Email Discussions**

* [POST125][804][CE\_enh] Updated RRC CR (Huawei)

 Scope: Update the RRC CR with the agreements from this meeting

Intended outcome: Updated version of RRC CR to be provided in R2-2401771

Deadline: Short (for plenary)

* [POST125][805][CE\_enh] Updated MAC CR (ZTE)

 Scope: Update the MAC CR with the agreements from this meeting

Intended outcome: Updated version of MAC CR to be provided in R2-2401772

Deadline: Short (for plenary)

## 7.21 Further NR coverage enhancements

(NR\_cov\_enh2-Core; leading WG: RAN1; REL-18; WID: [RP-221858](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2396%5CTdocs%5CRP-221858.zip))

Time budget: 0 TU

Tdoc Limitation: 2 tdoc

### 7.21.1 Organizational

Incoming LSs, Rapporteur input etc.

Editorials/clarifications should not be included in any tdoc but sent to the WI spec rapporteurs, who can submit a rapporteur CR as part of this AI.

Rapporteur inputs and other pre-assigned documents in this AI do not count towards the tdoc limitation.

**LS in**

[R2-2400012](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400012_R1-2312339.docx) Reply LS on PHR reporting (R1-2312339; contct: InterDigital) RAN1 LS in Rel-18 NR\_cov\_enh2-Core To:RAN2

* Noted

[R2-2400046](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400046_R4-2321998.docx) LS reply on further clarifications on enhancements to realize increasing UE power high limit for CA and DC (R4-2321998; contact: Huawei) RAN4 LS in Rel-18 NR\_cov\_enh2 To:RAN2 Cc:RAN1

* The capability of ΔPPowerClass reporting feature is per UE and this will be directly implemented in the mega CR
* Noted

[R2-2400060](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400060_R4-2321960.docx) LS on UE capabilities for MPR reduction (R4-2321960; contact: Nokia) RAN4 LS in Rel-18 NR\_cov\_enh2 To:RAN2, RAN1

* powerBoostRel18 and powerBoostTSRel18 capabilities need to be implemented in the mega CR
* Capture the RAN4 agreements in the RRC CR and also capture that legacy powerBoostPi2BPSK cannot be configured at the same time as powerBoostPi2BPSKRel18 in the RRC – details can be checked offline.
* Noted

**Rapporteur input CRs**

[R2-2400131](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400131%20Miscellaneous%20corrections%20to%20CE%20in%20RRC.docx) Miscellaneous corrections to CE in RRC Huawei, HiSilicon CR Rel-18 38.331 18.0.0 4516 - F NR\_cov\_enh2-Core

**Discussion**

* Chair suggests to update the cover sheet with more detail added for the RILs implemented
* Can be used as baseline for further updates.
* coordinate the final RRC CRs between REDCAP and CE rapporteurs to ensure they are complete and compatible.
* The CR is Revised in R2-2401771

R2-2401771 Miscellaneous corrections to CE in RRC Huawei, HiSilicon CR Rel-18 38.331 18.0.0 4516 1 F NR\_cov\_enh2-Core

* Will be produced as the output of the Post meeting email discussion [804]

[R2-2400183](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400183_Stage-2%20CR%20for%20Further%20NR%20coverage%20enhancements.docx) Stage-2 CR for Further NR coverage enhancements China Telecom CR Rel-18 38.300 18.0.0 0776 - F NR\_cov\_enh2-Core

**Discussion**

* Apple think the change is okay, but want to also capture that the UE can only do fallback from lower to higher repetition number for share RO case
* LG don’t think we need to specify here that NTN is supported for CE case since this is not done for other features such as redcap. Also no need to specify the fallback clarification as stage 3 is clear.
* China Telecom explain are okay if this is clear in Stage3
* Not pursued.

