**3GPP TSG RAN WG2 Meeting #130 R2-250xxxx
Malta, MT, 19th to 23rd May 2025**

**Agenda item: 8.5.1**

**Source: Ericsson**

**Title: Comments to 38.331 CR for NES**

**Document for: Discussion and Decision**

# 1 Introduction

This is a summary document on collection of comments to TS 38.331 CR during below running CR discussion:

* [POST129b][111][NES] (Ericsson)

 **Scope:** Update RRC running CR based on RAN2#129bis progress and maintain essential open issue list in a separate contribution (RRC running CR can keep editor’s notes for readability).

 **Intended outcome:** Updated RRC running CR and essential RRC open issue list.

**Deadline: Long email discussion**

DL for the email discussion is 2nd May, please provide your comments early so there is time to resolve when needed. Last comments to take into account should be uploaded by 23:59 UTC 1st May. Later comments are taken into account by best effort.

# 2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

|  |  |  |
| --- | --- | --- |
| Company | Name | Email Address |
| Ericsson | Helka-Liina Määttänen | Helka-liina.maattanen@ericsson.com |
| Apple  | Peng Cheng | Pcheng24@apple.com |
| OPPO | Qianxi Lu | qianxi.lu@oppo.com |
| CATT | Rui Zhou | zhourui@catt.cn |
| xiaomi  | Shukun Wang | Wangshukun3@xiaomi.com |

# 3 Open issue list

5.2.2.2.2

Editor’s note: FFS pharsing for paging adaptation pos only, that is those occasions that are not also configured for legacy.

**5.2.2.3.1**

Editor’s note:

FFS whether to capture the UE first should acquire a valid SIB1 (e.g. via SIB1 request) for camping on an OD-SIB1 NES cell.

FFS RAN1 discussion on e.g. *ssb-SubcarrierOffset*

**5.2.2.3.3x**

Editor’s note:

FFS how does UE check is SIB1 is already provided.

FFS: if there is need to emphasize it is normal uplink

FFS reference for where are the details on how UE is obtaining SIB1, possibly RAN1 specification

**5.2.2.4.2x**

Editors notes: FFS depending SIBxx/UL WUS validity discussion details

***SIBxx***

Editor’s note: Only parameters in R1-2501645 that are in own rows are implemented and not all listed e.g. in cell 17P or 21P.

FFS to group some parameters under subIEs like frequencyInfoUL

FFS to separate IE OD-SIB1 as own IE, for review purposes it is here now.

FFS: value for maxCells, maxSIB1-Message, maxPCI

FFS: optionality of the parameters as there was no input on this

FFS: if list of cells is ARFCN&PCI or only PCI

***DownlinkConfigCommonSIB***

Editor’s note:

FFS field description for pagingAdaptationNAndPagingFrameOffset with respect to possible configuration restrictions. FFS: firstPDCCH-MonitoringOccasionOfPO for paging adaptations.

FFS: Do we need to introduce a separate pei-ConfigBWP for paging adaptation?

***UE-RadioPagingInfo***

Editor’s note: FFS details

***si-BroadcastStatus***

FFS: how to capture that a CONNECTED MODE UE supporting OD-SIB1 who is in a cell that does not broadcast SIB1, understands that the stored SIB1 is the latest SIB1.E.g. “The UE supporting OD-SIB1 in RRC\_CONNECTED regards the stored SIB1 is the latest SIB1.”

Additional open issues that will have RRC impact but since RAN2/other WG discussion is missing these are not ENs in RRC:

 **OD-SSB:**

1) FFS: How to capture OD-SSB configuration in RRC, including the configurations included in MAC-CE, with consideration of RAN1 input.

2) FFS: How to capture procedure text and RRC configuration of L3 RRM for OD-SSB, with consideration of RAN4/RAN1 input.

**RACH adaptation:**

1) FFS: How to configure additional RACH resource for RACH adaptation in RRC, with consideration of RAN1 input.

