3GPP TSG-RAN WG2 #109bis-e R2-20xxxxx

Electronic Meeting, April 20th – 30th 2020

Agenda Item: 5.4.1.4

Source: Ericsson

Title: [AT109bis-e][012][NR15] Inter Node Coord

Document for: Discussion, Decision

# 1 Introduction

This document is to kick off the following email discussion:

* [AT109bis-e][012][NR15] Inter Node Coord (Ericsson, Google)

Scope: Treat all docs under AI 5.4.1.4

Part 1: Determine which issues that need resolution, find agreeable proposals. Deadline: April 23 0700 UTC

Part 2: For the parts that are agreeable, discussion will continue to agree on CRs.

# 2 Discussion

Companies are requested to add their comments for each of the treated CRs of this email discussion in the boxes below (one for each CR to be treated).

### 2.1 Remaining issues on MN-SN measurement coordination in INM ([R2-2003195](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003195))

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| --- | --- | --- |
| Company | Agree/Disagree | Comments |
| Nokia | Yes, but… | The issue is valid while it seems the enhancement is not essential. There are currently other shared aspects where it is up to MN implementation for example to allocate the right amount of measurement identities between MN and SN independently. It is thus the MN that takes priority to reserve needed measurement identities no matter if the SN request is supported or not. |
| Ericsson | Agree | As for the power sharing and the band combination coordination, we think the same principle can be applied also for the measurement identities. |
| NEC | Agree with observations, but | The situation summarized in observations could happen. However, this seems not so essential issue to be solved in Rel-15 as Nokia commented. To us, it looks similar to what RAN2 discussed for maxMeasFreqsSCG for which RAN2 agreed that the MN fully controls (without any negotiation/ coordination).  However, we are open for further discussions if some suppports, wth restricting the possible CRs from Rel-16 (not Rel-15). |
| ZTE | Agree | We agree the issue is valid, since the measurement identity coordination is introduced at the late stage of Rel-15. We are fine to consider a more complete solution/enhancement in Rel-15.  Compare to maxMeasFreqsSCG, we think the number of used measurement identities may fluctuate in a wider range. So that is why negotiation of measurement identities seems more useful than negotiation of measured frequencies. |
| Huawei | Disagree | Agree with Nokia and NEC that this is not essential.  MN will take control of the assignment of measIDs, and will guarantee enough measIDs for itself. Even if SN wants more, it is not sure whether MN will satisfy the demand. On the other hand, if SN wants to indicate that it was allocated more measIDs than needed, it does not make much difference to MN because MN already has adequate measIDs.  We don’t think the mechanism can simply mimic band combination and power coordination. For power coordination, it has already been agreed that semi-static sharing, dynamic sharing are both supported. For band combination, things are more complicated because Scell addition/release and mobility are involved.  In our understanding, the measId coordination could be implemented in a semi-static way, which is much easier than dynamic coordination. |
| Samsung | Disagree | We agree with others that this is not essential.  We note that long time ago we agreed not to introduce the SN initiated re-negotiation for the coordination of frequencies to measure. We don’t think the changes introduced recently require a change regarding this |
| vivo | Agree | We think this coordination is useful as it is for the case of power coordination. We consider this as a must have enhancement. |
| Qualcomm | Agree but | There is benefit in SN request for measurement identities when many measurements are configured. However, it is difficult to justify as a correction so can be considered as a Rel-16 enhancement. |
| Intel | May be | It is not essential to have to renegotiate, it could be useful in certain implementations. |
| CATT | Disagree | We agree with others that this is not essential and it is enough to follow the same principle for the coordination of frequencies, i.e. re-negotiation initiated by SN is not supported. |
| Google | Disagree | It is not essential for Rel-15. This can be considered for Rel-16 enhancement. |

### 2.1.1 Correction on MN-SN measurements coordination in INM – Stage 3 ([R2-2003193](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003193), [R2-2003194](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003194))

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| Company | Agree/Disagree | Comments |
| Nokia | Yes, but… | The issue is valid while it seems the enhancement is not essential. There are currently other shared aspects where it is up to MN implementation for example to allocate the right amount of measurement identities between MN and SN independently. It is thus the MN that takes priority to reserve needed measurement identities no matter if the SN request is supported or not. |
| Ericsson | Agree | As for the power sharing and the band combination coordination, we think the same principle can be applied also for the measurement identities. |
| NEC |  | general comment is same as 2.1.  When we focus on the CR, a question is wheter there is any specific difference between maxMeasFreqsSCG (no request) and maxInter/intraMeasIdentitiesSCG? Why only the latter should be able to be requested for change (but not for the former)? |
| ZTE | Agree | Same comment as 2.1. |
| Huawei | Disagree | Same comment as 2.1. |
| Samsung | Disagree | See 2.1 |
| vivo | Agree | See comments above |
| Qualcomm | Agree | Same as 2.1 |
| Intel | May be | Same as 2.1 |
| CATT | Disagree | Same as 2.1 |
| Google | Disagree | Same as 2.1 |

