**3GPP TSG-WG4 Meeting #116 *rev3-R4-2511626***

**Bengaluru, India, 25th Aug 2025 - 29th Aug 2025**

**Title:** Views on Rel-19 FR1 optional CBW

**Agenda Item:** 6.2.6

**Source:** Skyworks Solutions, Inc.

**Document for:** Approval

1. **Introduction**

This contribution proposes to remove the 5 MHz CBW for Bands n41 and n90 based on [1] and way-forward [2].

1. **Discussion**

**Proposal**: Adopt the following TP for RAN4 PRD. The handling of 5 MHz CBW for Bands n41 and n90 can be clarified once a decision on removing or keeping this CBW as an optional CBW is reached.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of TP to RAN4 PRD 0.3.0 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

5.5.2 Inter-band CA

**Handling of MSD requirements related to optional or irregular channel bandwidth (CBW)**:

The following CBW shall not be considered as “valid new smallest CBW” when specifying the inter-band DL CA MSD requirements:

* 3MHz CBW, except when the DL affected band is Band n106,
* 7MHz CBW for all FR1 affected DL bands.

**Handling of MSD requirements for bands where the smallest DL CBW is restricted to Scell operation:**

As an exception, proponents may decide on a case-by-case basis if MSD requirements shall be or shall not be specified for bands where the smallest DL CBW is restricted to Scell operation.

For example, the Band n48 5MHz CBW MSD due to UL2/DL1 harmonic interference is specified for CA\_n25-n48, where band n48 5MHz CBW is restricted to Scell operation.

A counter example is the MSD of Band n40 due to UL2/DL3 harmonic mixing interference for CA\_n40-n77, where the band n40 MSD smallest DL CBW of 5MHz restricted to Scell operation is not specified. Instead, the band n40 MSD is specified for 10MHz CBW.

5.5.2.1 Two-band Inter-band Downlink CA

5.5.2.1.1 One Uplink Band

5.5.2.1.1.1 One Uplink CC

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Unchanged sections are skipped\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Guidelines for MSD Test Points due to cross-band isolation.**

Guidelines for the DL band configuration:

1. The affected DL band carrier centre-frequency is to be configured closest to the UL band.
2. A maximum of two test points can be specified:

* The first test point captures the smallest DL channel bandwidth (CBW) MSD
* The second test point is optional and may capture the greatest DL channel bandwidth (CBW) MSD. For this second test point, other DL configurations are not precluded to account for regional spectrum allocations specificities, for example, or proponent concerns on a specific CBW of interest, etc.

Guidelines for the UL band configuration:

* UL band CBW:
* For the so-called “first mandatory MSD test point”, the UL band shall be configured with the highest supported CBW across all specified BCSs. This ensures that the UL band smallest IMD order has a maximum reach towards the DL affected band.
* For the so-called “second optional MSD test point”, the UL band may be configured with an UL CBW other than the highest CBW supported across all specified BCSs.

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1. **Conclusion**

This contribution clarifies rules on handling MSD requirements for FR1 bands that support optional or irregular CBW. It also relaxes rules on the so-called optional second MSD test point for MSD due to cross-band isolation.

**References**

1. R4-2507700 Impact of Rel-19 BCS4\_5 new greatest-smallest CBW on MSD, 3GPP TSG RAN Meeting #115, St Julians, Malta, Skyworks Solutions, Inc.
2. R4-2508050 WF on optional CHBW across releases, 3GPP TSG RAN Meeting #115, St Julians, Malta, Skyworks Solutions, Inc.