**SSB adaptation:**

1) FFS: How to capture procedure text and RRC configuration of L3 RRM for SSB adaptation, with consideration of RAN4/RAN1 input.

|  |  |  |
| --- | --- | --- |
| **Company** | **Detailed comments on FFSs** | **Rapporteur response** |
| Apple | We think the following ENs can be removed: FFS whether to capture the UE first should acquire a valid SIB1 (e.g. via SIB1 request) for camping on an OD-SIB1 NES cell. [Apple] We are a bit confused by this FFS. It seems that Section 5.2.2.3.3x has captured the procedure that the UE acquires a SIB1 via SIB1 request.FFS how does UE check is SIB1 is already provided. [Apple] RAN1#121b has agreed it is up to UE implementation when K\_SSB>=24 for FR1 or K\_SSB>=12 for FR2:**Agreement**If a UE has SIB1 request configuration of a cell and before transmitting UL WUS,* If the UE detects a SSB where K\_SSB>=24 for FR1 or K\_SSB>=12 for FR2, select the following:
	+ Alt. 3: It is up to UE implementation on whether to monitor Type 0 PDCCH for SIB1 transmission

For the other case (i.e. when K\_SSB<24 for FR1 or K\_SSB<12 for FR2), it is legacy UE behaviour on monitoring CD-SSB and no need of new specification. Thus, we think it is sufficient to add the following in Section 5.2.2.3.3x, and remove EN.“NOTE: It is up to UE implementation on how to check SIB1 is being broadcasted.”FFS: if there is need to emphasize it is normal uplink[Apple] As it is same as legacy text in 38,331, we suggest:Keep the current text in running RRC CR and remove EN.Whether to support SUL in OD-SIB1 is a separate discussion, which can be company contribution driven. FFS: how to capture that a CONNECTED MODE UE supporting OD-SIB1 who is in a cell that does not broadcast SIB1, understands that the stored SIB1 is the latest SIB1.[Apple] See A004 | [Rapp] We have RAN2 agreement from 127bis: If UE has SIB1 request configuration of a cell, UE needs to check if SIB1 is currently being broadcasted or provided on demand for that cell before requesting SIB1 of that cell.The FFS is for this agreement and while RAN1 has agreed that from their perspective it can be left to UE implementation it does not mean the RAN2 agreeement is cancelled since RAN2 has made the agreement from RAN2 perspetive using RAN2 considerations and expertise.Plan to resolve the FFS is to see the parameters and use the SIB1 tentative time locations, so UE would next tentative location before requesting.I can remove the normal uplink EN unless complains appear. Did not do that yet in V01. |
| CATT001 | In RAN2#127bis, L3 framework with the following options was discussed with no conclusion.- Option1: Based on different measurement configuration when OD-SSB is transmitted- Option2: Based on OD-SSB pattern ignoring SMTC when OD-SSB is transmittedIn addition, according to RAN1 agreement, *od-ssb-PositionsInBurst* of OD-SSB and AO-SSB may be different, which may result in the *ssb-ToMeasure* configured in *MeasObjectNR* originally applicable to AO-SSB not being applicable to OD-SSB after OD-SSB is activated.For OD-SSB, a fast time window is defined by RAN4. It is necessary to introduce a new L3 measurement report triggering to ensure that UE can quickly send measurement results after OD-SSB is activated.Therefore, the following open issues need to be added: (1) FFS on L3 frame work (i.e., based on different measurement configuration or based on OD-SSB pattern ignoring SMTC when OD-SSB pattern is transmitted.(2) If the *od-ssb-PositionsInBurst* of OD-SSB and AO-SSB is different, how the UE adapts the *ssb-ToMeasure* of *MeasObjectNR* after OD-SSB is activated.(3) Whether to introduce a new measurement report triggering? |  |
| Xiaomi  | 3 opens issues can be discussed online:1. How to ensure the UE has valid SIB-X in RRC\_CONNECTED, and this valid SIB-X can be used after RRCRelease, RLF and so on.
2. Co-existence of SBFD and OD-SIB1
3. Co-existence of SDT and OD-SIB1
 |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 4 RRC CR

