3GPP TSG-RAN WG2 Meeting #109bis-e [R2-2003841](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-200xxxx.zip)

Elbonia, 20 – 30 April 2020

**Agenda item: 4.5**

**Source: Nokia (RAN2 Vice-chair )**

**Title: Summary and discussion of LTE contributions in AI 4.5**

**Document for: Discussion and Decision**

# 1 Brief scope of the LTE legacy contributions

This document contains the summary of documents from agenda item 4.5 (“Other LTE corrections Rel-15 and earlier”) as referenced in Section 4.

# 2 LTE legacy summary

## 2.1 Pre-Rel-15 topics

The documents in [3-7], [17-23], [8-11] and [14-16] all concern pre-Rel-15 topics as shown below.

|  |  |
| --- | --- |
| **Tdoc(s), Title, Company** | **Proposal(s)** |
| 1) [R2-2003147](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003147.zip), [R2-2003148](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003148.zip), [R2-2003149](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003149.zip), [R2-2003150](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003150.zip), [R2-2003151](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003151.zip), “Clarification to UE capabilities for non-contiguous intra-band CA“ Nokia, Nokia Shanghai Bell  AND  [R2-2003548](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003548.zip), [R2-2003549](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003549.zip), [R2-2003550](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003550.zip), [R2-2003551](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003551.zip), [R2-2003552](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003552.zip), [R2-2003553](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003553.zip), [R2-2003554](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003554.zip), “Clarification on UE capability for intra-band non-continuous CA”, Huawei, Hisilicon | **Discussed already in RAN2#109-e**  CRs from Rel-12 to clarify intra-band non-contiguous is handled as intra-band contiguous as proposed by discussion document. |
| 2) [R2-2003152](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003152.zip), [R2-2003153](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003153.zip), [R2-2003154](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003154.zip): “Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs“ Nokia, Nokia Shanghai Bell, Qualcomm Incorporated | **Discussed already in RAN2#109-e**  Clarify it is mandatory for UEs to support both CC and DAI for more than 5CCs. |
| 3) [R2-2003451](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003451.zip), [R2-2003452](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003452.zip), [R2-2003453](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003453.zip):”Correction on autonomous measurment gap release”, Huawei, HiSilicon | **New proposal (potentially related to [AT109e][069][NR15])**  Clarify which measurement gap configurations are released upon handover and re-establishment |

For the topics 1) and 2), they were already discussed in RAN2#109-e, with the following conclusions (from RAN2#109-e email discusion [203]):

**As per the report of offline discussion [203] in** [**R2-200176:**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-200176:.zip)

**For** [**R2-2001134**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001134.zip)**:**

**RAN2 note the following observations on differences of UE capabilities for intra-band contiguous and non-contiguous CA:**

**- Intra-band contiguous CA capabilities are all contained within a single band entry of a band combination, while intra-band non-contiguous CA capabilities require at least two band entries.**

**- For intra-band contiguous carriers, UE band combination capabilities specify that UE supports any ordering of the capabilities.**

**- (Based on TS36.101): The ordering of intra-band non-contiguous entries is relevant for the support of BCS.**

**- (Based on TS36.101): The ordering of BCS is not directly related to the MIMO capabilities.**

**FFS: if UE supports (2, 4) MIMO layers with CA\_xA\_xA, it will also support (4, 2) MIMO layers with CA\_xA\_xA.**

**The CRs in** [**R2-2001135**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001135.zip)**,** [**R2-2001136**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001136.zip)**,** [**R2-2001137**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001137.zip)**,** [**R2-2001138**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001138.zip) **are postponed.**

**The CRs in** [**R2-2001140**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001140.zip)**,** [**R2-2001141**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001141.zip)**,** [**R2-2001142**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001142.zip) **are postponed to next meeting.**

Hence, for this meeting, 1) is about capturing the agreements and 2) continues the disucssion that wasn’t concluded, and 3) requires new discussion:

