**3GPP TSG-RAN WG2 Meeting #131bis R2-250xxxx**

**Prague, Czech Republic, 13th – 17th October 2025**

**Agenda item: 8.9.1**

**Source: Qualcomm Incorporated**

**Title: Open issues on Rel-19 IoT NTN UE capabilities**

**Document for: Discussion and Decision**

1. Introduction

This document intends to list any remaining open issues for the Rel-19 IoT NTN TS 36.306 by continuing following post email discussion. The CR for Rel-19 IoT NTN UE capability was agreed in R2-2506572.

* [Post131][309][R19 IoT NTN] capability CR (Qualcomm)

Scope: finalize the running capability CR

Intended outcome: Endorse CR

Deadline: Sept. 4th

1. Discussion

As per R2-2505542, the majority view was No UE radio capability signaling is introduced to indicate whether UE supports S&F mode operation [5/8].

**Question 1**: Do you agree there is no need to introduce UE capability at AS layer to indicate whether UE supports S&F mode operation?

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| --- | --- | --- |
| Company | Yes/No | Comments |
| vivo | Agreed | There is no need to introduce UE capability at AS layer related to S^F operation. |
| Samsung | Agreed | Unless any company has a good reason to, we see no need. |
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Another aspect is whether/how to capture NB-IoT UE’s radio capability for supporting acceptable cell, for example, capture it as optional feature without signalling or conditional mandatory feature. The main discussion point is even if the UE supports PWS, does it mean it shall support camping on a non-registered PLMN cell, this could also include TN cell as now NB-IoT UE also supports PWS in TN.

Based on the comments, Rapporteur suggests following proposal.

1. No UE radio capability signaling is introduced to indicate whether UE supports S&F mode operation

**Question 2**: Whether/how to capture NB-IoT UE capability for supporting acceptable cell considering TN and NTN?

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| Company | Comments |
| vivo | First of all, NB-IoT TN should not be considered for the PWS reception until SA1 confirms they support it.  A single capabitliy without capability is sufficient to cover PWS reception and PWS reception on acceptable cells for NB-IoT NTN.  Proposed text, 4.3.8.xx pws-Support-r19 This field indicates whether the UE supports the reception of PWS message including ETWS, CMAS, KPAS, EU-Alert in RRC\_IDLE as defined in TS 36.331 [5]. It is optional for a PWS-capable Nb-IoT UE to support the reception of PWS message on an acceptable cell. This feature is only applicable if the UE supports *ue-category-NB.* |
| Samsung | Partly agree with Vivo. It should not be considered supported unless SA1 confirms it, and even then we think that it is risky to support it. This is because there are already deployed NB-IoT networks that will never intend to support PWS.  If acceptable cell is to be supported for TN, then we think that a network indication of support of PWS is needed to prevent UEs camping on cells that will not support PWS broadcasting. |
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Rapporteur thinks it is already agreed that the PWS is supported over NB-IoT TN and LS was sent to SA1. Based on this, RAN2 can assume SA1 would update the specification. Based on the comments, Rapporteur suggests

1. Update the current field description of *pws-Support-r19* by adding “It is optional for a PWS-capable NB-IoT UE to support the reception of PWS message on an acceptable cell”.
2. RAN2 decide whether PWS capable UE supports acceptable cell in NB-IoT TN.
3. If P3 is agreed, introduce TN network indication of support of PWS to prevent UEs camping on cells that will not support PWS broadcasting.

**Question 3**: Any other issues for TS 36.306 CR on Rel-19 IoT NTN UE features?

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| Company | Issues | Comments |
| Samsung | *pws-Support-r19* is indicated as only supported for FDD in RRC. We think that this is probably not correct if PWS is supported in general for TN. | Rapp: It would be good to clarify for TN case, PWS support may not need FDD/TDD differentiation. |
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Based on the comment, Rapporteur suggest discussing how to capture PWS over TDD for TN case.

1. For TN, RAN2 clarify that for *pws-Support-r19* in TN, TDD/FDD differentiation is not needed.
2. Conclusion

Following observation and proposals are made:

Proposal 1 No UE radio capability signaling is introduced to indicate whether UE supports S&F mode operation

Proposal 2 Update the current field description of *pws-Support-r19* by adding “It is optional for a PWS-capable NB-IoT UE to support the reception of PWS message on an acceptable cell”.

Proposal 3 RAN2 decide whether PWS capable UE supports acceptable cell in NB-IoT TN.

Proposal 4 If P3 is agreed, introduce TN network indication of support of PWS to prevent UEs camping on cells that will not support PWS broadcasting.

Proposal 5 For TN, RAN2 clarify that for *pws-Support-r19* in TN, TDD/FDD differentiation is not needed.