3GPP TSG-RAN WG2 #118e R2-220xxxx

2022 eMeeting, 09th May – 20th May, 2022

Agenda Item: 6.0.3

Source: MediaTek Inc.

**Title: Report of [AT118-e][027][NR17] Gap Coordination (MediaTek)**

Document for: Discussion and decision

# 1 Introduction

This is report for the following AT118-e mail discussion.

* [AT118-e][027][NR17] Gap Coordination (MediaTek)

 Scope: Treat R2-2205290, R2-2205768, R2-2206011 and other relevant input if any.

 Intended outcome: Report (expect to progress TPs W2 if applicable).

 Deadline: W1 Friday (online CB W2 Monday if needed).

First Deadline – Please provide comments before W1 Friday May 13th 1200 UTC

# 2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

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| --- | --- | --- |
| Company | Name | Email Address |
| MediaTek (Rapp) | Felix Tsai | chun-fan.tsai@mediatek.com |
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# 3 Discussion

## 3.1 Gap priority for non-MGE gaps

The gap priority is agreed to be introduced for concurrent gaps (MGE gaps) based on RAN4 LS R2-2203844. It is used to define the UE behavior/requirement while multiple gap configurations are overlapped in time domain. Since there are also other gaps introduced in Rel-17, it is proposed in R2-2205768 to have this gap priority for non-MGE gaps (i.e. MUSIM gap, pre-configured positioning gap, and NTN gaps). Rapporteur would like to check other company’s view on whether to extend the gap priority configuration to non-MGE gaps.

Note that rapporteur understanding the proposal is for ASN.1 forward compatibility and introducing this gap priority to non-MGE gaps does not change Rel-17 RAN4 requirement (i.e. there is still no RAN4 requirement for joint configuration).

**Question 1: Do companies agree to introduce gap priority configuration for MUSIM gap,** **pre-configured positioning gap, and NTN gaps?**

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| **Company** | **Agree or not** | **Comments** |
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**Summary: TBD**

In [R2-2205768](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2205768.zip), there are some further details if we agree to have gap priority configuration for non-MGE gaps. If companies agree to configure gap priority for non-MGE gaps, please provide comment on the further details.

**Question 2: If agreed to have gap priority for non-MGE gaps, companies are invited to provide comment on the further details of gap priority configuration. Please comment on below proposals from R2-2205768.**

* **Proposal 2: Gap priority is configured per gap configuration (not per gap feature).**
* **Proposal 3: For R17 positioning gaps, the network can configure the same or different priorities for different pre-configured positioning gaps.**
* **Proposal 5: Do not define complex field existence condition for gap priority field, keep using “Optional –Need R”.**

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| **Company** | **Comments** |
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**Summary: TBD**

## 3.2 Maximum number of gap priority

In current 38.331 v17.0.0, the definition for maximum number of gap priority is still FFS.

– *GapPriority*

The IE *GapPriority* is used to identify the priority of a gap configuration.

***GapPriority* information element**

-- ASN1START

-- TAG-GAPPRIORITY-START

GapPriority-r17 ::= INTEGER (1..maxNrOfGapPri-r17)

-- TAG-GAPPRIORITY-STOP

-- ASN1STOP

maxNrOfGapPri-r17 INTEGER ::= ffsUpperLimit -- Maximum number of gap priority level is FFS

No matter this gap priority could be configured for non-MGE gap or not, RAN2 has to define the maximum number of priority level. There are several Tdoc proposed different value with range from 8 to 32. Rapporteur would like to check more companies’ view on this.

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| **Companies** | **Proposals** |
| Huawei[R2-2205290](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2205290.zip) | Proposal 1: The maximum number of gap priorities is 8. |
| ZTE[R2-2205768](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2205768.zip) | Proposal 4: Define the maximum number of gap priority levels as 16 or 32. |
| MediaTek[R2-2205229](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CRAN2%5C2205_R2_118-e%5CDocs%5CR2-2205229.zip) | M606 – Define the maximum number of gap priority to 32 |
| Ericsson[R2-2206015](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2206015.zip) | Proposal 3 The maximum number of priority levels could range from 5 to 8. RAN2 to discuss whether there is a real motivation to consider a greater number. |
| CATT[R2-2204976](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2204976.zip) | Proposal 1: The maximum number of both gap priority and gap ID is 8. |
| Vivo[R2-2204823](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2204823.zip) | Proposal 4: Maximum number of gap priority level is 8 for forward compatibility on other features |
| Xiaomi[R2-2205227](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2205227.zip) | Proposal 2: The maximum number of gap priority can be 8. |

**Question 3: Companies are invited to provide their views on maximum number of gap priority.**

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| **Company** | **Preferred max value** | **Comments** |
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**Summary: TBD**

## 3.3 Joint Configuration limitation

In RAN2#117e, RAN2 sent an LS R2-2203879 on gap coordination and asking RAN4 the maximum of the gaps that could be activated simultaneously.

In [R2-2206011](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2206011.zip), it is proposed to describe joint configuration limitation in field description of each related gap configuration fields (If separate RRC configuration structure is confirmed). Rapporteur understands that we could wait for RAN4 reply and then discuss the RAN2 SPEC impact. Nevertheless, let try to collect companies’ view on this proposal.

**Question 4: Companies are invited to provide comment on the following proposal from** [**R2-2206011**](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2205_R2_118-e/Docs/R2-2206011.zip)**.**

* **Proposal 1 If separate RRC configuration structure is confirmed for the different features (e.g., MUSIM, MGE), RAN2 spec to describe the maximum number of active gaps and joint configuration restrictions, in each related gap configuration fields.**

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| **Company** | **Comments** |
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**Summary: TBD**

# 4 Conclusions

Base on the discussion in section 2, we propose the following:

**Proposal 1:**

# 5 References

[1]