[R2-2401438](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401438%20Miscellaneous%20MAC%20corrections%20for%20CE.docx) Miscellaneous MAC corrections for CE ZTE Corporation CR Rel-18 38.321 18.0.0 1779 - F NR\_cov\_enh2-Core Late

**Discussion**

* Huawei point out that there are some RILs from the main session that are overlapping with REDCAP session it is unclear which WI will implement this.
* Ericsson clarify that the agreements in CE session can be implemented in the CE CR.
* Use this as baseline for further updates.
* The CR is Revised in R2-2401772

R2-2401772 Miscellaneous MAC corrections for CE ZTE Corporation CR Rel-18 38.321 18.0.0 1779 1 F NR\_cov\_enh2-Core Late

* Will be produced as the output of the Post meeting email discussion [805]

**RIL List**

[R2-2401536](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2401536.zip) CE RIL resolutions Huawei, HiSilicon Late

Discussion

* HW: This version is not based on the latest RIL list but there are no further additions. Chair thinks this is fine.
* Noted
* PropAgree: I125, E061, H060, E063, B005, W020 -> Agreed
* PropReject: E056 -> Rejected

Copied from 7.0.3

ASN.1 Common RILs without a contribution to 7.0.3:

The ASN.1 Rapporteur has noted the following common RILs without a contribution to 7.0.3:

* Z420, Z423, Z428, Z430 (RedCap, CovEnh) – This is covered in CovEnh session.
* Z420, Z423, Z428, Z430 -> Agreed

R2-2401773 Updated CE RIL resolutions post R2#125 Huawei, HiSilicon Late

### 7.21.2 Control plane corrections

**MSG1 repetition applicability to eRedcap**

[R2-2400133](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400133%20Discussion%20on%20open%20issues%20on%20control%20plane%20for%20CE.docx) Discussion on open issues on control plane for CE Huawei, HiSilicon discussion NR\_cov\_enh2-Core

Proposal 1:MSG1 based SI request with repetition can be applicable to eRedcap UE and no new SI request configuration is needed, i.e. si-RequestConfigRedCap-MSG1-Repetition and posSI-RequestConfigRedCap-MSG1-Repetition are used for eRedcap.

[R2-2400984](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400984%20Support%20of%20Msg1%20repetition%20for%20eRedCap%20UEs.docx) Support of Msg1 repetition for eRedCap UEs LG Electronics Inc. discussion Rel-18 NR\_cov\_enh2-Core

* Revised in [R2-2401500](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401500%20Support%20of%20Msg1%20repetition%20for%20eRedCap%20UEs.docx)

[R2-2401500](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401500%20Support%20of%20Msg1%20repetition%20for%20eRedCap%20UEs.docx) Support of Msg1 repetition for eRedCap UEs LG Electronics Inc. discussion Rel-18 NR\_cov\_enh2-Core Late

Proposal 1. Support Msg1 repetition for eRedCap UE in all cases for Msg1 repetition.

Proposal 2. If the Msg1 repetition number is configured in RACH-ConfigDedicated when eRedCap is applicable, RACH partition for eRedCap indication and Msg1 repetition indication and associated with the indicated Msg1 repetition number is selected (i.e., eRedCap + Msg1 repetition with same repetition number).

**Discussion**

* ZTE if there is no eREDCAP resource can the UE select REDCAP resource?
* LG don’t think this is needed. This can be solved by network restrictions.
* CATT: Agree with ZTE as this is aligned with the how RECAP is specified.
* Huawei: Concerned that this will make the separation between REDCAP and eREDCAP features a bit blurred.
* Qualcomm: Also think this is not needed.
* ZTE explain that for CBRA such switching between REDCAP and eREDCAP was allowed by REDCAP session. The problem is also what happens if the UE fallsback to CBRA.
* LG think this can be solved using network restrictions.

**CB01**: Offline discussion to discuss the eREDCAP and REDCAP switching for CFRA (LG).

* [AT125][801][CE\_enh] Discuss the eREDCAP and REDCAP switching for CFRA (LG)

 Intended outcome: Agreeable details for handling of eREDCAP to REDCAP switching for CFRA

 Deadline: Thursday Feb 29th (TBD)

Proposal 3. For eRedCap UE, network restriction to configure Msg1 repetition number in RACH-ConfigDedicated should be determined based on whether eRedCap is applicable or RedCap is applicable for the current RA procedure as follows:

- If eRedcap is applicable for eRedCap UE, Msg1 repetition number can only be configured in RACH-ConfigDedicated if there is CBRA resource eRedCap indication and Msg1 repetition indication with the same Msg1 repetition number is configured.

- If Redcap is applicable for eRedCap UE, Msg1 repetition number can only be configured in RACH-ConfigDedicated if there is CBRA resource RedCap indication and Msg1 repetition indication with the same Msg1 repetition number is configured.

Proposal 4. Dedicated RA resource for Msg1-based SI request with Msg1 repetition for RedCap UE, i.e., si-RequestConfigRedCap-MSG1-Repetition and posSI-RequestConfigRedCap-MSG1-Repetition IE, can be used by eRedCap UEs.

