**3GPP TSG-RAN WG1 #102-e R1-20xxxxx**

**e-Meeting, Aug 17 – Aug 28, 2020**

**Source: Moderator (Ericsson)**

**Title: Summary of efficient and low latency serving cell configuration/activation/setup**

**Agenda item:** **7.2.10**

**Document for:** **Discussion and Decision**

# 1 Introduction

In this document, some suggestions for discussion in RAN1#102-e are provided by considering contributions [1-14] related to efficient and low latency serving cell configuration/activation/setup submitted under agenda item 7.2.10.

# 2. Possible topics for discussion

## 2.1 Possible topics for discussion

Topic 1-1: Processing time and HARQ timing for Case 2 dormancy indication – [3],[9],[11],[13],[14]

* Related to text in square brackets for TP2 in [15] from RAN1#100-e. Was discussed in RAN1#100bis-e and RAN1#101-e. Also consider discussing Topic 1-6 based on the conclusion.

Topic 1-2: Whether to have restriction that DCI format 1\_1/0\_1 with dormancy indication is only in first 3 symbols of a slot – [2], [3], [4], [8], [11],[13],[14]

* Was discussed in RAN1#100bis-e and RAN1#101-e.

Topic 2-5 ~~1-3~~: RRC parameter name alignment – [2], [7], [10], [12]

* Align the RRC parameter names with 38.331. Also, include other TPs in [7] in this discussion.

Topic 1-3 ~~1-4~~: Spec clarification TPs in [9], [13]

* TP1 and TP3 in [9].
* TP2 and TP3 in [13]

Topic 2-4 ~~1-5~~: Clarifications related to “BWP indicator field” not allowed to indicate a dormant BWP when detected in SCell DCI formats (including 0\_1, 0\_2) – [5],[6],[14]

Topic 1-6: TDRA restriction for Case 1 dormancy indication for cases where there is interruption on SCell due to BWP switch – [3]

* Can be considered after concluding Topic 1-1

Topic 2-1: Starting point for bwpInactivityTimer for an SCell when DCI format 2\_6 indicates dormant to non-dormant BWP switch for that SCell– [1]

Topic 2-2: Handling SCell dormancy indication bits in DCI format 2\_6 when wake-up bit=0 – [1], [6]

Topic 2-3: UE ignores dormancy indication in DCI format 2\_6 if it is too close to on duration – [5]

## 2.2 Moderator proposal

**Moderator Proposal**

Discuss following topics related to maintenance of efficient and low latency serving cell configuration/activation/setup in RAN1#102-e as part of A.I. 7.2.10

* First email thread
	+ Topic 1-1: Processing time and HARQ timing for Case 2 dormancy indication – [3],[9],[11],[13],[14]
	+ Topic 1-2: Whether to have restriction that DCI format 1\_1/0\_1 with dormancy indication is only in first 3 symbols of a slot – [2], [3], [4], [8], [11], [13], [14]
	+ Topic 1-3: RRC parameter name alignment – [2], [7], [10], [12]
	+ Topic 1-4: Spec clarification TPs in [9], [13] (TP1 and TP3 in [9]; TP2 and TP3 in [13])
	+ Topic 1-5: Clarifications related to “BWP indicator field” not allowed to indicate a dormant BWP when detected in SCell DCI formats (including 0\_1, 0\_2) – [5],[6],[14]
* Second email thread
	+ Topic 2-1: Starting point for bwpInactivityTimer for an SCell when DCI format 2\_6 indicates dormant to non-dormant BWP switch for that SCell– [1]
	+ Topic 2-2: Handling SCell dormancy indication bits in DCI format 2\_6 when wake-up bit=0 – [1], [6]
	+ Topic 2-3: UE ignores dormancy indication in DCI format 2\_6 if it is too close to on duration – [5]

Please provide comments (if any) for above proposal.

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| Company Name | Comments |
| Huawei, HiSilicon | Our understanding is 1-3 and 1-4 can be handled later as the main function is stable while 2-1 and 2-3 can be with higher priority thus in the first round of discussion (2-1, 2-3 seems to discuss a same issue caused by BWP switching w.r.t. ON duration). |
| MTK | Thanks for the detailed summary. We are fine with the Moderator Proposal about the discussed topics corresponding to email threads.. |
| Spreadtrum | We are fine with the proposal of email discussions from Moderator. |
| Nokia, NSB | Whole second email thread are non-essential single company proposals. If we have two threads available, we suggest splitting Thread 1: 1-1,1-2 Thread 2: 1-3,1-4,1-5 |
| ZTE | We are generally fine with the FL proposal. If the email budget is limited, the topics under second email thread can be deferred to next meeting. |
| vivo | If we are allowed to have two email thread, then the FL proposal above is fine. Otherwise, if we only have one email thread, we think Topic 2-1 has to be treated since the specification will be broken if starting time of bwpInactivityTimer is ambiguous.  |
| CATT | High priority 1-1 and 1-2. For Topic 2-1 and 2-2, the same question of multiple PDCCH monitoring occasions up to 3 CORESETs exists in Rel-15. There is no discussion on which DCI should be considered as the starting time of BWP switching. We are OK to discuss 2-1 and 2-2 if there is a room in the email thread. All other issues could be discussed later.  |
| Nokia, NSB | With respect to essentiality of Topic 2-1* If UEs support BWP switching they will support 2BWP capability only, one dormant, other non-dormant, there is not really room for default BWP, since RAN2 said dormant cannot be default.
* Inactivity timer would be typically long, 50,100ms, and would be restarted again in On Duration immediately after PDCCH with C-RNTI is received by UE. Any small misunderstanding gets resolved quickly.
* Start and restart conditions are RAN2 business. RAN1 says, “if the restarting conditions in [11, TS 38.321] …”
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**Moderator Proposal v2**