* [R2-2003147](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003147.zip), [R2-2003148](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003148.zip), [R2-2003149](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003149.zip), [R2-2003150](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003150.zip), [R2-2003151](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003151.zip) and [R2-2003548](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003548.zip), [R2-2003549](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003549.zip), [R2-2003550](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003550.zip), [R2-2003551](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003551.zip), [R2-2003552](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003552.zip), [R2-2003553](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003553.zip), [R2-2003554](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003554.zip): Both document sets discuss the same question already discussed last time. Based on teh last meeting’s conclusion, the issues exists but how a correction should be worded and from which release onwards should a correction be made was not decided.
* [R2-2003152](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003152.zip), [R2-2003153](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003153.zip), [R2-2003154](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003154.zip): These CRs attempt to clarify the meaning of “mandatory” for a Rel-13 capability, which requires companies to indicate whether they share the interpretation proposed. This requires (short) discussion on whether the interpretation is correct, whether a CR is needed and from which release.
* [R2-2003451](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003451.zip), [R2-2003452](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003452.zip), [R2-2003453](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003453.zip): The CR attempts to clarify that releasing measurement gap configurations applies to both legacy *MeasGapConfig* as well as *MeasGapConfigPerCC-List* introduced in Rel-14. The correction seems straightforward an inline with existing interpretation.

**DISC S1\_1:** Discuss, based on [R2-2003147](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003147.zip), [R2-2003148](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003148.zip), [R2-2003149](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003149.zip), [R2-2003150](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003150.zip), [R2-2003151](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003151.zip) and [R2-2003548](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003548.zip), [R2-2003549](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003549.zip), [R2-2003550](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003550.zip), [R2-2003551](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003551.zip), [R2-2003552](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003552.zip), [R2-2003553](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003553.zip), [R2-2003554](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003554.zip), what to capture in specifications and from which release onwards.

**DISC S1\_2:** Discuss the CRs [R2-2001140](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001140.zip), [R2-2001141](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001141.zip), [R2-2001142](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001142.zip) to determine if the interpretation is correct and how a correction should be captured (if needed).

**Proposal S1\_1:** Agree to CRs in [R2-2003451](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003451.zip), [R2-2003452](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003452.zip), [R2-2003453](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003453.zip).

## 2.2 Miscellaneous Rel-15 corrections

The CRs in [1-2], [12-12] and [24-28] all concern Rel-15 as shown below:

|  |  |
| --- | --- |
| **Tdoc, Title, Company** | **Proposal(s)** |
| 4) [R2-2003232](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003232.zip), [R2-2003233](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003233.zip): “Minor changes collected by Rapporteur”, Samsung Telecommunications | **Rapporteur input on ASN.1 naming**  When dash (i.e. “-“) is used in ENUMERATED, it denotes a negative value, which is not correct fpor the MBMS SCS case. |
| 5) [R2-2002619](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002619.zip), [R2-2002620](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002620.zip): “Correction on SRB duplication”, OPPO | **New proposal**  PDCP specification sub-clause 5.1.2.4 does not contain “SRB” although it was part of an earlier agreed CR from RAN2#102, which may be (mis)interpreted to mean that the procedures in 5.1.2.4 are not applicable for SRB duplication. |
| 6) [R2-2003569](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003569.zip), [R2-2003570](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003570.zip), [R2-2003571](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003571.zip), [R2-2003572](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003572.zip), [R2-2003573](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003573.zip): “Correction on Need code for CMAS”, Huawei, HiSilicon | **New proposal:**  Current need code for CMAS coordinate segment is OR (LTE) or R (NR), which may be interpreted to mean that absence in one message requires UE to drop all previously received segments. |

Out of these proposals, 4) and 5) seem relatively straightforward to agree so the summary rapporteur proposes to treat them as a batch of agreeable CRs.

**Proposal S2\_1:** Agree to CRs in [R2-2003232](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003232.zip), [R2-2003233](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003233.zip), [R2-2002619](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002619.zip), [R2-2002620](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002620.zip).

For the proposals in 6) , the main issue is related to both LTE and NR, is about general ASN.1 and needs a common understanding for both systems. Therefore, it will be handled in NR joint session

**Proposal S2\_2:** Handle the contributions in [R2-2003569](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003569.zip), [R2-2003570](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003570.zip), [R2-2003571](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003571.zip), [R2-2003572](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003572.zip), [R2-2003573](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003573.zip) main session.

