**3GPP TSG RAN WG2 #118e (draft)R2-2206419**

**e-Meeting, 9th – 20th May, 2022**

**Title: (draft)** Reply LS on operation with and without SSB for RedCap UE

**Response to:** R2-2206419(R1-2202886)

**Release:** Release 17

**Work Item:** NR\_redcap-Core

**Source:** ZTE Corporation [to be RAN2]

**To:** RAN1, RAN4

**Cc:**

**Contact Person:**

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

**1. Overall Description:**

RAN2 would like to thank RAN1 for the LS on operation with and without SSB for RedCap UE. RAN2 has discussed the following RAN1 agreements regarding BWP#0 configuration option 2.

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| --- |
| Agreement:* Note: For BWP#0 configuration option 2,
	+ For FR1,
		- For a separate initial DL BWP in connected mode (if it does not include CD-SSB and the entire CORESET#0), if it is configured for paging,
			* A RedCap UE supporting mandatory FG 6-1 (but not optional FG 6-1a) expects it to contain NCD-SSB for serving cell but not CORESET#0/SIB
			* A RedCap UE supporting FG 6-1a does not expect it to contain SSB/CORESET#0/SIB
	+ For FR2,
		- For a separate initial DL BWP in connected mode (if it does not include CD-SSB ~~and the entire CORESET#0~~), if it is configured for paging,
			* A RedCap UE supporting mandatory FG 6-1 (but not optional FG 6-1a) expects it to contain NCD-SSB for serving cell but not CORESET#0/SIB
			* A RedCap UE supporting FG 6-1a does not expect it to contain SSB/CORESET#0/SIB
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Although RAN1 mentions for BWP#0 configuration option 2, the separate initial DL BWP in connected mode can be configured for paging, after discussion, RAN2 concludes that if the separate initial DL BWP does not contain CD-SSB and CORESET#0, then this BWP will not be configured with paging search space for UEs in any RRC state. In this case, the RedCap UE in connected mode is not required to read paging.

The reason is that:

1. RedCap UEs in connected mode monitors paging in order to obtain system information change indication or ETWS/CMAS notification indication. After the UE receives such indication(s) from paging message, the UE is expected to read corresponding SIB(s) in order to update SIB or to obtain ETWS/CMAS messages. But according to above RAN1 agreements, the UE does not expect the separate initial DL BWP to contain CORESET#0 /SIB. Then, only to monitor paging is meaningless for connected UEs. Instead, the network can use other methods to inform the UE, e.g. transmit corresponding SIB(s) via dedicated signalling, or switch the UE to legacy initial DL BWP that contains CORESET#0 and CD-SSB.
2. Paging search space is configured in *pdcch-ConfigCommon*, it is cell-specific configuration which is applicable to UEs in any RRC states. RAN2 hasn’t seen the benefit to apply different paging mechanisms for UEs in different RRC state.

So RAN2 thinks there is no need to support paging connected RedCap UEs in separate initial DL BWP which does not contain CORESET#0 and CD-SSB. RAN2 respectfully asks RAN1 to take this conclusion into consideration in their future work.

**2. Actions:**

**To RAN1**

**ACTION:**  RAN2 respectfully asks RAN1 to take this conclusion into consideration in their future work.

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

3GPP RAN2#119-e 15th – 26th Aug 2022 Online