**3GPP TSG-RAN WG2 #130 R2-25nnnnn**

**St Julian’s, Malta, 19-23 May 2025**

Agenda Item: 8.10.2.1

Source: Ericsson

Title: Remaining RRC Open issues for SONMDT feature

Document for: Discussion, Decision

# Introduction

The following document includes a list of open issues according to the following email discussion:

* [Post129bis][603][SONMDT] Running NR RRC CR for SONMDT (Ericsson)

Scope:

1. Update the running CRs based on the progress in the meeting
2. Create open issue lists

      Intended outcome:

* + - Updated running CR to be submitted to next meeting

     Deadline:

* + - Long

Companies are invited to provide feedback on open issue list by: **2nd May 2025**

# Remaining open issues for specification TS 38.331

### Issues on MRO for CHO with candidate SCG

**Open issue RRC-1:**Avoiding duplicated measurement reports in SHR and SPR

**Issue description:**

In RAN2#129bis meeting, discussion on near failure scenarios for CHO with candidate SCG resulted in below FFS-

* FFS whether it is needed to avoid duplication of information in case of two reports being generated CHO with candidate SCGs, any redundancy (e.g., measurements) are recorded in the reports for PCell (i.e., in SHR, SPR).

Hence the following Editor’s Note is captured in the running CR:

Editor’s Note: FFS whether it is needed to avoid duplication of information in case of two reports being generated CHO with candidate SCGs, any redundancy (e.g., measurements) are recorded in the reports for PCell (i.e., in SHR, SPR).

The scenario addressed in this FFS involves sub-optimal execution of both CHO and CPC procedures, where one or more SHR/SPR triggering conditions are met for each conditional cell change procedure, including PCell and PSCell. In such scenario according to the offline discussions in RAN2#129bis, the UE may have to log redundant measurements (e.g., neighbour cell measurements) in SHR and SPR. Such duplicated measurements may increase the UE reports overhead to the network, particularly if such scenarios addressed in this FFS happens frequently. However, how frequent such event (fulfilment of SHR and SPR triggering conditions in CHO with Candidate SCG) can happen in the network is a question we may need to answer before designing a solution for this procedure. Nevertheless, rapporteur believe avoiding duplication of the measurements need a correlation mechanism between reports so the network can extract the information from one report (e.g., SHR) for the other report (SPR).

Having, the above analysis, rapporteur would like to ask companies to provide their input on the following question on the necessity of correlation of SHR and SPR when both being triggered in CHO with Candidate SCG execution.

**Regarding Open issue RRC-1, companies are invited to provide comments on whether correlation of the SHR and SPR is needed in case of both reports being generated in a CHO with candidate SCG execution scenario.**

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| **Company** | **Yes/No** | **Comments** |
| Huawei, HiSilicon | Yes, but | We understand that possible redundant measurements are mainly about neighbour cell measurements, which may need to be optimized from UE point of view.We also realize that there are pros/cons for this direction:pros: reduce UE memory requirementcons: specify more UE behaivours, e.g. UE needs to check the duplicated parts and then filter the measurements in reports. NW behaviours need to be enhanced as wellSo we are open for now. |
| Samsung | No, but see the comments. | Please note that there are no new measurements logged for CHO with Candidate SCG(s) in SHR/SPR. We had agreements, but in the end we just moved existing serving PCell/PSCell measurements to a new structure. UE logs all the measurements configured by PCell in the SPR for MN initiated handover, including the measurements for MCG handover in R18. Similarly for SHR also, UE logs the PSCell measurements from R17. Thus this is not an issue specific to CHO with candidate SCG.There may be some duplication of time information or some additional flags (which is first triggered event etc.). It may not be beneficial to have added UE behaviour for avoiding this duplication considering that the overhead is not very high and the occurrence of SHR/SPR at the same time is a corner case (more so for CHO with candidate SCG(s) as it depends on A4 event and hence the target PSCell’s measurements only). We also note that RAN3 decided to not consider near failure scenarios. So we prefer not to do further optimisation for this case for now.However if the companies support avoiding unnecessary measurements in SHR/SPR, we are open to discuss, but it should not be in the context of the CHO with Candidate SCG(s). |
| Nokia | Yes | In the case that both SHR and SPR are generated for the same CHO with candidate SCG, correlation of the two reports is needed as they are both pointing to the same execution and in this way, the maximum information is gathered and can be used by the network for optimization actions. Such a correlation may be easiest achieved by including a coexistence flag in each report pointing to the existence of the other report. |
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Given that we have not discussed the solutions for such problem, rapporteur would like to collect companies input on the potential solutions for the correlation of the SCG and SPR reports in case both being generated CHO with candidate SCG execution scenario.