# 3 Company comments to the contributions

## 3.1 Pre-Rel-15 contributions requiring discussion (email discussion [202])

## 3.1.1 [R2-2003147](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003147.zip), [R2-2003148](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003148.zip), [R2-2003149](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003149.zip), [R2-2003150](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003150.zip), [R2-2003151](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003151.zip): Clarification to UE capabilities for non-contiguous intra-band CA: (Nokia) and [R2-2003548](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003548.zip), [R2-2003549](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003549.zip), [R2-2003550](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003550.zip), [R2-2003551](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003551.zip), [R2-2003552](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003552.zip), [R2-2003553](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003553.zip): Clarification on UE capability for intra-band non-continuous CA (Huawei)

This section deals with DISC\_S1\_1:

***DISC S1\_1:*** *Discuss, based on* [*R2-2003147*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003147.zip)*,* [*R2-2003148*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003148.zip)*,* [*R2-2003149*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003149.zip)*,* [*R2-2003150*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003150.zip)*,* [*R2-2003151*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003151.zip) *and* [*R2-2003548*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003548.zip)*,* [*R2-2003549*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003549.zip)*,* [*R2-2003550*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003550.zip)*,* [*R2-2003551*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003551.zip)*,* [*R2-2003552*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003552.zip)*,* [*R2-2003553*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003553.zip)*,* [*R2-2003554*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003554.zip)*, what to capture in specifications and from which release onwards.*

Hence, it should be discussed how to capture a clarification and from which release onwards. Companies are requested to provide comments in the tables 1 and 2 below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments.

|  |  |
| --- | --- |
| **Company** | **From which release onwards should something be captured and why?** |
| Nokia | The problem can only occur from Rel-12 onwards since that's when the per-CC list for intra-band CA band combinations were introduced. Hence, having the note from Rel-12 is necessary |
|  |  |
|  |  |

**Table 1. Starting release for the correction CRs**

|  |  |
| --- | --- |
| **Company** | **Detailed comments on how to capture a clarification** |
| Nokia | The proposal in Huawei’s CRs introduces a new condition on when the same order of UE capabilities could apply, i.e. “carriers sharing the same uplink capability within intra-band non-contiguous CA”. What does the requirement mean for intra-band non-contiguous CCs?  Minor remark: that he CR for legacy release need to respect NOTEs numbering in later releases , NOTE 5 has been superseded in later releases. Therefore, this creates inconsistent CRs. |
|  |  |
|  |  |

**Table 2. Details of the correction CRs**

**Conclusions:** TBA

## 3.1.2 [R2-2003152](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003152.zip), [R2-2003153](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003153.zip), [R2-2003154](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003154.zip): “Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs“ (Nokia, Nokia Shanghai Bell, Qualcomm Incorporated)

This section deals with DISC\_S2\_1:

***DISC S1\_2:*** *Discuss the CRs [R2-2001140](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001140.zip),* [*R2-2001141*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001141.zip)*,* [*R2-2001142*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001142.zip) *to determine if the interpretation is correct and how a correction should be captured (if needed).*

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments.

|  |  |
| --- | --- |
| **Company** | **Detailed comments on the proposal** |
| Qualcomm | Agree with the CRs |
|  |  |
|  |  |

**Table 3. Details of the correction(s) in** [**R2-2003152**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003152.zip)**,** [**R2-2003153**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003153.zip)**,** [**R2-2003154**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003154.zip)

**Conclusions:** TBA

## 3.2 Other corrections (email discussion [201])

This section deals with the remaining corrections that are proposed to be agreed by Proposal S1\_1 and S2\_1 as shown below:

***Proposal S1\_1:*** *Agree to CRs in* [*R2-2003451*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003451.zip)*,* [*R2-2003452*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003452.zip)*,* [*R2-2003453*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003453.zip)*.*

***Proposal S2\_1:*** *Agree to CRs in* [*R2-2003232*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003232.zip)*,* [*R2-2003233*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003233.zip)*,* [*R2-2002619*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002619.zip)*,* [*R2-2002620*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002620.zip)*.*

Companies are requested to indicate in case there are issues with the proposals in the summary in the table below.

|  |  |
| --- | --- |
| **Company** | **Issues to CRs in** [**R2-2003451**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003451.zip)**,** [**R2-2003452**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003452.zip)**,** [**R2-2003453**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003453.zip) |
| Lenovo | * From Rel-14 onwards either measGapConfig or measGapConfigPerCC-List can be configured by network. Thus, the condition “1> release the measurement gaps, if activated;” refers to the concerned gap configuration and no further clarification is needed. * measGapConfigDensePRS was introduced in Rel-15 in the context of eMTC. Here we have no strong opinion. Therefore, we suggest to discuss the expected UE behaviour in the eMTC session. |
| Qualcomm | Agree with Lenovo’s comments. Existing text is clear and includes “all” such possible meas gap configurations unless explicitly listed/excluded. The current CRs are not needed. But if the intention is to have special handling for measGapConfigDensePRS, that should be discussed in eMTC session. |
| OPPO | Before CR, the issue is to clarify the gap-release operation is for *measGapConfig* and/or *measGapConfigPerCC-List*. For that, we tend to believe the release operation should be applied to both.  For the CR, we tend to agree with Lenovo, i.e., the current spec is clear enough, so no need for the CR. |