|  |  |  |
| --- | --- | --- |
| **Company** | **Detailed comments RRC CR** | **Rapporteur response** |
| AppleA001 | **Where:** 5.2.2.1 General UE requirements:and SIBxx (if UE is supporting OD-SIB1). The in RRC\_CONNECTED shall ensure having a valid version of SIBxx (if UE is supporting OD-SIB1)**Issue:**Some typos in above text.We understand OD-SIB1 UE in all RRC state has this requirement (rather than only RRC\_CONNECTED).**Suggested change:**and *SIBxx* (if UE is supporting OD-SIB1). The UE supporting OD-SIB1 ~~in RRC\_CONNECTED~~ shall ensure having a valid version of *SIBxx*.Nokia: Seems legit proposal to us | [Rapp] Updated in V01 but to not to duplicate, I deleted the “SIBxx(if UE is supporting OD-SIB1)” |
| A002 | **Where:** 5.2.2.2.2 SI change indication and PWS notificationUEs in RRC\_CONNECTED shall monitor for SI change indication in any paging occasion exept those for paging adaptation at least once per modification period if the UE is provided with common search spaceETWS or CMAS capable UEs in RRC\_CONNECTED shall monitor for indication about PWS notification in any paging occasion exept those only for paging adaptation at least once every *defaultPagingCycle* if the UE is provided with common search space, including *pagingSearchSpace*, *searchSpaceSIB1* and *searchSpaceOtherSystemInformation,* on the active BWP to monitor paging.**Issue:**We think the above highlighted text is not clear because paging adaptation is a NES technique rather than indicating some specific paging occasion. **Suggested change:**We think it is sufficient to add the following simple clarification text in section 5.2.2.2.2 or in 38.300:“Paging adaptation is not supported for the UE in RRC\_CONNECTED.”Nokia: Stage-2 is not full requirement so not sure if that would be enough. If there is no nclear requirement for UE then NW cannot utilize this. So maybe we should in fact refer to actual IE to make it clear e.g. “ except the ones configured in *pgingAdaptation-NS* and *pagingAdaptationNAndPagingFrameOffset*” if possible one could consider adding a IE pagingAdapation-r19 which contain above two listed parameters to simplify the wording. | [Rapp] We also think it is better t describe something in 331. If we point to the fields as suggested by Nokia, the issue is that some of those POs may collide with legacy POs, than those to be excluded by connected mode UEs should be those tat are ONLY for paging adapdation.I can add EN to address the concern from Apple about the wording:Editor’s note: FFS pharsing for paging adaptation pos only, that is those occasions that are not also configured for legacy. |
| A003 | **Where:**Section 6.3.1***sib1-rsrp-ThresholdSSB*** L1-RSRP threshold used for determining whether a candidate beam may be used by the UE to attempt to transmit OD-SIB1 request, see TS XXXXX**Issue:**It is sufficient to refer to 38.321.**Suggested change:*****sib1-rsrp-ThresholdSSB*** L1-RSRP threshold used for determining whether a candidate beam may be used by the UE to attempt to transmit OD-SIB1 request, see TS 38.321 [3]. ~~XXXXX~~ | [Rapp] Fixed in V01 |
| A004 | **Where:**Section 6.3.2***si-BroadcastStatus***Indicates if the SI message is being broadcasted or not. Change of *si-BroadcastStat*us should not result in system information change notifications in Short Message transmitted with P-RNTI over DCI (see clause 6.5). The value of the indication is valid until the end of the BCCH modification period when set to *broadcasting.* When *SIB19* is scheduled in an NTN cell, the *si-BroadcastStatus* for the mapped *SIB19* is set to *broadcasting*. When *SIB22* is scheduled in an ATG cell, the *si-broadcastStatus* for the mapped *SIB22* is set to *broadcasting*. FFS: how to capture that a CONNECTED MODE UE supporting OD-SIB1 who is in a cell that does not broadcast SIB1, understands that the stored SIB1 is the latest SIB1.**Issue:**According to RAN2#129b agreement, we think it is sufficient to capture that “The UE supporting OD-SIB1 in RRC\_CONNECTED regards the stored SIB1 is the latest SIB1”.1. UE understands that the stored SIB1 is the latest SIB1.

