**3GPP TSG-RAN WG2 Meeting #113bis electronic R2-210xxxx**

**Online, April 12 – April 20, 2021**

**Title:** [Draft] LS on BCS capability

**Response to:**

**Release:** Rel-15

**Work Item:** NR\_newRAT

**Source:** [Huawei, HiSilicon]

**To:** RAN4

**Cc:**

**Contact Person:**

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**Attachments**: N/A

**1. Overall Description:**

1) BCS of a fallback band combination

In RAN2 understanding, UE is required to support the same bandwidths for each carrier in a fallback BC as the parent BC, additionally UE can support more bandwidths for each carrier in a fallback BC. Bandwidth Combination Set (BCS) should be considered for determining the bandwidths supported by the UE.

RAN2 is not sure in RAN4 definition, what’s the relation between bandwidths defined for the same BCS ID corresponding to parent band combination and fallback band combination. For example:

Case 1: bandwidths for BCS#ID of fallback BC are **more than** that of parent BC, e.g.

BCS#0 of parent BC: {A, B} MHz

BCS#0 of fallback BC: {A, B, C} MHz

Case 2: bandwidths for BCS#ID of fallback BC are **less than** that of parent BC, e.g.

BCS#0 of parent BC: {A, B, C} MHz

BCS#0 of fallback BC: {A, B} MHz

BCS#1 of fallback BC: {A, B, C} MHz (maybe defined additionally)

Case 3: bandwidths for BCS#ID of fallback BC are **different (not fully contained)** that of parent BC, e.g.

BCS#0 of parent BC: {A, B} MHz

BCS#0 of fallback BC: {B, C} MHz

BCS#1 of fallback BC: {A, B, C} MHz (maybe defined additionally)

RAN2 kindly asks RAN4 to inform RAN2 which case(s) above are valid case(s) from RAN4 perspective, and what’s the relation between bandwidths defined for the same BCS ID corresponding to parent band combination and fallback band combination.

2) BCS for contiguous and non-contiguous intra-band (NG)EN-DC

RAN2 discussed BCS reporting for contiguous and non-contiguous intra-band (NG)EN-DC and concluded that:

If the UE supports intra-band (NG)EN-DC with contiguous and non-contiguous, and the BCS for contiguous and non-contiguous are the same, the UE can signal “both” in *intraBandENDC-Support* with associated BCS value. If the BCS for contiguous and non-contiguous are different, the UE can signal two band combination entries and set “contiguous” and “non-contiguous” separately, with associated BCS value respectively. If no BCS is signalled then the BCS0 is assumed for “both” signalled case.

RAN2 kindly asks RAN4 to take above RAN2 understanding into account.

**2. Actions:**

**To RAN4:**

**ACTION:** RAN2 respectfully asks RAN4 to answer to the above questions in 1), and take the RAN2 understanding in 2) into account.

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

TSG-RAN2 Meeting#114-e 19 – 27 May 2021 Online

TSG-RAN2 Meeting#115 23 – 27 August 2021 Toulouse