**Regarding Open issue RRC-1 if companies agree to have a correlation mechanism what potential solutions for correlation of the SHR and SPR reports are suggested?**

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| **Company** | **Proposed solution** | **Comments** |
| Nokia | Introducing a coexistence flag in each report |  |
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And finally, if companies agree to correlate the SHR and SPR report, rapporteur would like to collect their input if companies are interested to avoid the duplication of the measurements in the SHR and SPR report. Therefore, the following question is asked.

**Regarding Open issue RRC-1, if companies agree to adopt a correlation solution between SHR and SPR, do you agree to avoid duplication of the measurements in such reports e.g., UE logs the duplicated measurements only in one report.**

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| **Company** | **Yes/No** | **Comments** |
| Nokia | NO | Complex specification and implementation efforts |
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**Rapporteur summary:**

Thanks companies who provided their view on the Open issue RRC-1. Given that only 3 companies provided their input concluding this open issue might not be possible over this discussion. Therefore, rapporteur believe that this open issue should be treated per contribution basis, meaning that companies are welcome to address this open issue in their contribution.

**Proposal 1. Companies are invited to discuss the Open issue RRC-1 (i.e., the correlation of SHR and SPR and avoiding duplication of the information) in their contribution for the meeting RAN2#130.**

# Other identified open issues

Companies are invited to describe any other identified open issues not currently included within this document

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| **Company** | **Other identified open issues? (please describe)** |
| Samsung | RAN2 agreed to log the L1 measurements in RLF/SHR for LTM candidate cells. However, the LTM can be based on L3 measurements and not L1 measurements. UE already reports L3 filtered beam information in RLF report/SHR. L1 measurements need to be reported only for the candidates configured with LTM-SSB-Config-r18 in RLF report/SHR. |
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In other identified open issues, Samsung has brought up a concern in logging the L1 measurements in the RLF/SHR report. The issue points to the fact that the LTM cell switch can be executed based on L3 measurements and the UE may not necessarily have the L1 measurement to include the RLF report unless the UE candidate cell is configured with LTM-SSB-Config-r18. Rapporteur while agree with this point, would like to highlight that the current implementation only asks the UE to include the L1 measurements only if the measurements are available. This is shown the following excerpt from the current running CR.

1> if the UE supports RLF-Report for LTM, for each neighbour MCG LTM candidate cell:

2> if SS/PBCH block-based L1-RSRP measurement quantities are available:

3> set the *measResultL1NeighCells* to include all the available SS/PBCH block-based L1-RSRP measurement results, ordered such that the cell with highest SS/PBCH block-based L1-RSRP (of all SS/PBCH block-based L1-RSRP measurement results for the cell) is listed first;

Therefore, rapporteur believes the current implementation addresses the concern brought up by Samsung and hence no further action is needed. Hence this issue will not be listed among the identified open issues. However, companies are welcome to address this issue in their contribution if they foresee needs for further clarification.

# Conclusions

[Proposals for discussion]

**Proposal 1. Companies are invited to discuss the Open issue RRC-1 (i.e., the correlation of SHR and SPR and avoiding duplication of the information) in their contribution for the meeting RAN2#130.**