**Table 4. Issues with any of the CRs proposed for agreement by S1\_1**

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| --- | --- |
| **Company** | **Issues to CRs in** [**R2-2003232**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003232.zip)**,** [**R2-2003233**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003233.zip)**,** [**R2-2002619**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002619.zip)**,** [**R2-2002620**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002620.zip) |
| Lenovo | **3232:**   * We agree with the Rel-14 changes. In addition, further Rel-14 issues can be fixed as well:  1. For mcch-ModificationPeriod-v1430 the spare7 can be renamed to spare1.   mcch-ModificationPeriod-v1430 ENUMERATED {rf1, rf2, rf4, rf8, rf16, rf32, rf64, rf128, rf256, spare7}  [QC] If updated, this should be spare7, spare6, spare5, spare4, spare3, spare2, spare1 (i.e. add 6 spares) as discussed in Rel-16 RIL B003.   1. SystemInformationBlockType13-r9: “Need OR” for optional field notificationConfig-v1430 can be added.   SystemInformationBlockType13-r9 ::= SEQUENCE {  mbsfn-AreaInfoList-r9 MBSFN-AreaInfoList-r9,  notificationConfig-r9 MBMS-NotificationConfig-r9,  lateNonCriticalExtension OCTET STRING OPTIONAL,  ...,  [[  notificationConfig-v1430 MBMS-NotificationConfig-v1430 OPTIONAL  ]]  }  **3233:**   * We agree with the Rel-15 changes. In addition, further Rel-15 issues can be fixed as well:   1. In SIB26 late NCE container can be added after the extension marker and suffix of threshS-RSSI-CBR-r14 needs to be corrected to "-r15”.  2. Suffix of crs-IntfMitigEnabled-15 needs to be corrected to “-r15” (SIB1, RadioResourceConfigDedicated IE).  [Qualcomm] since these are values in CHOICE introduced in the original fields when they appeared first, if we are updating these, the suffixes should be removed instead (both places) (similar discussion in Rel-16 RIL H136/H140)  3. MeasResults IE: Suffix of frequencyBandList-15 needs to be corrected to “-r15”.  4. ReportConfigEUTRA IE: suffix of h1-Hysteresis-15, h2-Hysteresis-15 needs to be corrected to “-r15”.  5. SL-V2X-ConfigDedicated field descriptions: in the description of field logicalChGroupInfoList the field “logicalChGroupInfoList-v-1520” does not exist in ASN.1 but logicalChGroupInfoList-v1530, so it needs to be corrected accordingly. And the words “priorties” and “reliablities” should be corrected to “priorities” and “reliabilities” (add missing “i”).  6. In Rel-16 UE-Capability-NB-v15x0-IEs has been introduced but definition in Rel-15 is missing.  In the folder [201] a draft CR “draft 36331\_CRxxx\_(Rel-15)\_R2-200xxxx\_Misc\_corrections” has been uploaded incl. the proposed corrections.  [Qualcomm] except #2, we are fine with other suggestions.  **2619/2620:**   * We agree with the intention of the CR, i.e. “for SRBs” in the header was missed during CR implementation of the concerned HRLLC CR. However, it’s not essential and of cat D. So, there is no need to agree on the CRs. |
| Qualcomm | In additional to comments above, for 3232/3233 (RRC rapp’s CRs)  'khz' should be 'kHz' (big H). CRnum missing in coversheet. Other specs affected = N is missing.  For 2619/2620: Agree with Lenovo’s comment. Such editorial can be captured by rapporteur’s CR instead of separate company CR. |
| OPPO | Agree with the CRs of[R2-2003232](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003232.zip), [R2-2003233](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003233.zip), [R2-2002619](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002619.zip), [R2-2002620](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002620.zip).  For 2619/2620, since the title is a key information on UE behaviour category, we believe it is in cat-F, so should be corrected. And we are fine to handle that in rapporteur CR.  For the change suggested by Lenovo, we are fine with most of them except for change-6, which should be discussed in NB related session. |

**Table 5. Issues with any of the CRs proposed for agreement by S2\_1**

**Conclusions:** TBA

# 4 Conclusions

**Agreements proposed to be agreed in this meeting (from all sub-topics)**

**Proposal S1\_1:** Agree to CRs in [R2-2003451](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003451.zip), [R2-2003452](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003452.zip), [R2-2003453](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003453.zip).