R2-2401774 Report of [AT125][CE\_enh][801] LG Electronics report

Proposal 1: No fallback from eRedCap to RedCap with Msg1 repetition for CFRA, once RRC indicates that eRedCap is applicable. TP in Annex A is be used as a baseline.

Proposal 2: Update the field description of condition presence for msg1-Repetitions should be updated to consider eRedCap UE. TP in Annex B is used as a baseline, and update the text during the post e-mail discussion.

DISCUSSION

* RRC Rapporteur thinks we can endorse the TP.

**=> No fallback from eRedCap to RedCap with Msg1 repetition for CFRA, once RRC indicates that eRedCap is applicable. TP in Annex A is be used as a baseline.**

**=> Update the field description of condition presence for msg1-Repetitions should be updated to consider eRedCap UE. TP in Annex B is endorsed and can be used as a baseline**

[R2-2401101](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401101%20Discussion%20on%20the%20CP%20remaining%20issues%20of%20CE.docx) Discussion on the CP remaining issues of CE CATT discussion Rel-18 NR\_cov\_enh2-Core

Proposal 1: Msg1 repetition is applicable to eRedCap.

**Discussion on all the three papers above**

* Msg1 repetition is applicable to eRedCap
* No new SI request configuration is needed, i.e. si-RequestConfigRedCap-MSG1-Repetition and posSI-RequestConfigRedCap-MSG1-Repetition are used for eRedcap (field description update to clarify that this applies to also (e)RedCap will be captured in eRedCap RRC CR)

**DPC Capability reporting (related to LS in** [**R2-2400060**](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400060_R4-2321960.docx)**)**

[R2-2401308](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401308%20Capability%20for%20DPC%20reporting.docx) Capability for DPC reporting Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_cov\_enh2-Core

* Noted

Proposal: Introduce per UE capability for the DPC reporting in TS 38.306

**RIL Issues**

[R2-2400328](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400328%20%5BH501%5D%5BH815%5D%5BH505%5D%20Modeling%20on-demandSIreq%20as%20RACH%20feature%20in%20R18.docx) [H501][H815][H505] Modeling OdSI request with msg1 repetition as RACH feature Huawei, HiSilicon discussion Rel-18 NR\_cov\_enh2-Core

Proposal1: From RRC point of view, configure RACH resource for on-demand SI request by RACH partitioning. Support on-demand SI request with msg1 repetition by the feature combination of on-demand SI request and msg1 repetition. Adopt the TP in Annex A.

Proposal2: From MAC point of view, specify selection of the RACH resource set for on-demand SI request with msg1 repetition by the legacy procedure for CBRA. Adopt the TP in Annex B.

[R2-2401439](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401439%20Remaining%20CP%20issues%20for%20CE.docx) Remaining CP issues for CE ZTE Corporation discussion Rel-18 NR\_cov\_enh2-Core Late

Proposal: Do not modify the ASN.1 signalling of Msg1-based on-demand SI with Msg1 repetition (e.g. SI-RequestConfigRepetition-r18).

**Discussion on above two papers**

* Samsung agree with ZTE and nothing is broken. The basic principle for SI is similar to CFRA and this can be kept like this.
* LG also agree with Samsung and ZTE (it is too late now to change this). Redefining this would also need a separate feature priority for this and will lead to more changes. There are no serious issues with current structure
* Vivo Same view as ZTE and Samsung.
* Huawei think that the current spec is not clear (i.e. the root sequence to be used is not clear).
* No changes to the ASN.1 signaling for on-demand SI with message 1 repetition. If some clarifications in field description is needed to clarify that common configuration is used for certain parameters, this can be discussed further.
* H501, H505 and H815 are rejected

**Other Issues**

[R2-2400586](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400586%20Discussion%20on%20Coverage%20Enhancements%20Control%20Plane.docx) Discussion on Coverage Enhancements Control Plane Ericsson discussion Rel-18 38.331 NR\_cov\_enh2-Core

Proposal 1 Update the field description for additionalRACH-ConfigList to allow for 64 configurations.

* Qualcomm think that this is fine from a CE perspective and we can coordinate this with REDCAP like we did at the last meeting and think that 32 is enough.

