**3GPP TSG-RAN WG2 Meeting #130 R2-250xxxx**

**St. Julians, Malta, 19 – 23 May 2025**

**Source: Huawei, HiSilicon**

**Title: Remaining RRC open issue for 36.331 CR for R19 SONMDT**

**Agenda Item: 8.10.1**

**Document for: Discussion and Decision**

1. Introduction

The following document includes a list of RRC open issues for LP-WUS/WUR according to the following email discussion:

* [Post129bis][604][SONMDT] Running LTE RRC CR for SONMDT (Huawei)

Scope:

1. Update the running CRs based on the progress in the meeting

      Intended outcome:

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

     Deadline:

* + - Long

Companies are invited to provide comments/additional issues in the below table by May 1st 10:00 UTC, 2025.

# Discussion

* 1. Open issues

**Open issue LTERRC-1: Condition for UE setting timeSCGFailure and previousPSCellId**

At RAN2#129bis meeting, the open issue list Tdoc [2] was discussed. For the second open issue, RAN2 had some online discussion, but it still needed more time to check it. The following text is about this issue (from [2]):

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During the email discussion, the following text was discussed.

2> else:

3> set the *failedPSCellId* to the physical cell identity and carrier frequency of the PSCell in which the SCG failure was declared;

3> if the last *RRCReconfiguration* message including the *reconfigurationWithSync* for the SCG was received to enter the PSCell in which the SCG failure was declared:

4> set the *timeSCGFailure* to the elapsed time since the last execution of *RRCReconfiguration* message including the *reconfigurationWithSync* for the SCG until declaring the SCG failure;

4> set the *previousPSCellId* to the physical cell identity and carrier frequency of the source PSCell associated to the last received *RRCReconfiguration* message including *reconfigurationWithSync* for the SCG;

For the above highlighted part, one company would like to further discuss it.

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| Samsung (Aby):  Woundn’t this caluse in 3> will be always true? For both SCG addition and change, RRCReconfiguration message will include reconfigurationWithSync for the SCG.  It looks to me that this part seems to be intended only PSCellChange.  First it needs to be clarified, if timeSinceSCGFailure needs to be set for PSCellAddition for these cases.  If yes, this 3> can be removed and 4 should be  4>set the *previousPSCellId* to the physical cell identity and carrier frequency of the source PSCell associated to the last received *RRCReconfiguration* message including *reconfigurationWithSync*, if available;  If no,  We may need to update 3> as below:  3> if the last *RRCReconfiguration* message including the *reconfigurationWithSync* for the SCG was received to enter the PSCell in which the SCG failure was declared from another PSCell:  I think it will need some discussion. |

For the above changes, they are following the definitions from TS 38.331, and NR introduced this text since Rel-17, i.e. R2-2204209. Furthermore, the changes were made based on the RAN3 requirement in the LS R3-211332, and the applicable use case is PScell change failure for MRO.

The CR rapporteur thinks that the condition "RRCReconfiguration message including the reconfigurationWithSync for the SCG" may not always happen before SCG failure happens, e.g. after the UE accesses the network, the MCG and SCG are configured by the network, and then an SCG failure occurs. So this condition is important and it should be kept.

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**Regarding Open issue LTERRC-1, companies are invited to provide comments on whether to keep the following condition or not (it has been captured in section 5.6.13a.3 in *draft\_Running 36.331 CR for R19 SONMDT\_v00-Rapp*). If No, please provide your comments/suggestions.**

3> if the last *RRCReconfiguration* message including the *reconfigurationWithSync* for the SCG was received to enter the PSCell in which the SCG failure was declared:

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| **Company** | **Yes/No** | **Comments, if any** |
| Samsung | No | We think that the condition "RRCReconfiguration message including the reconfigurationWithSync for the SCG" will always happen before SCG failure happens  Regarding “after the UE accesses the network, the MCG and SCG are configured by the network, and then an SCG failure occurs. So this condition is important and it should be kept.”, please see the below the presence condition in reconfigurationWithSync. ReconfWithSync is present during PSCellChange,PSCellAddition,SCG resume.  What is the condition by which UE enters PSCell without *reconfigurationWithSync*, before SCG failure occur (other than the highlighted ones)? If there is such a condition and it needs to be excluded for *timeSCGFailure*, this “if clause” can be kept, otherwise the “if clause” is useless and need to be removed.   |  |  | | --- | --- | | *ReconfWithSync* | The field is mandatory present in the *RRCReconfiguration* message:  - in each configured *CellGroupConfig* for which the SpCell changes,  - in the *masterCellGroup* at change of AS security key derived from KgNB,  - in the *secondaryCellGroup* at:  - PSCell addition,  - SCG resume with NR-DC or (NG)EN-DC,  - update of required SI for PSCell,  - change of AS security key derived from S-KgNB while the UE is configured with at least one radio bearer with *keyToUse* set to *secondary* and that is not released by this *RRCReconfiguration* message,  Otherwise, it is optionally present, need M. The field is absent in the *masterCellGroup* in *RRCResume* and *RRCSetup* messages and is absent in the *masterCellGroup* in *RRCReconfiguration* messages if source configuration is not released during DAPS handover.  Assuming that the intention is to consider PSCell addition or SCG resume during (NG) EN-DC, the condition can be removed, and “if available” needs to be added for previous PSCellId. | |
| Huawei, HiSilicon | No strong opinion | We think that the condition does not have much value, as pointed out by Samsung. However, this condition is not harmful for UE.  If other companies are also fine to remove the condition, we can be fine. |
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* 1. Other open issues

Companies are invited to provide other open issues if any.

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| **Company** | **Comments** |
| Samsung | There may be an impact due to the below agreement- When the LTM based recovery fails and the UE selects E-UTRA cell and receives RRCConnectionSetup, timeUntilReconnection need to refer to the first failure.   * Reuse the existing approach of using timeUntilReconnection in RLF-report also for LTM failure scenarios.   Something similar to the below may be needed  5> if the UE supports RLF-Report for LTM as defined in TS 38.306 [87] and if *LTMCellId* in *VarRLF-Report* of TS 38.331 [82] is set:  6> set *timeUntilReconnection* in *VarRLF-Report* of TS 38.331 [82] to the time that elapsed since the radio link failure or handover failure experienced in the *failedPCellID* stored in *VarRLF-Report* of TS 38.331 [82];  5> else:  6> set *timeUntilReconnection* in *VarRLF-Report* of TS 38.331 [82] to the time that elapsed since the last radio link failure or handover failure; |
| Huawei, HiSilicon | Thanks to Samsung for pointing out this. We also think that running 36.331 CR can align this part with running 38.331 CR. |
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# Conclusion

Based on the discussion in section 2 and in running 36.331 CR, the following open issues are identified and discussed. It is proposed:

**Proposal 1: It is proposed RAN2 to discuss the open issue LTERRC-1, i.e. whether to keep the following condition or not (it has been captured in section 5.6.13a.3 in running 36.331 CR):**

3> if the last *RRCReconfiguration* message including the *reconfigurationWithSync* for the SCG was received to enter the PSCell in which the SCG failure was declared:

**Proposal 2: It is proposed RAN2 to discuss the open issue LTERRC-2, i.e. when the LTM based recovery fails and the UE selects E-UTRA cell and receives RRCConnectionSetup, timeUntilReconnection need to refer to the first failure and this should be captured in running 36.331 CR.**

**Proposal 3: It is proposed RAN2 to discuss the open issue LTERRC-3, i.e. whether to have a single container to carry all the fields (PerRAInfoList-r16, PerRAInfoList-v1660 and PerRAInfoList-v1800) or not.**

# References

1. R2-25xxx, Running 36.331 CR for R19 SONMDT, Huawei, HiSilicon
2. R2-2502788, Open issue list for running 36.331 CR for R19 SONMDT, Huawei, HiSilicon