**3GPP TSG RAN WG2 Meeting #131 R2-250xxxx  
Bengaluru, Indian, August 25 – 29, 2025**

**Agenda item: 8.5.1**

**Source: Apple (Rapporteur)**

**Title: Summary report of [POST131][109][NES] 38.304 CR (Apple)**

**WID/SID: Netw\_Energy\_NR\_enh-Core– Release 19**

**Document for: Discussion and Decision**

# 1 Introduction

This is a summary document on collection of comments to TS 38.304 running CR after RAN2#131:

* [[POST131][109][NES] (Apple)

**Scope:** Update NES 38.304 CR (including this meeting agreements also).

**Intended outcome:** 38.304 CR in R2-2506220 to be agreed.

**Deadline:** Short email discussion

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# 2 Updates after RAN2#131

In RAN2#131, the following running CR was endorsed:

*R2-2505496 Running 38.304 CR for network energy saving Apple (Rapporteur) CR Rel-19 38.304 18.4.0 0442 - B Netw\_Energy\_NR\_enh-Core*

* *Endorsed and considered as baseline for further discussion.*

After online and offline discussion of RAN2#131, CR rapporteur made the following updates (compared with *R2-2505496)* summarized in Table.1.

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| **Description of the change** | **Reason for the change** |
| **Section 7.1:**  For a UE in RRC\_IDLE or RRC\_INACTIVE state and supporting paging adaptation, if *pagingAdaptation-NS* and *pagingAdaptationNAndPagingFrameOffset* are signaled in *SIB1*, the UE determines the value of Ns from *pagingAdaptation-NS,* N and PF\_offset from the parameter *pagingAdaptationNAndPagingFrameOffset* as defined in TS 38.331 [3], and only monitors the PO(s) derived from these paging parameters. The parameter *firstPDCCH-MonitoringOccasionOfPO-r19* for paging adaptation is signalled in *SIB1* for paging in the BWP configured by *initialDownlinkBWP*. For paging in a DL BWP other than the BWP configured by *initialDownlinkBWP*, the parameter *firstPDCCH-MonitoringOccasionOfPO-r19* for paging adaptation is signaled in the corresponding BWP configuration. | Capture the following RAN2#131 agreement:  => firstPDCCHMonitoringOccasionOfPO-r19 is introduced both PCCH-Config and PDCCH-ConfigCommon. |
| **Section 7.2.1:**  The time location of PEI-O for UE's PO is determined by a reference point and an offset:  - The reference point is the start of a reference frame determined by a frame-level offset from the start of the first PF of the PF(s) associated with the PEI-O, provided by *pei-FrameOffset* (or *pei-FrameOffset-r19*) in SIB1;  - The offset is a symbol-level offset from the reference point to the start of the first PDCCH MO of this PEI-O, provided by *firstPDCCH-MonitoringOccasionOfPEI-O* (or *firstPDCCH-MonitoringOccasionOfPEI-O-r19*) in SIB1.  If one PEI-O is associated with POs of two PFs, the two PFs are consecutive PFs calculated by the parameters *PF\_offset*, *T*, *Ns*, and *N*. The first PF of the PFs associated with the PEI-O is provided by (SFN for PF) - floor (*iPO*/*Ns*)\**T*/*N*, where SFN for PF is determined in clause 7.1, *iPO* is defined in clause 10.4a in TS 38.213[4], *T*, *Ns*, and *N* are determined in clause 7.1.  The PDCCH MOs for PEI are determined as specified in TS 38.213 [4] according to *pei-SearchSpace*, *pei-FrameOffset* (or *pei-FrameOffset-r19*), *firstPDCCH-MonitoringOccasionOfPEI-O* (or *firstPDCCH-MonitoringOccasionOfPEI-O-r19*) and *nrofPDCCH-MonitoringOccasionPerSSB-InPO* ifconfigured as specified in TS 38.331 [3]. When *SearchSpaceId* = 0 is configured for *pei-SearchSpace*, the PDCCH MOs for PEI are same as for RMSI as defined in clause 13 in TS 38.213 [4]. UE determines first PDCCH MO for PEI-O based on *pei-FrameOffset* (or *pei-FrameOffset-r19*), and *firstPDCCH-MonitoringOccasionOfPEI-O* (or *firstPDCCH-MonitoringOccasionOfPEI-O-r19*), as for the case with *SearchSpaceId* > 0 configured. | Capture the following RAN2#131 agreement:  Proposal 4 (7/13) The following Rel-19 PEI configurations with the same value range (except pei-FrameOffset-r19) as Rel-17 PEI configuration need to be introduced.  o po-NumPerPEI-r19  o payloadSizeDCI-2-7-r19  o pei-FrameOffset-r19: extend to 32 radio frame  **=> All proposals above (proposal 1 - 5, and 8 - 15) are agreed.** |
| **Section 7.2.1:**  For a UE supporting paging adaptation and PEI, if *pagingAdaptationPEI-Config* is signaled in system information, the UE in RRC\_IDLE or RRC\_INACTIVE state can monitor the PEI occasion according to *pagingAdaptationPEI-Config, pei-FrameOffset-r19* and *firstPDCCH-MonitoringOccasionOfPEI-O-r19 ~~(if configured).~~* | Capture the following RAN2#131 agreement:  Proposal 15: When pagingAdaptationPEI-Config is signaled in system information, pagingAdaptationFirstPDCCH-MonitoringOccasionOfPEI-O-r19 should be configured.  **=> All proposals above (proposal 1 - 5, and 8 - 15) are agreed.** |

**Table.1 Summary of updates after RAN2#131**

# 3 Collection of comments on running CR after RAN2#131

Please provide your comments in below table, and Rapporteur will response. Please do not insert any comments in running CR directly, which is hard for Rapporteur to follow all comments.