**CB02: Check offline if going to 64 is okay coordinate with this also with non-CE delegates (Ericsson)**

* [AT125][802][CE\_enh] Check the max number of additionalRach-ConfigList (Ericsson)

 Intended outcome: Agreeable value for the max number of addtionalRach-ConfigList

 Deadline: Thursday Feb 29th (TBD)

* Rapporteur informs that some issues were identified offline with the proosed increase of the number of additionalRACch-ConfigList and it was agreed not to pursue this further.
* Mediatek point out that even the increase to 32 is pointless because this has the sideeffect of actually reducing the number of partitions in the SIB1, so, infact we should revert it back to 16 as in Rel-17 (or this increase should be tied to some capability as it increases the memory requirements at the UE).
* Increase of max number of additionalRach-ConfigList to 64 is not pursued

### 7.21.3 User plane corrections

**MSG1 repetition applicability to NTN**

Moved from 7.21.2

[R2-2400181](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400181_Discussion%20of%20PRACH%20repetition%20for%20TN%20and%20NTN.doc) Discussion of PRACH repetition for TN and NTN China Telecom discussion Rel-18 NR\_coav\_enh2-Core

Proposal 1: Msg1 repetition in NTN is supported.

Proposal 2: For Msg1 repetition of NTN, start the ra-ResponseWindow as specified in TS 38.213 after all repetitions ending.

Proposal 3: RAN2 consider the TP in the Annex for Msg1 repetition of NTN.

**Discussion**

* Samsung support the TP
* QC thinks some further clarification is needed
* Xiaomi: think we can leave everything to phy specs
* LG: RAN1 capture something but we need to specify something in MAC as well and the TP in this paper is fine.
* CATT, ZTE are also okay with China telecom TP
* Msg1 repetition in NTN is supported
* For the Msg1 repetition specification for NTN in MAC, use the TP in [R2-2400181](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400181_Discussion%20of%20PRACH%20repetition%20for%20TN%20and%20NTN.doc) as a baseline

**DWS with Multi-TRP**

R2-2400127 Discussion on the Support of DPC with Multiple-TRP vivo discussion Rel-18 NR\_cov\_enh2-Core

Proposal 4: RAN2 confirms that twoPHRMode can be configured along with R18 DWS configuration.

[R2-2400793](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400793%20Coverage%20Enhancements%20User%20Plane%20Open%20Issues.docx) Open Issues in Coverage Enhancements UP Qualcomm Incorporated discussion Rel-18

Proposal 3: RAN2 to discuss if DWS with mTRP can be implemented in the MAC spec without RAN1/RAN4 impact.

* Focus on P3

[R2-2401309](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401309%20Miscellaneous%20on%20DWS.docx) Miscellaneous on DWS Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_cov\_enh2-Core

Proposal 1: DWS and mTRP are not configured concurrently for a UE.

* Focus on P1

**Discussion on the three papers above**

* Ericsson: think DWS and mTRP can be configured together. This will have RAN2 impacts but no RAN1 impacts.
* LG think RAN1 impact is there since PCmax needs to be obtained for each TRP. RAN1 discussed this without conclusion. Don’t configure this unless RAN1 asks us to do this.
* InterDigital we already agreed that we wait for RAN1. So, we should not discuss this!
* Huawei think that some restriction needs to be captured.
* Confirm that we will not specify anything new for simultaneous support of DWS and mTRP unless RAN1 asks us to do so. Can specify some configuration restrictions in RRC to specify that this combination is precluded (details can be discussed offline and implemented in the RRC CR).

[R2-2401440](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401440%20Remaining%20UP%20issues%20for%20CE.docx) Remaining UP issues for CE ZTE Corporation discussion Rel-18 NR\_cov\_enh2-Core Late

Proposal RAN2 confirm that twpPHRMode and phr-AssumedPUSCH-Reporting can not be configured simultaneously in Rel-18.

**DPC reporting**

[R2-2400132](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400132%20Open%20issues%20on%20user%20plane%20for%20CE%20v2-ych.docx) Discussion on open issues on user plane for CE Huawei, HiSilicon discussion NR\_cov\_enh2-Core

Proposal 4: For Multiple Entry PHR, RAN2 to discuss which option is supported:

* Option 1: If dpc-Reporting-FR1 is configured and all DPC fields set to a value other than 0, DPCBC field indicates the ΔPPowerClass, CA/ΔPPowerClass, EN-DC/ΔPPowerClass, NR-DC.
* Option 2: the network shall ignore the DPCBC field in case all the DPC fields are set with value 0.