**Proposal S2\_1:** Agree to CRs in [R2-2003232](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003232.zip), [R2-2003233](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003233.zip), [R2-2002619](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002619.zip), [R2-2002620](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002620.zip).

**Proposal S2\_2:** Handle the contributions in [R2-2003569](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003569.zip), [R2-2003570](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003570.zip), [R2-2003571](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003571.zip), [R2-2003572](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003572.zip), [R2-2003573](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003573.zip) main session.

**Open items proposed to be further discussed in this meeting (from all sub-topics)**

**DISC S1\_1:** Discuss, based on [R2-2003147](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003147.zip), [R2-2003148](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003148.zip), [R2-2003149](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003149.zip), [R2-2003150](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003150.zip), [R2-2003151](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003151.zip) and [R2-2003548](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003548.zip), [R2-2003549](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003549.zip), [R2-2003550](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003550.zip), [R2-2003551](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003551.zip), [R2-2003552](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003552.zip), [R2-2003553](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003553.zip), [R2-2003554](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003554.zip), what to capture in specifications and from which release onwards.

**DISC S1\_2:** Discuss the CRs [R2-2001140](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001140.zip), [R2-2001141](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001141.zip), [R2-2001142](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2001142.zip) to determine if the interpretation is correct and how a correction should be captured (if needed).

# 5 List of referenced documents

[1] [R2-2002619](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002619.zip) Correction on SRB duplication OPPO

[2] [R2-2002620](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2002620.zip) Correction on SRB duplication OPPO

[3] [R2-2003147](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003147.zip) Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell

[4] [R2-2003148](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003148.zip) Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell

[5] [R2-2003149](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003149.zip) Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell

[6] [R2-2003150](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003150.zip) Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell

[7] [R2-2003151](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003151.zip) Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell

[8] [R2-2003152](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003152.zip) Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs Nokia, Nokia Shanghai Bell, Qualcomm Incorporated

[9] [R2-2003153](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003153.zip) Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs Nokia, Nokia Shanghai Bell, Qualcomm Incorporated

[10] [R2-2003154](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003154.zip) Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs Nokia, Nokia Shanghai Bell, Qualcomm Incorporated

[11] [R2-2003155](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003155.zip) Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs Nokia, Nokia Shanghai Bell, Qualcomm Incorporated

[12] [R2-2003232](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003232.zip) Minor changes collected by Rapporteur Samsung Telecommunications

[13] [R2-2003233](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003233.zip) Minor changes collected by Rapporteur Samsung Telecommunications

[14] [R2-2003451](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003451.zip) Correction on autonomous measurment gap release Huawei, HiSilicon

[15] [R2-2003452](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003452.zip) Correction on autonomous measurment gap release Huawei, HiSilicon

[16] [R2-2003453](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003453.zip) Correction on autonomous measurment gap release Huawei, HiSilicon

[17] [R2-2003548](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003548.zip) Clarification on UE capability for intra-band non-continuous CA Huawei, Hisilicon

[18] [R2-2003549](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003549.zip) Clarification on UE capability for intra-band non-continuous CA Huawei, Hisilicon

[19] [R2-2003550](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003550.zip) Clarification on UE capability for intra-band non-continuous CA Huawei, Hisilicon

[20] [R2-2003551](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003551.zip) Clarification on UE capability for intra-band non-continuous CA Huawei, Hisilicon

[21] [R2-2003552](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003552.zip) Clarification on UE capability for intra-band non-continuous CA Huawei, Hisilicon

[22] [R2-2003553](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003553.zip) Clarification on UE capability for intra-band non-continuous CA Huawei, Hisilicon

[23] [R2-2003554](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003554.zip) Clarification on UE capability for intra-band non-continuous CA Huawei, Hisilicon

[24] [R2-2003569](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003569.zip) Discussion on Need code for CMAS Huawei, HiSilicon

[25] [R2-2003570](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003570.zip) Correction on Need code for CMAS Huawei, HiSilicon

[26] [R2-2003571](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003571.zip) Correction on Need code for CMAS Huawei, HiSilicon

[27] [R2-2003572](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003572.zip) Correction on Need code for CMAS Huawei, HiSilicon

[28] [R2-2003573](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003573.zip) Correction on Need code for CMAS Huawei, HiSilicon