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| **Company**  **+issue #**  **(e.g. Apple 001)** | **Detailed issue and proposed change** | **Rapporteur response** |

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| Nokia001 | Parameter having actual effect should not be listed in parenthesis. Anything in paranthesis is just informative and does not have any impact to UE implementation as such. So one should not have pei-frameOffset-r19 in parenthesis but just listed similarly as other parameters. | Thanks for raising the issue. However, existing 38.304 has used pei-frameOffset from Rel-17:  The time location of PEI-O for UE's PO is determined by a reference point and an offset:  - The reference point is the start of a reference frame determined by a frame-level offset from the start of the first PF of the PF(s) associated with the PEI-O, provided by *pei-FrameOffset* in SIB1;  - The offset is a symbol-level offset from the reference point to the start of the first PDCCH MO of this PEI-O, provided by *firstPDCCH-MonitoringOccasionOfPEI-O* in SIB1.  [vivo] Share same feeling as Nokia. One suggestion is to revise as below:  The reference point is the start of a reference frame determined by a frame-level offset from the start of the first PF of the PF(s) associated with the PEI-O, provided by *pei-FrameOffset* in SIB1, or by *pei-FrameOffset-r19* in SIB1 for UE supporting *pagingAdaptation-r19*;  Similar changes can be adopted for other places.  **[Rapporteur update] I had an offline discussion with Nokia and vivo. And the conclusion is that latest RRC running CR has included when the UE uses Rel-17 *pei-FrameOffset* vs Rel-19 *pei-FrameOffset* in field description of *pei-FrameOffset-r19:***  ***pagingAdaptPEI-Config***  The PEI related configuration for paging adaptation. If the UE supports paging adaptation for PEI, it ignores *pei-Config-r17*, if configured.  **As it is clear in RRC, we don’t need to distinguish in 38.304 whether UE uses r17 or r19 version. So, I remove the parentheses in 38.304, including *firstPDCCH-MonitoringOccasionOfPEI-O* (with same logic).**  **It is reflected in v03.** |
| ERI 001 | The cover page should include the CR numbers for the mega capability CRs, i.e., 38.306 and 38.331. | Reflected in v04 |
| ERI 002 | The names of the parameters *odsib1-CellReselectionPriority* and  *odsib1-CellReselectionSubPriority* should be replaced with *od-sib1-CellReselectionPriority* and *od-sib1-CellReselectionSubPriority* to align with the 38.331 CR. | Reflected in v04 |
| ERI 003 | Please check for similar others, such as  *intraFreqODSIB1-ExcludedCellList*,  *interFreqODSIB1-ExcludedCellList*,  *firstPDCCH-MonitoringOccasionOfPO,*  *pagingAdaptation-NS,*  *pagingAdaptationNAndPagingFrameOffset*  to make sure that parameter names are aligned. | Update to  *intraFreqOD-SIB1-ExcludedCellList*,  *interFreqOD-SIB1-ExcludedCellList*,  *pagingAdaptFirstPDCCH-MonitoringOccasionOfPO*  *firstPDCCH-MonitoringOccasionOfPO,*  *pagingAdapt-NS,*  *pagingAdaptNAndPagingFrameOffset*  Reflected in v04 |
| ERI 004 | The following TP needs editorial revision:  If a UE supporting OD-SIB1 is barred in a cell due to no available *SIB1* request configuration as defined in section 5.2.2.3.1 of TS 38.331 [3], it considers the cell is no longer barred once *SIB1* request configuration of the cell is acquired. | Fixed in v04 |
| ERI 005 | No need to use the release extension with the parameter names: e.g.,  *firstPDCCH-MonitoringOccasionOfPO-r19* | Fixed in v04 |
| ERI 006 | Is the following text needed in section 7.1:  For paging in a DL BWP other than the BWP configured by *initialDownlinkBWP*, the parameter *firstPDCCH-MonitoringOccasionOfPO-r19* for paging adaptation is signaled in the corresponding BWP configuration.  Is it correct at all since *pagingAdaptFirstPDCCH-MonitoringOccasionOfPO* is optional? | It just mimics its previous paragraph:  “Parameters *Ns*, *nAndPagingFrameOffset*, *nrofPDCCH-MonitoringOccasionPerSSB-InPO*, and the length of default DRX Cycle are signaled in *SIB1*. The values of N and PF\_offset are derived from the parameter *nAndPagingFrameOffset* as defined in TS 38.331 [3]. The parameter *firstPDCCH-MonitoringOccasionOfPO* is signalled in *SIB1* for paging in the BWP configured by *initialDownlinkBWP*.For paging in a DL BWP other than the BWP configured by *initialDownlinkBWP*, the parameter *first-PDCCH-MonitoringOccasionOfPO* is signaled in the corresponding BWP configuration.”  On its optional, current 38.304 has captured the UE behavior when it is absent:  “When *firstPDCCH-MonitoringOccasionOfPO* (or *pagingAdaptFirstPDCCH-MonitoringOccasionOfPO* for paging adaptation) is present, the starting PDCCH monitoring occasion number of (i\_s + 1)th PO is the (i\_s + 1)th value of the *firstPDCCH-MonitoringOccasionOfPO* (or *pagingAdaptFirstPDCCH-MonitoringOccasionOfPO* for paging adaptation) parameter; otherwise, it is equal to i\_s \* S\*X.” |
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# 3 Conclusion

TBD