3GPP TSG-RAN WG1 Meeting #101 R1-200xxxx

e-Meeting, May 25th – June 5th, 2020

**Title:** [DRAFT] LS on UE capability on wideband carrier operation for NR-U

**Release:** Rel-16

**Work Item:** NR\_unlic-core

**Source:** [RAN WG 1] MediaTek Inc.

**To:** RAN WG 4

**Cc:**

**Contact Person:**

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**1. Overall Description:**

RAN1 is discussing NR-U UE feature on wideband carrier operations about whether to add UE capabilities for Mode2 and Mode 3 from [1]. RAN1 would like to ask RAN4 for feedbacks about the following questions.

* Question 1: For DL wideband carrier operation, does RAN4 think AGC may be an issue to UE to support Mode 2 and Mode 3? Are there any other issues to UE to support Mode 2 and Mode 3?
	+ In RAN1, some companies think AGC at UE side may be an issue in Mode 2 and Mode 3 where a subset of LBT sub-bands may be acquired by devices other than the UE’s serving cell e.g. near-by WiFi APs.
* [Question 2: For UL wideband carrier operation, does RAN4 think filter adaptation may be required and hence may be an issue for UE to support Mode 2? Are there any other issues to UE to support Mode 2 for UL transmission?
	+ In RAN1, some companies think in Mode 2, UE may be required to adapt filters in between UL-1 and UL-2 transmissions in Figure 1. ]



[Figure 1: In Mode 2 operation, UE may have to adapt filters according to the bandwidth of uplink transmissions.]

**2. Actions:**

**To RAN WG 4 group**

**ACTION:** RAN WG1 respectfully asks RAN WG4 for a response to the above questions and take the above into consideration in their future work.

**3. Date of Next TSG-RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #102 17 –28 August 2020 e-Meeting

**4. Reference**

[1] R4-1905209, “LS reply on wideband carrier operation for NR-U,” RAN4 #90bis, April 2019