Discuss following topics related to maintenance of efficient and low latency serving cell configuration/activation/setup in RAN1#102-e as part of A.I. 7.2.10

* First email thread
	+ Topic 1-1: Processing time and HARQ timing for Case 2 dormancy indication – [3],[9],[11],[13],[14]
	+ Topic 1-2: Whether to have restriction that DCI format 1\_1/0\_1 with dormancy indication is only in first 3 symbols of a slot – [2], [3], [4], [8], [11], [13], [14]
	+ Topic 1-3 ~~1-4~~: Spec clarification TPs in [9], [13] (TP1 and TP3 in [9]; TP2 and TP3 in [13])
* Second email thread
	+ Topic 2-1: Starting point for bwpInactivityTimer for an SCell when DCI format 2\_6 indicates dormant to non-dormant BWP switch for that SCell– [1]
	+ Topic 2-2: Handling SCell dormancy indication bits in DCI format 2\_6 when wake-up bit=0 – [1], [6]
	+ Topic 2-3: UE ignores dormancy indication in DCI format 2\_6 if it is too close to on duration – [5]
	+ Topic 2-4 ~~1-5~~: Clarifications related to “BWP indicator field” not allowed to indicate a dormant BWP when detected in SCell DCI formats (including 0\_1, 0\_2) – [5],[6],[14]
	+ Topic 2-5 ~~1-3~~: RRC parameter name alignment – [2], [7], [10], [12]

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| Company Name | Comments |
| vivo | Regarding the TP1 of [9] in Topic 1-3, i.e. the DAI issue for case-2 dormancy DCI for cross-carrier scheduling with different numerologies, our understanding is that the due to the following agreement, in the concerned scenario a case-2 dormancy DCI shall include CIF=0 thus the DCI belongs to the Pcell for DAI accumulation and there is only one DCI expected per MO so the issue does not exist.Agreements:* + When UE is configured with CIF, DCI format 1-1 on primary cell with CIF≠0‘is not used for Case 2 SCell dormancy indication
		- Discuss TP in next phase
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# 3 Conclusion

Following is proposed based on preparation phase email discussion [102-e-Prep-LTE\_NR\_DC\_CA\_enh-Core]

**Moderator Proposal v2**

Discuss following topics related to maintenance of efficient and low latency serving cell configuration/activation/setup in RAN1#102-e as part of A.I. 7.2.10

* First email thread
	+ Topic 1-1: Processing time and HARQ timing for Case 2 dormancy indication – [3],[9],[11],[13],[14]
	+ Topic 1-2: Whether to have restriction that DCI format 1\_1/0\_1 with dormancy indication is only in first 3 symbols of a slot – [2], [3], [4], [8], [11], [13], [14]
	+ Topic 1-3 ~~1-4~~: Spec clarification TPs in [9], [13] (TP1 and TP3 in [9]; TP2 and TP3 in [13])
* Second email thread
	+ Topic 2-1: Starting point for bwpInactivityTimer for an SCell when DCI format 2\_6 indicates dormant to non-dormant BWP switch for that SCell– [1]
	+ Topic 2-2: Handling SCell dormancy indication bits in DCI format 2\_6 when wake-up bit=0 – [1], [6]
	+ Topic 2-3: UE ignores dormancy indication in DCI format 2\_6 if it is too close to on duration – [5]
	+ Topic 2-4 ~~1-5~~: Clarifications related to “BWP indicator field” not allowed to indicate a dormant BWP when detected in SCell DCI formats (including 0\_1, 0\_2) – [5],[6],[14]
	+ Topic 2-5 ~~1-3~~: RRC parameter name alignment – [2], [7], [10], [12]

# 3 References

1. [R1-2005359](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2005359.zip) Remaining issues on Scell dormancy like behavior vivo
2. [R1-2005421](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2005421.zip) Remaining Issues of SCell Dormancy and Cross-carrier Scheduling ZTE
3. [R1-2005626](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2005626.zip) Remaining issues on Rel-16 carrier aggregation MediaTek Inc.
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5. [R1-2005788](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2005788.zip) Remaining issues on CA Huawei, HiSilicon
6. [R1-2005856](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2005856.zip) Remaining issues on MR-DC & eCA Intel Corporation
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8. [R1-2006035](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2006035.zip) Remaining issues for Scell dormancy OPPO
9. [R1-2006123](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2006123.zip) On maintenance of Scell dormancy and CCS with different SCSs Samsung
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11. [R1-2006430](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_102-e/Docs/R1-2006430.zip) Remaining issues on Efficient CA design Nokia, Nokia Shanghai Bell
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15. [R1-2001419](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100_e/Docs/R1-2001419.zip) Text proposals from email discussion [100e-NR-LTE\_NR\_DC\_CA\_enh-ScellDormancy-01] Ericsson