3GPP TSG-RAN WG2 #119 electronic R2-220xxxx

Electronic Meeting, Aug 17th – 29th, 2021

Agenda Item: 5.1.3.1.2

Source: Ericsson

Title: Summary of offline [011][NR1516] RRC LTE Overheating Misc and Idle

Document for: Discussion, Decision

# 1 Introduction

This contribution summarizes the following discussion:

* [AT119-e][011][NR1516] RRC LTE Overheating Misc and Idle (Ericsson)

Scope: Treat [R2-2208202](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2208202.zip), [R2-2208203](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2208203.zip), [R2-2207575](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207575.zip), [R2-2207576](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207576.zip), [R2-2207577](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207577.zip), [R2-2208207](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2208207.zip), [R2-2208208](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2208208.zip), [R2-2207357](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207357.zip), [R2-2207358](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207358.zip), [R2-2208209](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2208209.zip), [R2-2208210](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2208210.zip), [R2-2208211](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2208211.zip), R2-2208140, [R2-2207540](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207540.zip), [R2-2207558](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207558.zip), [R2-2207559](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\TSGR2_119-e\Docs\R2-2207559.zip) Determine agreeable parts, For agreeable parts, agree CRs.

Intended outcome: Report, Agreed CRs, LS out if applicable

Deadline: Schedule 1

Companies are invited to fill in contact details.

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| --- | --- |
| **Company** | **Contact details** |
| OPPO | shicong@oppo.com |
| Samsung | sb07.kim@samsung.com (Sangbum Kim) |
| Huawei, HiSilicon | [kuangyiru@huawei.com](mailto:kuangyiru@huawei.com) (Yiru Kuang) |
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# 2 Discussion

## 2.1 Part 1: Intended to determine agreeable parts

The CRs in [1][2] propose miscellaneous editorial corrections.

**Q1 Do companies agree with the intention of the CRs above?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| OPPO | Yes | Can merge with the rapp CR. |
| Samsung | Yes |  |
| Huawei, HiSilicon | Yes |  |
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The CR in [3] is not provided by the 38331 Rapporteur, and hence not part of this email discussion.

The CRs in [4][5][6] intend to clarify the following:

1. Clarify in 5.5.5.1 (in 36.331) that the UE includes NR serving frequency results if the purpose field in the associated report configuration is not configured or is set to a value other than reportLocation.

2. Clarify in 5.5.5.1 (in 36.331) that the UE includes NR serving frequency results only in case of (NG)EN-DC.

**Q2 Do companies agree with the intention of the CRs above?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| OPPO | Yes | Proponent |
| Samsung | No | Agree to the intention of this CR, i.e. SN measurement results may be less usefulness to LTE SN for NE-DC, but it seems to be less critical problem. LTE SN could still handle it by implementation i.e. it simply ignores the measurement results. |
| Huawei, HiSilicon | Yes | Proponent |
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The CRs in [7][8][9][10] intend to clarify the UE behavior to indicate overheating mitigation for SCG in case of EN-DC. Two options can be outlined:

Option 1: In [7][8], this is clarified in procedural text.

Option 2: In [9][10], this is clarified with a note.

**Q3 Which option is preferred by companies?**

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| **Company** | **Option 1/2** | **Comments** |
| OPPO | Option 2 | The note clarifies the intended behaviour |
| Samsung | Option 2  (if required, possible to merge with Option 1) | Proponent on [9][10].  If required, two options could be merged. Then, UEAssistanceInformation-v1530-Ies should be also considered. Actually, we assume it has been implicitly agreed in R2-2111610 (i.e. in the Reasone for change).  On the other hand, for Rel-17, the following intention should be also reflected in RRC specification:  not including the *overheatingAssistance-v1610* or *overheatingAssistance-v1710* signifies that UE can implement it by not including parent IE, e.g. *UEAssistanceInformation-v1710-IEs*, *UEAssistanceInformation-v1700-IEs*, *UEAssistanceInformation-v1610-IEs* or *UEAssistanceInformation-v1530-IEs*, the NW interpretation in all cases is that “UE did not include *overheatingAssistance-v1610* or *overheatingAssistance-v1710*” |
| Huawei, HiSilicon |  | We understand the issue in [7][8] is the procedural text says “do not include *overheatingAssistance-v1610* in *OverheatingAssistance* IE”, however, the *overheatingAssistance-v1610* is included in *UEAssistanceInformation-v1610* IE. We prefer to simply the change, e.g.  3> do not include *reducedUE-Category*, *reducedMaxCCs* in *OverheatingAssistance* IE and do not include *overheatingAssistance-v1610* (if configured to provide overheating assistance indication for NR SCG) in *UEAssistanceInformation-v1610* IE;  Besides, the UE cannot send *overheatingAssistance-v1610* if overheating assistance for NR SCG is not configured, so NOTE 0 in [7][8] is not needed. |
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The CRs in [11][12][13] propose to update the description of the overheating IEs, to reflect that the UE sends the overheating UAI for active CCs.

