3GPP TSG RAN WG2 Meeting #119bis-e R2-22xxxxx

Online, October, 2022

**Title: LS on SL LBT failure indication and consistent SL LBT failure**

**Response to: -**

**Release: Release 18**

**Work Item: NR\_SL\_enh2**

**Source: RAN2**

**To: RAN1**

**Cc: -**

**Contact person: Xiao XIAO**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** **mailto:3GPPLiaison@etsi.org**

**Attachments:** **-**

# 1 Overall description

In RAN2 #119bis-e, RAN2 discussed SL-specific consistent LBT failure detection and recovery procedure for SL-U and made the following agreements:

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| Agreements on SL-specific consistent LBT failure detection and recovery |

To support SL-specific consistent LBT failure detection procedure in SL-U, RAN2 agreed to reuse the consistent LBT failure detection procedure in NR-U as the baseline. RAN2 understand that how SL-specific consistent LBT failure detection should be performed depends on the granularity in which the SL-specific LBT failure is notified by PHY, since this is related to how SL-specific LBT procedure is performed in PHY and how PHY channel/resource structures are to be designed by RAN1 for SL-U.

In particular, in NR-U when an LBT failure is notified due to an intended UL transmission by PHY, MAC considers the LBT failure for the UL BWP where the LBT failure has happened, so that “Consistent LBT failure is detected *per UL BWP* by counting LBT failure indications, for all UL transmissions, from the lower layers to the MAC entity” as specified in TS 38.321.

By contrast, for SL-U, RAN1 has already agreed to support only one SL BWP on a SL-U carrier (as in legacy R16/17 NR SL), which is essentially different from NR-U from resource configuration perspective. Thus it is unclear to RAN2, when an SL-specific LBT failure is notified by PHY due to an intended SL transmission, whether the LBT failure can still be considered as an LBT failure instance indicated for the SL BWP where the LBT failure has happened, or alternatively whether the LBT failure can be considered as an LBT failure instance indicated in other resource granularity (e.g. indicated for an SL resource pool, an SL RB set, etc). This will affect RAN2’s decision on whether SL-specific consistent LBT failure detection can/need be performed in other granularity (e.g. per resource pool, per RB set, etc.) than per BWP as in NR-U.

Therefore, RAN2 respectively request RAN1 to provide the guidelines on the following questions related to SL-specific LBT failure indication.

* **Question**: When SL-specific LBT failure is notified by PHY due to an intended SL transmission, what is the granularity in which MAC can consider that the LBT failure has been detected (e.g. whether MAC can consider that the LBT failure has been detected per SL BWP, per SL resource pool, per RB set, etc.).

# 2 Actions

**To RAN1**

**ACTION:** RAN2 respectfully request RAN1 to provide the feedback on the above Question regarding the granularity of SL-specific LBT failure indication.

# 3 Dates of next TSG RAN WG2 meeting

TSG RAN WG2 Meeting #120 14 November – 18 November 2022 Toulouse, France

TSG RAN WG2 Meeting #121 27 February – 03 March 2023 Athens, Greece