**Discussion**

* ZTE wonder how to capture it if we adopt option 2. But fine with either of the options.
* Huawei prefer option 1
* QC wonder if there is a problem as value 0 can be used. Huawei explain that value 0 cannot be used.

After offline check

* Huawei informs that the agreement from online session seems agreeable, but some concerns were found by Ericsson.
* Ericsson indicate that the agreement should refer to any one of the DPC fields instead of all of them.
* Qualcomm wonder if only one cell can be reported. Ericsson confirm that this is possible.

**Updated agreement**

* If dpc-Reporting-FR1 is configured and any one of the DPC field is set to a value other than 0, DPCBC field indicates the ΔPPowerClass, CA/ΔPPowerClass, EN-DC/ΔPPowerClass, NR-DC

**PHR MAC CE design**

[R2-2400198](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400198_Correction%20to%20PHR%20MAC%20CE%20Design%20for%20assumed%20PUSCH%20reporting.doc) Correction to PHR MAC CE Design for assumed PUSCH reporting Samsung Electronics Co., Ltd discussion Rel-18 NR\_cov\_enh2-Core

Proposal 1: For the Multiple Entry PHR with assumed PUSCH MAC CE:

- Ek field corresponds to the kth Serving Cell for which Ci field is set to 1 and is configured to support dynamic waveform switching.

- The Serving Cells for which Ci field is set to 1 and are configured to support dynamic waveform switching, are indexed sequentially starting with SpCell and followed by SCells in ascending order of ServCellIndex i.

- This field indicates the presence of a PCMAX,f,c for assumed PUSCH field for the Serving Cell. The Ek field set to 1 indicates that a PCMAX,f,c for assumed PUSCH field for the kth Serving Cell is reported.

**Discussion**

* Huawei, LG, ZTE Don’t think Samsung proposal is needed as this is an optimisation.
* ZTE think that if we use order of the index, there may be some issues in inter-node case wen MN doesn’t know the SN configuration.
* Vivo think this may be useful for CA case.
* Noted

[R2-2400916](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400916_CR1753_38321%20Clarification%20on%20Multiple%20Entry%20PHR%20with%20Assumed%20PUSCH.docx) Clarification on Multiple Entry PHR with Assumed PUSCH vivo CR Rel-18 38.321 18.0.0 1753 - F NR\_cov\_enh2-Core

Discussion

* LG think change is not needed since we include this if physical layer provides this
* Vivo think this clarification is needed.
* Changes 1 and 2 are agreed and can be merged in the MAC CR from the rapporteur.

**Other Issues and enhancements**

[R2-2400620](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400620%20Discussion%20on%20the%20remaining%20UP%20issues.docx) Discussion on the remaining UP issues NEC Corporation. discussion NR\_cov\_enh2-Core

Proposal 2: RAN2 to confirm whether MPE and assumed PUSCH can be reported simultaneously. If MPE and assumed PUSCH can be reported simultaneously, some modifications are needed for multiple entry PHR with assumed PUSCH.

Discussion

* Huawei wonder why MPE and assumed pusch will be configured simultaneously because one is for FR1 and another is for FR2.
* Interdigital think we can rely on network configuration not to configure them simultaneously as they are for different FRs.
* MPE and assumed PUSCH cannot be configured simultaneously as one is for FR1 and the other is for FR2

[R2-2400262](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400262_CFRA%20with%20Msg1%20Repetition%20-%20RO%20Mask%20handling.doc) CFRA with Msg1 Repetition - RO Mask handling Samsung Electronics Co., Ltd discussion Rel-18 NR\_cov\_enh2-Core

Proposal : For CFRA with Msg1 repetition, ra-ssb-OccasionMaskIndex indicates the allowed RO set(s) of selected SSB.

ra-ssb-OccasionMaskIndex 0: All RO sets of selected SSB are allowed.

ra-ssb-OccasionMaskIndex 1: RO set with index 1 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 2: RO set with index 2 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 3: RO set with index 3 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 4: RO set with index 4 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 5: RO set with index 5 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 6: RO set with index 6 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 7: RO set with index 7 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 8: RO set with index 8 of selected SSB is allowed

ra-ssb-OccasionMaskIndex 9: Even RO set of selected SSB are allowed

 ra-ssb-OccasionMaskIndex 10: Odd RO set of selected SSB are allowed

**Discussion**

* LG, Vivo, Huawei are fine with this approach but point out that RAN1 are also discussing this.
* ZTE thinks RAN1 are not converging and the RAN1 chair may push this to RAN2.
* Samsung explain that RAN1 will not conclude on this.

