3GPP TSG-RAN WG4 Meeting #104-e R4-22xxxxx

Electronic Meeting, Aug 15 – Aug 26, 2022

**Title:** draft Reply LS on *ModifiedMPR-Behaviour* clarification for different power classes

**Response to:** R5-223635

**Release:** Rel-16

**Work Item:** NR\_RF\_FR2\_req\_enh-UEConTest

**Source:** RAN4

**To:** RAN5

**Cc:**

**Contact Person:**

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**Attachments**: N/A

**1. Overall Description:**

RAN4 would like to thank RAN5 for clarification questions on *ModifiedMPR-Behaviour* for different power classes.

With regard to the questions raised by RAN5, the answers from RAN4 are as follows:

**Question a)** *For Rel-15 PC3 UE, is the MPR as defined in 38.101-2 v16.2.0 applicable if the UE supports modifiedMPR-Behaviour bit 0 UE capability?*

**Answer:** Yes, for Rel-15 PC3 UE, MPR defined in 38.101-2 v16.2.0 is also applicable if the UE reports modifiedMPR-Behaviour bit 0 UE capability, but this modified MPR is optional for a Rel-15 UE.

**Question b)** *For Rel-15 PC2 and PC4 UEs, is modifiedMPR-Behaviour bit 0 capability applicable?*

[**Answer alt1:** Yes, Since MPR for PC2 and PC4 refers to the PC3 MPR requirement, the *modifiedMPR-Behaviour* bit 0 capability is also applicable for Rel-15 PC2 and PC4 UEs.]

**Answer alt2:** No, *modifiedMPR-Behaviour* bit 0 capability is not applicable for Rel-15 PC2 and PC4 UEs.

*Alt 1: QC, HW*

*Alt 2: OPPO, E//, Xiaomi*

**Question c)** *For Rel-16 PC3 UE, is the MPR as defined in 38.101-2 v16.2.0 mandatory or optional? In case it is mandatory then is the Rel-16 UE expected to signal modifiedMPR-Behaviour bit 0=true?*

**Answer alt1:** For Rel-16 PC3 UE, the MPR as defined in 38.101-2 v16.2.0 is optional according to the current specification.

[**Answer alt2:** For Rel-16 PC3 UE, the MPR as defined in 38.101-2 v16.2.0 is mandatory and the bit shall be set to “1”.]

*Alt 1: OPPO, QC, HW, Xiaomi, Apple*

*Alt 2: E//*

**Question d)** *For Rel-16 PC3 UE, which version of specification is taken as default MPR requirement, 38.101-2 v16.2.0 or latest version (v16.11.0 released in Apr 2022)? What are the Rel-16 MPR requirements if the UE signals respectively modifiedMPR-Behaviour bit 0=false and modifiedMPR-Behaviour bit 0=true?*

[**Answer alt1:** For Rel-16 PC3 UE, the latest Rel-16 version of specification can be taken for the MPR requirement. A Rel-16 PC3 UE is still allowed to signal *modifiedMPR-Behaviour* bit 0=false and use the previous MPR requirement before v16.2.0 specification, otherwise, if modifiedMPR-Behaviour bit 0=true is indicated, the modified MPR is applied for a Rel-16 PC3 UE.]

**Answer alt2:** For Rel-16 PC3 UE, 38.101-2 v16.1.0 and earlier versions are taken as default MPR requirement. The PC3 UE need meet the MPR as defined in 38.101-2 v16.2.0 if the PC3 UE signals respectively *modifiedMPR-Behaviou*r bit 0=ture, if not, the PC3 UE just need meet the default MPR requirement.

*Alt 1: OPPO, HW*

*Alt 2: QC, Xiaomi, HW, Apple*

*Neither: E//*

**Question e)** *For Rel-16 PC2, PC4 and PC5 UEs is modifiedMPR-Behaviour bit 0 capability applicable*?

[**Answer alt1:** Yes, *modifiedMPR-Behaviour* bit 0 capability is also applicable for Rel-16 PC2, PC4 and PC5 UEs, the behaviour is similar to that of PC3 UE.]

**Answer alt2:** No, *modifiedMPR-*Behaviour bit 0 capability is not applicable for Rel-16 PC2, PC4 and PC5 UEs.

*Alt 1: QC, HW.*

*Alt 2: OPPO, E//, Xiaomi*

**Question f)** *For Rel-17 PC3 UE, what are the MPR requirements if the UE signals respectively modifiedMPR-Behaviour bit 0=false and modifiedMPR-Behaviour bit 0=true?*

[**Answer alt1:** For a Rel-17 PC3 UE, applicable MPR requirement depends on the indicated capability, i.e. original MPR (before v16.2.0) for UE signals *modifiedMPR-Behaviour* bit 0=false while the modified MPR (requirement in latest Rel-17 specification) for UE signals *modifiedMPR-Behaviour* bit 0=true.]

**Answer alt2:** For a Rel-17 PC3 UE, it should comply with the improved MPR defined in the latest Rel-17 version of 38.101-2 and may not set this bit 0 to false.

*Alt 1: HW, Xiaomi*

*Alt 2: OPPO, QC, E//, HW, Apple*

**2. Actions:**

**To RAN1:**

**ACTION:** RAN4 respectfully asks RAN5 to take the above feedback into account for the future work.

**3. Date of Next TSG WG RAN4 Meetings:**

TSG-RAN4 Meeting#104-bis-e 10th – 19th October 2022 Online

TSG-RAN4 Meeting#105 14th – 18th November 2022 Canada