**3GPP TSG- Meeting #bis *draft***

**Changsha, China, April 15-19, 2024**

**Title: Reply LS** **on inter-frequency neighbour cells supporting NR dedicated spectrum less than 5 MHz for FR1**

**Response to:** **R1-2312668 / R2-2400032**

**Release: Rel-18**

**Work Item: NR\_FR1\_lessthan\_5MHz\_BW-Core**

**Source: RAN WG2**

**To: RAN WG1, RAN WG4**

**Cc: -**

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

**Attachments: R2-2403961 (CR for TS 38.331), R2-2403962 (CR for TS 36.331)**

# 1 Overall description

RAN2 thanks RAN1 for the LS on inter-frequency neighbour cells supporting NR dedicated spectrum less than 5 MHz for FR1 (R1-2312668).

RAN2 had previously replied to Question 1 in [R2-2401885](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_125/Docs/R2-2401885.zip).

RAN2 further discussed question 2 in the LS and would like to provide following response:

**Question 2:** If the answer to Question 1 is Yes, is it possible for RAN2 to define a scheme to avoid the backward compatibility issue?

**Answer 2:** RAN2 will add a Rel-18 parallel list in SIB4 indicating the *dl-CarrierFreq-r18* and *frequencyBandList-r18* of the <5MHz neighbor cells. If the new fields are included, legacy fields will need to be gracefully ignored by the legacy UEs. However, legacy fields are mandatory to signal in current specification.

From RAN2 point of view, it is feasible to use ARFCN-ValueNR = 250 (corresponding to GSCN = 2) and *freqBandIndicatorNR* = 1024 as reserved values.

When the new fields are included, legacy fields will be set to the reserved values by the network and ignored by the new UE.

RAN2 requests RAN4 to define these ‘reserved’ values of GSCN =2 / ARFCN-ValueNR = 250 and NR operating band = 1024, and capture in RAN4 specifications, e.g. in Table 5.4.3.1-1 and Table 5.2-1 in TS 38.101-1.

Furthermore, RAN2 will introduce changes in NR SIB11 >> *measIdleConfigSIB-r16*, and LTE SIB24 to enable signalling of <5MHz cells applicable only for UEs supporting <5MHz CBW. Please refer to the attached endorsed CRs.

# 2 Actions

**ACTIONS:**

**To RAN WG4:** RAN2 would like to request RAN4 to take the above information into account, define the ‘reserved’ GSCN / ARFCN-ValueNR and NR operating band and capture in RAN4 specifications, and provide feedback, if any.

**To RAN WG1:** RAN2 would like to request RAN1 to take the above information into account and provide feedback, if any.

# 3 Dates of next TSG RAN WG2 meetings

TSG-RAN2 Meeting #126 May 20 - 24, 2024 Fukuoka, Japan

TSG-RAN2 Meeting #127 Aug 19 - 23, 2024 Maastricht, NL