**Q4 Do companies agree with the intention of the CRs above?**

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| **Company** | **Yes/No** | **Comments** |
| OPPO | Yes |  |
| Samsung | No | We have a strong concern on this change because it results in a critical impact on current UE implementation. Furthermore, RRC specification clearly mentions 'configured CCs' in  5.7.4.3 Actions related to transmission of *UEAssistanceInformation* message  *(skipped)*  1> if transmission of the *UEAssistanceInformation* message is initiated to provide *maxCC-Preference* of a cell group for power saving according to 5.7.4.2 or 5.3.5.3:  2> include *maxCC-Preference* in the *UEAssistanceInformation* message;  2> if the UE has a preference on the maximum number of secondary component carriers for the cell group:  3> include *reducedMaxCCs* in the *MaxCC-Preference* IE;  3> set *reducedCCsDL* to the number of maximum SCells the UE desires to have configured in downlinkin the cell group;  3> set *reducedCCsUL* to the number of maximum SCells the UE desires to have configured in uplinkin the cell group;  Finally, we see no problem with the current specification. |
| Huawei, HiSilicon | No | These are NBC changes. Based on previous discussion and conclusion, the intention of *reducedCCs* is about “configured CC” instead of “active CC” which can be hinted from the description “Indicates the UE's preference on reduced configuration corresponding... ”. |
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The CRs in [14][15][16] intend to clarify that, when the cell is identified to not support IMS emergency calls when camped on Any Cell state, the UE shall deprioritize the pertinent frequency to be the lowest priority frequency.

**Q5 Do companies agree with the intention of the CRs above?**

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| **Company** | **Yes/No** | **Comments** |
| OPPO | No | Not sure how frequent the case happens in the field. BTW, even if it happens, is it possible that the UE igores the previous cell and reselect to another cell for camping by UE implementation. |
| Samsung | Yes | Once UE reselects an acceptable cell that supports IMS energency calls, it is very likely with the existing cell reselection criteria that UE reverts to the previous cell not supporting IMS emergency calls. This ping-pong of reselection is undesirable.  @OPPO, It will not be consistent with present specification. We think a clear behaviour should be provided in the specification to support UE implementation. |
| Huawei, HiSilicon | No | The spec already allowes the UE ignores priorities provided in SI in order to reselect to an acceptable cell that supports emergency calls, this change is not necessary. Besides, some other cells in the same frequency will be impacted according to the CR. |
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## 2.2 Part 2: Intended to progress discussion on agreeable parts

- To be updated after discussion on part 1 -

# 3 Conclusion

- To be updated after discussion on part 1 -

# 4 References

1. R2-2208202 Miscellaneous corrections Lenovo draftCR Rel-16 38.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
2. R2-2208203 Miscellaneous corrections Lenovo draftCR Rel-17 38.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
3. R2-2208140 Miscellaneous non-controversial corrections Set XV Ericsson CR Rel-16 38.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
4. R2-2207575 Correction on NR serving frequency results reporting for event-triggered measurement (R15) Huawei, HiSilicon, OPPO, MediaTek Inc., vivo, Nokia, Nokia Shanghai Bell, CATT, Ericsson, NTT DOCOMO, Lenovo, ZTE Corporation, Apple, NEC, China Telecom CR Rel-15 36.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
5. R2-2207576 Correction on NR serving frequency results reporting for event-triggered measurement (R16) Huawei, HiSilicon, OPPO, MediaTek Inc., vivo, Nokia, Nokia Shanghai Bell, CATT, Ericsson, NTT DOCOMO, Lenovo, ZTE Corporation, Apple, NEC, China Telecom CR Rel-16 36.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
6. R2-2207577 Correction on NR serving frequency results reporting for event-triggered measurement (R17) Huawei, HiSilicon, OPPO, MediaTek Inc., vivo, Nokia, Nokia Shanghai Bell, CATT, Ericsson, NTT DOCOMO, Lenovo, ZTE Corporation, Apple, NEC, China Telecom CR Rel-17 36.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
7. R2-2208207 Rel-16 Correction of overheating for NR SCG Qualcomm Incorporated, Ericsson CR Rel-16 36.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
8. R2-2208208 Rel-17 Correction of overheating for NR SCG Qualcomm Incorporated, Ericsson CR Rel-17 36.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
9. R2-2207357 SCG Overheating termination in EN-DC Samsung CR Rel-16 36.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
10. R2-2207358 SCG Overheating termination in EN-DC Samsung CR Rel-17 36.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
11. R2-2208209 Rel-15 Clarification on the overheating UAI Qualcomm Incorporated CR Rel-15 38.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
12. R2-2208210 Rel-16 Clarification on the overheating UAI Qualcomm Incorporated CR Rel-16 38.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
13. R2-2208211 Rel-17 Clarification on the overheating UAI Qualcomm Incorporated CR Rel-17 38.331, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
14. R2-2207540 UE behavior when IMS emergency call is not supported in cell Samsung CR Rel-15 38.304, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
15. R2-2207558 UE behavior when IMS emergency call is not supported in cell Samsung CR Rel-16 38.304, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022
16. R2-2207559 UE behavior when IMS emergency call is not supported in cell Samsung CR Rel-17 38.304, RAN2#119-e, Eletronic Meeting, Aug 17th – 29th, 2022