3GPP TSG-RAN WG2 #113bis-e R2-210xxxx

eMeeting, 12th – 20th April, 2021

**Title:** **[**Draft] Reply LS on single-uplink operation in more than one band pair of a band combination

**Response to:** R4-2103144 / R2-2102644

**Release:** Rel-15

**Work Item:** NR\_newRAT-Core

**Source:** MediaTek [to be RAN2]

**To:** RAN4

**Cc:**

**Contact Person:**

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**1. Overall Description**

RAN2 would like to thank RAN4 for the LS R4-2103144 on single-uplink operation in more than one band pair of a band combination. RAN2 has discussed the question raised by RAN4 and concluded as following.

RAN2 confirms that *singleUL-Transmission* can not indicate dual UL in one UL band pair and single UL in another UL band pair in one band combination. However, with the ASN.1 signalling from Rel-15, UE is able to indicate dual UL transmission capability in one UL band pair and single UL transmission capability in another UL band pair in different band combination entries.

* For example, suppose a UE supports (hypothetical) band combination DC\_1A\_2A\_n66A\_n78A where single UL is allowed for DC\_2A\_n66A and DC\_2A\_n78A. If UE indicates *singleUL-Transmission* for DC\_1A\_2A\_n66A\_n78A but only need it with DC\_2A\_n66A (i.e. single UL is not needed for DC\_2A\_n78A), UE can indicate separate band combination DC\_2A\_n78A where *singleUL-Transmission* is not included to indicate that single UL is not required for DC\_2A\_n78A. That is:
	+ BC entry 1 - DC\_1A\_**2A**\_**n66A**\_n78A (with UL DC\_2A\_n66A) – Indicates SUO is required
	+ BC entry 2 - DC\_1A\_**2A**\_n66A\_**n78A** (with UL DC\_2A\_n78A) – Not include SUO

Therefore, RAN2 can solve this issue from Rel-15 for two UL CC case and there is still limitation on current signaling if the UE supports more than 2 UL bands simultaneously with some UL band pair requests SUO. However, RAN2 has no plan to implement additional solutions.

In addition, RAN2 would like to point out that UE capability signalling is considered per BC when deciding RRC configuration. Network is not required to derive UE configuration for a BC based on multiple band combination capabilities.

**2. Actions:**

**ACTION:** RAN2 respectfully asks RAN4 to take above RAN2 conclusions into consideration.

**3. Date of Next RAN2 Meetings:**

RAN2#114e, eMeeting, 19-27 May. 2021

RAN2#115e, eMeeting, 16-27 Aug. 2021