**3GPP TSG-RAN WG2 Meeting #116 electronic R2-21xxxxx**

**Online, 1 – 12 Nov 2021**

**Agenda Item: 8.13 SON/MDT**

**Source: Huawei**

**Title: Report of [AT116e][830][SON/MDT] Reply LS on Area scope configuration and Frequency band info in MDT configuration (Huawei)**

**Document for: Discussion and decision**

# Introduction

This document is to kick off the following email discussion:

* **[AT116e][830][SON/MDT] Reply LS on Area scope configuration and Frequency band info in MDT configuration (Huawei)**

Based on R2-2109334 to figure out the acceptable version on Reply LS

Intended outcome: Approved LS

Deadline: 05:00 UTC, Friday November 5th

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|  |  |
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# Discussion

At RAN2#115-e, the LS [1] was discussed in the email discussion [2]. The following proposals were made but not concluded due to lack of time.

Proposal 11 Rel-16 RAN2 specifications are unchanged with respect to RAN3’s question on the presence of interFreqTargetList within AreaConfiguration.

Proposal 12 RAN2 works on the introduction of AreaConfiguration-r17 (including areaConfig-r16 and interFreqTargetList-r16 inside it with both fields being optional) in Rel-17.

Proposal 13 RAN2 confirms that frequency band list configuration is not supported in interFreqTargetList configuration.

The previous discussions (including companies’ opinions) are lised in section 5 Annex. It can be seen that all above proposals represent the majority view of companies, so it is proposed to use them as a baseline for the reply LS.

**Q1: Do companies agree with the above P11, P12 and P13?**

|  |  |  |
| --- | --- | --- |
| Company | Agree?  (Yes or No) | Comments |
| Qualcomm | Yes |  |
| vivo | Yes |  |
| Ericsson | Yes |  |
| ZTE | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Nokia | Yes |  |
| Sharp | Yes |  |
| CATT | Yes |  |
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|  |  |  |

**Summary: All companies say Yes. So P11, P12 and P13 are agreeable.**

**Q2: Regarding the reply LS to R2-2109334, do companies agree to capture the above P11, P12 and P13?**

|  |  |  |
| --- | --- | --- |
| Company | Agree?  (Yes or No) | Comments |
| Qualcomm | Yes |  |
| vivo | Yes |  |
| Ericsson | Yes |  |
| ZTE | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Nokia | Yes |  |
| Sharp | Yes |  |
| CATT | Yes |  |
|  |  |  |
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**Summary: All companies say Yes. So P11, P12 and P13 will be put in the reply LS.**

# Conclusions

The agreeable proposals are listed as below:

Proposal 1 Rel-16 RAN2 specifications are unchanged with respect to RAN3’s question on the presence of interFreqTargetList within AreaConfiguration.

Proposal 2 RAN2 works on the introduction of AreaConfiguration-r17 (including areaConfig-r16 and interFreqTargetList-r16 inside it with both fields being optional) in Rel-17.

Proposal 3 RAN2 confirms that frequency band list configuration is not supported in interFreqTargetList configuration.

# Reference

[1] R2-2109334 LS on Area scope configuration and Frequency band info in MDT configuration (R3-212824; contact: Huawei) RAN3 LS in Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core To:RAN2

[2] [R2-2108965](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_115-e/Docs/R2-2108965.zip) Report of [Offline-872][SONMDT] Logged MDT enhancements (Ericsson)

# Annex

The following text is about the discussions on the incoming LS [1] at RAN2#115-e meeting.

## 3.3 RAN3 LS related (R3-212824)

RAN3 has sent an LS to RAN2 with some questions.

RAN3 discussed the configuration of Area Scope of Neighbour Cells for logged MDT and the NR Frequency Band in the Area Scope of Neighbour Cells. RAN3 would like to check if there is alignment between TS 38.413 and TS 38.331.

* Area Scope of Neighbour Cells for logged MDT

The Area Scope of Neighbour Cells was introduced for signalling based logged MDT in Rel-16 as an IE that does not depend on the presence of the Area Scope of MDT, e.g. see TS38.413. However, RAN3 observed that the Area Scope of Neighbour Cells cannot be configured to the UE if the Area Scope of MDT is configured as PLMN wide at NGAP level. The reason is that in TS 38.331, the areaConfiguration-r16 is optional, and the interFreqTargetList-r16 is encoded inside the areaConfiguration-r16.If the Area Scope of MDT is configured as PLMN wide, the IE AreaConfiguration-r16 would not be configured to the UE which leads to the fact that the interFreqTargetList-r16 cannot be configured in this case.

