
1 Introduction

CB: # 3_PositioningPRS

- Wait for RAN1/RAN2 to further discuss on this PRS measurement priority issue and evaluate the RAN3 impacts after further agreements are reached in RAN1/RAN2? HW

- RAN3 to confirm that RAN1 WA on gapless measurement enhancements can be supported in existing deployment? Support Option1 with priority recommendation from LMF in the form of QoS for positioning? E///

- Reply LS to RAN1 if needed

(HW - moderator)

[NWM] Summary of offline disc R3-215806

It is propose to focus first on confirming the proposal from RAN1 [3] on gapless measurement enhancements, then decide if RAN3 should proceed in the discussion or wait RAN2/RAN1 progress [2]. In case of RAN3 prefer to proceed with the discussion now, the company are invited to express view on Option 1 and Option 2 of the LS in [1] and the priority recommendation from LMF in the form of QoS for positioning.

The moderator will provide an update 4th Friday afternoon UTC, pending to responses, please if possible provide a first feedback before. Otherwise the official deadline for comment is 9th Tuesday 12 UTC.

2 Discussion

2.1 Gapless measurement enhancements

Based on incoming LS [1], it is propose in [3] to confirm that RAN1 WA on gapless measurement enhancements can be supported in existing deployment.

Feedback Form 1: Is there any technical reason now for RAN3, to not support the gapless measurement enhancements via Option 1 or Option 2 as proposed by RAN1 assuming RAN1 reach an agreement?

1 – Huawei Tech.(UK) Co.. Ltd

No, either Option 1 and Option 2 can be supported

2 – Ericsson LM

As we have mentioned in our paper R3-215434, gapless measurements can already be supported today via existing deployment.

Regarding the options, RAN1 had agreed in their recent e-meeting to support option1. Below is the RAN1 agreement:

Agreement:

- With regards to UE determining the PRS priority with other DL signal/channels within the PRS processing window for PRS measurement outside MG, **support the priority indicated by gNB.**
 - o FFS: What are the other DL signals/channels
- With regards to the PRS processing window for PRS measurement outside MG, **at least support the window indicated by gNB.**

3 – Nokia

No. Also our understanding is that RAN1 has recently agreed on Option 1.

4 – Samsung R&D Institute UK

No. Although option 1 is agreed in RAN1, there's still an FFS under the agreement, i.e. "FFS: What are the other DL signals/channels", in our understanding, not all the DL signals/channels' priority should be indicated by gNB, some of the signals/channels' priority can be specified directly in RAN1 spec, so option 1's impact is not clear for RAN3 now.

5 – Qualcomm Technologies Int

RAN3 should investigate the impacts (if any) once RAN1 has fully finalized the discussions on this.

6 – ZTE Corporation

Agree with QC. Wait for RAN1 further progress.

2.2 RAN3 Immediate action?

The LS in from RAN1 proposed a WA, in [2], it is propose to RAN3, wait for RAN1/RAN2 to further discuss on this PRS measurement priority issue and evaluate the RAN3 impacts after further agreements are reached in RAN1/RAN2

Feedback Form 2: Should RAN3 wait for RAN1/RAN2 to further progress and get agreements before any decision?

1 – Huawei Tech.(UK) Co.. Ltd

Yes, we have preference to wait, RAN1 is discussing additional parameters than priority e.g. the PRS window

2 – Ericsson LM

Fine to wait for RAN1 progress, although it has been confirmed that gNB will indicate the PRS processing window to the UE. In this case RAN3 can align with RAN1 agreement and capture that the gNB configures the PRS measurement time window.

<p>3 – Nokia</p> <p>Yes, fine to wait until e.g. next RAN3 meeting, to ensure topic has become stable in RAN1/RAN2.</p>
<p>4 – Samsung R&D Institute UK</p> <p>Yes. As we commented in 2.1, even option 1 is chosen, the solution is not clear right now, we should wait for RAN1/RAN2.</p>
<p>5 – Qualcomm Technologies Int</p> <p>RAN3 should investigate the impacts (if any) once RAN1 has finalized the discussions on this.</p>
<p>6 – ZTE Corporation</p> <p>Yes. Wait for RAN1 further progress.</p>

2.3 Indication on priority from LMF

If RAN3 has preference to proceed with discussion on this meeting any comment, on support Option1 with priority recommendation from LMF in the form of QoS for positioning as described in [5,6], including LS to RAN1 like [3]...

Feedback Form 3: Companies are invited to express their view on the proposals of addition of Positioning QoS R3-215436; R3-215437 [5, 6]and draft LS R3-215435 [4]

<p>1 – Huawei Tech.(UK) Co.. Ltd</p> <p>Se above</p> <p>The QoS information may not be helpful for determining priority.</p>
<p>2 – Ericsson LM</p> <p>Since gNB configures the PRS measurement time window via control plane (we assume it will be done via RRC), you need some QoS indication from LMF to help gNB prioritize the CP resources and dimension this measurement window. Basically, different measurement windows depending upon the need of positioning application QoS.</p> <p>As can be seen in our proposed TPs, it can be simply some priority indications for the positioning, just like we have in other specifications.</p>
<p>3 – Nokia</p> <p>MG-less PRS reception can also apply to cells in neighbor gNBs, so it is not clear how this proposal can work.</p>
<p>4 – Samsung R&D Institute UK</p> <p>Too early to discuss RAN3 impact, let's wait for a clear solution from RAN1/RAN2, then we can analyze the RAN3 impact.</p>

5 – Qualcomm Technologies Int

It's unclear how this proposal is supposed to work and why e.g., 8 priority levels are needed. Should investigate the RAN3 impacts (if any) once RAN1 has finalized the discussions on this.

6 – ZTE Corporation

Wait for RAN1 further progress.

7 – Ericsson LM

To Nokia: the QoS is generic and can be applicable for both serving and neighbor gNBs, in our view.

To Qualcomm: The priority can be extendable. We are open to consider other positioning QoS metrics and how to signal prioritization information that can help gNB configure the MTW.

3 Conclusion

3.1 Moderator’s Summary

It seems RAN1 had consensus on Option1, but some parameters are still FFS.

There is a large preference to wait next meeting before progressing

Chair may consider to have dedicated AI for Gapless measurement enhancements next meeting

There is no consensus on introduction of Positioning QoS

3.2 Moderator’s Conclusion

The moderators propose to close the CB with recommendation to the Chair to open an AI for:

Gapless measurement enhancements

Feedback Form 4: Please provide comment on conclusion, if any

1 – Ericsson LM

We are fine with the moderator’s conclusion with a new AI to be opened as part of the Rel-17 positioning topics in AI 19

2 – Nokia

This is a latency improvement topic, so we prefer that it be discussed under existing AI 19.3.

3 – Huawei Tech.(UK) Co.. Ltd

That does not preclude a new agenda 19.3.x

There is no consensus on recommendation for an AI

3.3 Conclusion

It seems RAN1 had consensus on Option1, but some parameters are still FFS.

There is a large preference to wait next meeting before progressing

There is no consensus on other proposals Positioning QoS and Gapless dedicated agenda.