### 2.2.2 Correction on MN-SN measurements coordination in INM – Stage 2 ([R2-2003191](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003191), [R2-2003192](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003192))

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| Company | Agree/Disagree | Comments |
| Nokia | Yes, but… | The issue is valid while it seems the enhancement is not essential. There are currently other shared aspects where it is up to MN implementation for example to allocate the right amount of measurement identities between MN and SN independently. It is thus the MN that takes priority to reserve needed measurement identities no matter if the SN request is supported or not. |
| Ericsson | Agree | As for the power sharing and the band combination coordination, we think the same principle can be applied also for the measurement identities.  On top of this, our understanding is that the second sentence proposed is anyway needed because is based on what has been agreed in the last meeting. |
| NEC |  | same comment as 2.2.1 |
| ZTE | Yes, but… | The current stage2 CR mainly focus on the negotiation of measurement identities. But we still need to update the sentence to capture the latest situation.  See below highlighted part.  Measurements can be configured independently by the MN and by the SN (intra-RAT measurements on serving and non-serving frequencies). The MN indicates the maximum number of frequency layers and measurement identities of intra-frequency and inter-frequency easurement that can be used in the SN to ensure that UE capabilities are not exceeded. The SN can also request the MN for new maximum values of the number of measurement identities that it can configure. To assist MN or SN to identify the measurement type, in all MR-DC cases, the SN indicates to the MN the list of SCG serving frequencies. And in NR-DC, the MN indicates to SN the list of MCG serving frequencies. |
| Huawei | Disagree | Same comment as 2.1. |
| Samsung | Disagree | See 2.1 |
| vivo | Agree | Same as in section 2.1 |
| Qualcomm | Agree | Same as 2.1 |
| Intel | May be | Same as 2.1 |
| CATT | Disagree | Same as 2.1 |
| Google | Disagree | Same as 2.1 |

## 2.3 Introduce RRC version for source configuration ([R2-2003753](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003753))

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| Company | Agree/Disagree | Comments |
| Nokia | Disagree for now | Not sure we understand the reason for proposing an OCTET STRING. Is the proposal to do something similar to:  HandoverPreparationInformation-v920-IEs ::= SEQUENCE {  ue-ConfigRelease-r9 ENUMERATED {  rel9, rel10, rel11, rel12, v10j0, v11e0,  v1280, rel13, …, rel14, rel15} OPTIONAL, -- Cond HO2  nonCriticalExtension HandoverPreparationInformation-v9d0-IEs OPTIONAL  } |
| Ericsson | Disagree | To be honest we struggle to understand why such field is needed and what is the benefits behind it. Our understanding is that the CR is not needed, unless the motivation is further clarified. |

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| NEC | Disagree | we would like to ask more explation for the need of this change.  In addition, it looks the proposal is from Rel-16, so no need to discuss this here? |

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| ZTE | Disagree | The motivation is unclear to us, and we are wondering about the consequence if this is not agreed? |
| Huawei | Disagree | This is not a correction and should not be discussed in Rel-15. |
| Samsung | Disagree | Alike others, we don’t see the need |
| vivo | Disagree | Same view as ZTE. |
| Qualcomm | Neutral | At a high level, this sounds useful, given that a similar IE was used in LTE. |
| Intel | Disagree | It is not clear how this is useful. If target of an earlier release, it will not be able to comprehend this field either. |
| CATT | Disagree | The motivation is unclear to us. |
| Google |  | As described in the changes in the CR, this can be used by the target to decide if the full configuration approach should be used. The target should not be required to comprehend the source configurations.  We add new functions in later releases so differences occur in difference releases. However, unlike LTE, NR has more changes in different versions in the same release according to Rel-15 history. We can foresee that a similar situation or even a worse situation can happen to Rel-16 considering the current meeting process and progress. Therefore, we propose not only to include an RRC release but also an RRC version. The target can better use the RRC release and RRC version to decide if the full configuration is needed.  Although we propose it for Rel-16, we think it is beneficial to introduce the proposal from Rel-15. |

# Conclusion

In the previous sections we made the following observations:

Based on the discussion in the previous sections we propose the following:

# References

[1]