RAN3 would like RAN2 to check whether this is an erroneous implementation in TS 38.331.

* Frequency band info

In TS 38.413, the NR Frequency Info in Area Scope of Neighbour Cells supports NR Frequency Band List configuration. While in TS 38.331, there isn’t any NR Frequency Band configuration in the InterFreqTargetInfo configured to the UE.

RAN3 would like RAN2 to feedback whether NR Frequency Band needs to be supported for the Area Scope of Neighbour Cells.

In the contribution [12], Huawei has provided the following related proposals.

**Proposal 1: It is proposed RAN2 to discuss whether the area scope of neighbour cells is dependent on the area scope of serving cells or not:**

* **If there is a dependency, from Rel-17, one option (for RAN3) is to add a clarificaiton to TS 38.413 that “Area Scope of Neighbour Cells” should be simultaneously configued with “the Area Scope of MDT is configured as PLMN wide”**
* **If there is no dependency, from Rel-17, one option (for RAN2) is to introduce AreaConfiguration-r17 including areaConfig-r16 and interFreqTargetList-r16 inside, and both fields are optional**
* **Rel-16 specifications are unchanged (leave it to network implementation)**

**Proposal 2: It is proposed to reply to RAN3 that NR Frequency Band is not supported for the Area Scope of Neighbour Cells.**

Based on the above, the following question is used to collect companies’ views regarding the question of interFreqTargetList within AreaConfiguration:

**Question-9: Which of the following option(s) are preferred regarding the RAN3’s question on the presence of** ***interFreqTargetList* within *AreaConfiguration*?**

1. **Add a clarificaiton to TS 38.413 that “Area Scope of Neighbour Cells” should be simultaneously configued with “the Area Scope of MDT is configured as PLMN wide” i.e., no change to RAN2 specification.**
2. **Introduce AreaConfiguration-r17 including areaConfig-r16 and interFreqTargetList-r16 inside, and both fields are optional.**
3. **Rel-16 specifications are unchanged**

|  |  |  |
| --- | --- | --- |
| **Company name** | **Agreeable option(s)?**  **1, 2, 3, All** | **Comments** |
| Qualcomm | For rel-16, we should adopt option 3 and RAN3 can add clarification as in option 1.  We can consider option-2 in rel-17. |  |
| vivo | 2) | This issue can be fixed in Rel-17. |
| Ericsson | 2 and 3 |  |
| Apple | 3 |  |
| ZTE | (3) |  |
| OPPO | 2） |  |
| Sharp | 3 |  |
| Huawei, HiSilicon | 3 | From RAN2 point of view, we think Rel-16 specification can be unchanged. RAN3 may discuss it based on RAN2 agreement, e.g. 1) may be considered in RAN3.  We are open for solutions in Rel-17, e.g. 2). |
| CATT |  | Agree with Qualcomm. |
| LGE | 3 |  |
| Nokia | 3 or 2 | Agree with Qualcomm suggestion |

**Rapporteur Summary:**

9/11 companies agree that rel-16 specifications should remain unchanged and 7/11 companies indicate that in Rel-17 RAN2 can study the introduction of AreaConfiguration-r17 including areaConfig-r16 and interFreqTargetList-r16 inside it with both fields being optional.

1. Rel-16 RAN2 specifications are unchanged with respect to RAN3’s question on the presence of interFreqTargetList within AreaConfiguration.
2. RAN2 works on the introduction of AreaConfiguration-r17 (including areaConfig-r16 and interFreqTargetList-r16 inside it with both fields being optional) in Rel-17.

Based on the past discussions in RAN2 quoted in [REF], it is clear that the frequency band list configuration is not supported in *interFreqTargetList* configuration*.*

**Question-10: RAN2 confirms that frequency band list configuration is not supported in interFreqTargetList configuration?**

|  |  |  |
| --- | --- | --- |
| **Company name** | **Yes/No** | **Comments** |
| Qualcomm | Agree. |  |
| vivo | Agree |  |
| Ericsson | Yes |  |
| Apple | Agree |  |
| ZTE | Yes |  |
| OPPO | Agree |  |
| Sharp | Agree |  |
| Huawei, HiSilicon | Agree |  |
| CATT | Agree |  |
| LGE | Yes |  |

**Rapporteur Summary:**

All companies agree that frequency band list configuration is not supported in interFreqTargetList configuration.

1. RAN2 confirms that frequency band list configuration is not supported in interFreqTargetList configuration.