**3GPP TSG-RAN WG2 Meeting #130** **R2-2504706**

**Malta, May 19th – 23rd, 2025**

**Agenda item: 8.5.1**

**Source: InterDigital (Rapporteur)**

**Title: [AT130][106][NES] Open issues for 38.321 CR (InterDigital)**

**Document for: Discussion and Decision**

# Introduction

This document collects the comments received during the following offline discussion on the MAC open issues for the R19 NES work item:

   \* **[AT130][106][NES] (IDC)**

**Scope:** Discuss and attempt to make conclusions on the following issues:

**-**        **Issue 2: Whether there is a need to capture selection/availability of additional RACH resources for RACH adaptation.**

**Intended outcome:** Discussion summary in R2-2504706.

**Deadline:**30min f2f offline discussion

# MAC Issue 2: availability of additional PRACH resources

From the set of open issues identified in the pre-meeting email discussion for the MAC CR, the following open issue is to be discussed in this offline:

**-**        **Issue 2: Whether there is a need to capture selection/availability of additional RACH resources for RACH adaptation.**

**Relevant proposals for issue 2:**

**R2-2504420 Discussion on adaptation of common signal and channel NTT DOCOMO, INC. discussion Rel-19**

Proposal 3: (MAC-2)

At least, the following aspects should be captured in MAC spec. for additional PRACH resources.

* MAC layer would apply new PRACH mask configured by RRC to additional PRACH resources
* MAC layer can use additional PRACH resources when lower layer indicates that they are available until indicated that they are unavailable.

Discussion:



Conclusion:

[Proposal 1: At least, the following aspects should be captured in MAC spec. for additional PRACH resources.

* MAC layer would apply new PRACH mask configured by RRC to additional PRACH resources
* MAC layer can use additional PRACH resources when lower layer indicates that they are available until indicated that they are unavailable.]

**R2-2504279 Time domain adaptation of common signalling and channels InterDigital discussion Rel-19 Netw\_Energy\_NR\_enh-Core**

Proposal 2: From a MAC perspective, additional PRACH resources are considered available if a PDCCH activation indication is received by lower layers; otherwise not considered available.

Text proposal:

|  |
| --- |
| 5.1.1c Availability of the set of Random Access resources  The MAC entity shall for each set of configured Random Access resources:  1> if *eRedCap* is set to *true* for a set of Random Access resources:  2> consider the set of Random Access resources as not available for a Random Access procedure for which eRedCap is not applicable.  1> if *redCap* is set to *true* for a set of Random Access resources:  2> consider the set of Random Access resources as not available for a Random Access procedure for which RedCap is not applicable.  1> if *smallData* is set to *true* for a set of Random Access resources:  2> consider the set of Random Access resources as not available for the Random Access procedure which is not triggered for RA-SDT by MO-SDT as specified in TS 38.331 [5].  1> if *NSAG-List* is configured for a set of Random Access resources:  2> consider the set of Random Access resources as not available for the Random Access procedure unless it is triggered for any one of the *NSAG-ID*(s) in the *NSAG-List*.  1> if *msg3-Repetitions* is set to *true* for a set of Random Access resources:  2> consider the set of Random Access resources as not available for the Random Access procedure if Msg3 repetition is not applicable.  1> if *msg1-Repetitions* is set to *true* for a set of Random Access resources:  2> if Msg1 repetition is not applicable to the current Random Access procedure; or  2> if the set of Random Access resources is not associated with any of the Msg1 repetition number that is applicable to the current Random Access procedure:  3> consider the set of Random Access resources as not available for the Random Access procedure.  1> if a set of Random Access resources is not configured with *FeatureCombination*:  2> consider the set of Random Access resources to not associated with any feature.  1> if a set of Random Access resources is configured with [RRC name TBD: additional PRACH resources]:  2> if PDCCH addressed for the P-RNTI is received from lower layers indicating the availability of the Random Access resources; or  2> if a PDCCH order is received from lower layers with the [TBD DCI field name] indicating the availability of the Random Access resources:  3> consider the set of Random Access resources as available. |

Discussion:



Conclusion:

[Proposal 2: From a MAC perspective, additional PRACH resources are considered available if:

* PDCCH addressed for the P-RNTI is received from lower layers indicating the availability of the Random Access resources; or
* PDCCH order is received from lower layers with the [TBD DCI field name] indicating the availability of the Random Access resources]

**R2-2503553 Adaptation of common signal or channel Fujitsu discussion Rel-19 Netw\_Energy\_NR\_enh-Core**

Proposal 4: RAN2 to discuss how to handle the RA resource selection when there are different preamble assignments for additional PRACH resource configuration and legacy PRACH resource configuration.

Relevant agreements:

* RAN2#129: “Will follow legacy mechanism regarding how to select RACH resource”.
* RAN1#120: “Separate configuration of number of SSB per RO is supported”
* RAN1#120bis: “Separate configuration of the following parameters for the additional PRACH resources at least for 4-step RACH is supported: CB-PreamblesPerSSB”

Discussion:



Conclusion:

Proposal 3: TBD

**Other proposals (If time allows), not directly related to issue 2**

R2-2503712 Remaining issues on common signal transmission adaptation Apple discussion Rel-19 Netw\_Energy\_NR\_enh-Core

Proposal 9: If UE has on-going RACH procedure upon reception of DCI with RACH adaptation indication, the UE stops the on-going RACH procedure, and re-initiates the RACH procedure with updated RACH resources.

R2-2503945 Discussion on adaptation of common signals/channels transmissions Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-Core

Proposal 8: RAN2 to discuss whether the RA procedure can be terminated earlier if the selected RA resource is deactivated.

Discussion:



Conclusion:

Proposal 4: TBD

# Conclusion

After the offline discussion, it is proposed to agree to the following:

# References

[1] R2-2504282, “Running 38.321 CR for network energy saving”, InterDigital

[2] R2-2504281, “Summary of Comments to 38.321 CR for NES”, InterDigital