**3GPP TSG-RAN WG4 Meeting #96-e R4-201xxxx**

**Electronic Meeting, August 17th – 28th 2020**

**Agenda item:** 7.1.2

**Source:** Moderator (Qualcomm Incorporated)

**Title:** Post-meeting email discussion summary for RAN4#96e\_#107\_NR\_unlic\_UE\_RF

**Document for:** Information

# Introduction

Email discussion of NR-U UE RF requirements is summarized in [1] for RAN4 #96-e. At the conclusion of the RAN4 #96-e meeting, a CR [2] was presented in response to comments received during the meeting. The RAN4 chairman has allotted a one-week email approval process for the CR to be concluded by 5pm UTC September 4. This document summarizes comments received during the post-meeting email discussion.

# Email discussion

There is strong desire and passion to complete the NR-U work. Therefore, the following NR-U UE tdocs are for email approval by 5pm UTC Sept. 4.

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| R4-2011943 | Introduction of NR-based access to unlicensed spectrum | Qualcomm Incorporated, Nokia |

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| **Company** | **Comments** |
| MediaTek | MediaTek cannot agree on this revision on 7.3F.2 REFSENS for n96 since our concerns are not addressed, the values are still copy from those of n46.  We've provided our proposal in the moderator summary report during 2nd round. |
| Charter Communications Inc | To Mediatek, question: if the values are change to your proposal but we leave them in [ ] for further confirmation by other companies, would this be acceptable? |
| Huawei | Comments applicable to BS and UE CR: there is no agreement on channelization. It should be further discussed especially after hearing the comments at Aug.27 GTW that proponents of option 2 (adopted in previous CR) emphasis option 2 is the best choice considering current status of uncertainty of IEEE draft standard. We may need the decision based on 3GPP study or have some coordination with IEEE to minimize the risk on the misalignment between NR-U and WIFI. The SU for 20 MHz with 60 KHz SCS is TBD for both single carrier case and wideband operation case. It is not acceptable since we had an agreement long time ago (R4-1910537) that 25 PRB should be adopted.  Comments specific to UE CR: For the reference sensitivity of 6GHz band, as we comment before, we believe the UE reference architecture should be selected firstly and then the insertion loss data must be provided before REFSENS can be given. We prefer MTK’s approach. And if there is some update on channelization, the A-MPR for 6 GHz band should be re-evaluated. New simulation or measurements are needed. There are lots of updates in the CR, which were new and provided in the last minute of RAN4#96e. We would like to take more time for review and will come back later. |
| AT&T | We support the Nokia CR draft revision R4-2011701. However, we also can support Charter’s suggestion to make progress on the work and to allow time for companies to confirm the values while also allowing for the band definition in Rel-16. We note that front-end and filter vendors have commented on the GTWs that the front-end insertion loss is similar to 5 GHz band with existing solutions, but we can support the compromise proposal.  Concerning channelization and any impact to related requirements, the following was agreed at the 27 Aug GTW.  “If there is updates from IEEE/WiFi Alliance, the channelization and related requirements should be further updated.”  This should allow for future revisions to align with any outcome from IEEE, if RAN4 determines that the revisions are necessary. As mentioned on the GTW, 3GPP RAN4 should not have to arbitrarily wait for IEEE to include n96 in the Rel-16 specification. |
| Intel | We cannot accept the CR as written because it does not include the previous SU agreement for 20 MHz CBW with 60 kHz SCS. It should be included in the revised CR. We echo Huawei’s comment on this issue. Upon this revision, we would be fine.  Regarding 6 GHz REFSENS, we propose as a compromise that the values to be TBD or in square brackets, and RAN4 takes more time to discuss this issue under Rel-16 maintenance. |
| LG Electronics | On channelization: as stated above by AT&T and discussed in GTW we think that further updates when proven necessary are normal way of working in 3GPP and RAN4 and in this case this would be well justified to achieve better and fair co-existence with other technologies within the same band.  On REFSENS: We can accept the proposed values, but leaving the square brackets to allow more time to study this topic is also OK. |

# Reference

1. R4-2011847, “Email discussion summary for RAN4#96e\_#107\_NR\_unlic\_UE\_RF,” Modertor (Qualcomm Incorporated)
2. R4-2011943, “Introduction of NR-based access to unlicensed spectrum,” Qualcomm Incorporated, Nokia