**CB003: Discuss this further in the comeback session to see if we can agree this in the CB session. Flesh out further details offline if the intention is to support ra-SSB-OccasionMaskIndex for this case (Samsung)**

* [AT125][803][CE\_enh] Details of ra-ssb-OccasionMaskIndex for CFRA with Msg1 repetition (Samsung)

 Intended outcome: Agreeable Details of ra-ssb-OccasionMaskIndex for CFRA with Msg1 repetition

 Deadline: Thursday Feb 29th (TBD)

R2-2401775 Summary for [AT125][CE\_enh][803] Details of ra ssb Occasion Mask Index for CFRA with Msg1 repetition Samsung report

Proposal: RAN2 aims to support ra-ssb-OccasionMaskIndex for msg1 repetitions. ~~UE identifies the allowed set(s) of PRACH occasions based on ra-ssb-OccasionMaskIndex.~~ Detailed mechanism to identify allowed set(s) of PRACH occasions is FFS (to be discussed in next meeting).

DISCUSSION

* Rapporteur reports that few companies prefer to not support ra-ssb-OccasionMaskIndex for msg1 repetition. Majority of the companies are ok to support ra-ssb-OccasionMaskIndex for msg1 repetition but need more time to review the issue/detailed solutions/spec impacts(RAN1/RAN2) etc
* Rappoteur also reports that some companies think may be we can just task RAN1 to come with some solution.
* Vivo agrees to support the mask, think we can say it is beneficial but ask RAN1 to define the solutions
* China telecom (WI rapporteur) explain that RAN1 couldn’t reach the conclusion and recommends that RAN2 makes the conclusion without further discussions with RAN1 and clarify that this is how we did it in the past. If RAN2 cannot reach consensus then we should simply not support this.
* Huawei think RAN1 discussed many options and are concerned that if we discuss this in RAN2 we will be stuck too. If really needed, we can ask RAN1 to work on details.
* ChinaTelecom (RAN2) in the past we did this and we can do this again for this too. Samsung solution is feasible and can be used as starting point.
* Ericsson: Think RAN2 can handle this issue and should be fine. Would be fine to already narrow down some solutions.
* LG think it is difficult to decide the impacts and which ones has RAN1 impact and it is difficult for RAN2 delegates to understand. Prefer to send an LS to RAN1.
* QC agree with Huawei. If companies insist to have this, we can try it, but if the views don’t converge then we can exclude this at the next meeting.
* ZTE Same view as Qualcomm
* Nokia It is difficult for RAN2 to converge and RAN1 details are difficult to converge here. If we can somehow narrow down some options here it might help RAN1 progress and we can then send an LS to RAN1
* CATT It is difficult to decide in RAN2 and we can ask RAN1 for more details.

**Show of hands**

Option 1: RAN2 agree that we try to support it and try to converge at next meeting and see if we can converge, if we don’t converge we don’t support it (6)

Option 4: Agree right away that we don’t support it (4)

* Try to support it and try to converge at next meeting and see if we can converge on a solution, if we don’t converge we don’t support it

R2-2400290 Discussion on on initialization of RRC parameter in RA procedure Xiaomi discussion Rel-18 38.321 NR\_cov\_enh2-Core

[R2-2400584](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400584%20Discussion%20on%20Coverage%20Enhancements%20User%20Plane.docx) Discussion on Coverage Enhancements User Plane Ericsson discussion Rel-18 38.321 NR\_cov\_enh2-Core

[R2-2400793](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400793%20Coverage%20Enhancements%20User%20Plane%20Open%20Issues.docx) Open Issues in Coverage Enhancements UP Qualcomm Incorporated discussion Rel-18

[R2-2400985](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2400985%20Remaining%20UP%20issues%20on%20Coverage%20Enhancement.docx) Remaining UP issues on Coverage Enhancement LG Electronics Inc. discussion Rel-18 NR\_cov\_enh2-Core

[R2-2401102](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2401102%20Discussion%20on%20the%20UP%20remaining%20issues%20of%20CE.docx) Discussion on the UP remaining issues of CE CATT discussion Rel-18 NR\_cov\_enh2-Core