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 the 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 the SL-specific consistent LBT failure detection should be performed depends on the granularity in which the SL-specific LBT failure is notified by the PHY, and this is further related to how SL-specific LBT procedure is performed in the PHY and how the 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 the PHY, the MAC considers the LBT failure to be indicated for the UL BWP where the LBT failure happens, 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, in SL-U RAN2 discovered that RAN1 already agreed to support only one SL BWP on the SL-U carrier (as in legacy R16/17 NR SL), which is essentially different from NR-U for a resource configuration perspective. It is thus unclear to RAN2 when a SL-specific LBT failure is notified by the 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 it happens, or alternatively needs to be considered as an LBT failure instance indicated in other resource granularity (e.g. indicated for an SL resource pool, for an SL RB set, etc). This will further affect RAN2 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 the per BWP manner 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 due to an intended SL transmission by the PHY, what is the granularity in which MAC can consider the LBT failure to be detected (e.g. whether the MAC can consider the LBT failure to be 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