**Suggested change:**Indicates if the SI message is being broadcasted or not. Change of *si-BroadcastStat*us should not result in system information change notifications in Short Message transmitted with P-RNTI over DCI (see clause 6.5). The value of the indication is valid until the end of the BCCH modification period when set to *broadcasting.* When *SIB19* is scheduled in an NTN cell, the *si-BroadcastStatus* for the mapped *SIB19* is set to *broadcasting*. When *SIB22* is scheduled in an ATG cell, the *si-broadcastStatus* for the mapped *SIB22* is set to *broadcasting*. ~~FFS: how to capture that a CONNECTED MODE UE supporting OD-SIB1 who is in a cell that does not broadcast SIB1, understands that the stored SIB1 is the latest SIB1.~~ The UE supporting OD-SIB1 in RRC\_CONNECTED regards the stored SIB1 is the latest SIB1.Nokia: Maybe we need nothing for this. What else can UE do than consider latest one valid? So likely we don’t need to capture anything on this. I would be fine to just remove FFS. | [Rapp] To us it is also unclear if something is needed. I’ll keep the FFS for now but add the suggestion from Apple as one example. |
| OPPO001 | In 5.2.2.1,The in RRC\_CONNECTED shall ensure having a valid version of SIBxx (if UE is supporting OD-SIB1) [OPPO] The sentence is not completed. But even if adding UE here, the intention seems not aligned with 129b conclusion, where it is to rely on \***NW**\* to ensure the validity rather than UE, for RRC\_CONNECTED state.=> NW ensures that the RRC connected UE has the latest SIB1 (e.g. dedicated RRC message to deliver SIB1 or not configure searchSpaceSIB1), as baseline. UE understands that the stored SIB1 is the latest SIB1.Nokia: we don’t write NW specification but UE specification in stage-3. Only thing we need to define is UE behaviour. If we don’t capture anything then it is clear that NW needs to update SIB1 to UEs. No need to capture anything.  | [Rapp] Agree with Nokia, the specification is not written from NW perspective. See response to A001, that should not cover now from UE perspective all modes and as Nokia comments, the NW operation is not specified. Usually chairnotes are relied on in this type of cases to understand the network side.[OPPO] OK to Nokia proposal to “ No need to capture anything.”. But the version in V01 is wrong in our view, “ The UE supporting OD-SIB1 shall ensure having a valid version of SIBxx”, it is not what R2 agreement said, UE cannot do anything to ensure validity, it just take what network provided for usage. |
| OPPO002 | In 5.2.2.3.3xFor the deletion of “immediately”[OPPO] we share the concern from RRC Rapp, since the word is used in other places, so the deletion may cause the misunderstanding that there is a difference between SIB1 acquisition and other cases.Nokia: After further thinking we are OK either way – For some reason we use word immediately for SIB acquisition. Not sure why though. So maybe better to keep immediately for now to aligne with legacy text. | [Rapp] Ok, I will cancel the deletition in V01 |
| OPPO003 | In the FD below***totalNumberOfRA-Preambles***Total number of preambles used for contention based and contention free 4-step or 2-step random access in the RACH resources defined in *RACH-ConfigCommon*, excluding preambles used for other purposes (e.g. for SI request). If the field is absent, all 64 preambles are available for RA. [OPPO] can we extend the “(e.g. for SI request)”, to cover SIB1 acquisition here.[OPPO] is it really possible for the value here to use 64 “ If the field is absent, all 64 preambles are available for RA.”, which means no preamble left for SIB1 acquisition? | [Rapp] Added the SIB1 aquisition in V01. However, I wonder should we only have the case of SIB1 aq here since this is in SIBxx?Then, it may not be feasible to have the field absent but if it is optional parameter we should say what is the assumption if it is absent(even if that option is not practical).[OPPO] Then maybe reasonable to put it as mandatory field? |
| OPPO004 | In the condition belowFR2-Only This field is mandatory present for an FR2 carrier frequency. It is absent otherwise and UE releases any configured value .[OPPO] If the field is either mandatory present, or always absent, why there is a case that a value was configured but now absent? And if there is, is the intention to say it is need-R? | [Rapp] This is copy of existing cond. I’m not sure now the history of the formulation but we can keep checking. Latest we resolve in ASN1 review. |
| OPPO005 | In the FD below***pagingAdaptationPEI-Config***The PEI related configuration for paging adaptation. The UE supporting paging adapdation ignores field pei-Config, if configured. [OPPO] here “if configured”, is to say the new PEI configuration is configured, but not the legacy pei-Config is configured (?), if so, good to clarify to avoid misunderstanding. | [Rapp] This is common expression in 331, it refers to pei-Config. |
| Nokia001 | Editorial – several places exept=>except | [Rapp] Fixed in V01 |
| Nokia002 | 5.2.2.3.3x – In 38.304 there is also failure if UE cannot acquire during the SI windows. Should we remove it from 38.304 as I guess it is covered by last two bullets in this section i.e. general failure to acquire SIB1. That seems to work to us.  | [Rapp] No action to 331 from this comment. |
| Nokia003 | Field description of  ***odsib1-cellReselectionPriority, odsib1-cellReselectionSubPriority***Maybe align with excluded cell list to clarify these are applicable only for UE supporting OD-SIB1 | [Rapp] Fixed in V01 |
| Nokia004 | Field description of pagingAdaptation parameters. For PEI parameter do we need to highlight UE supporting both PEI and OD-SIB1? And similarly for NS/N/frameoffset clarify UE supportin OD-SIB1 usese these if configured? Would it make sense to have all parameter in one IE pagingAdapation-r19? | [Rapp] It is not clear to me if we need to put this in every and single place as it may disturb readability. I’d prefer to add it only in places where there is higher risk of confusion. So I’m not adding now but we can add if there is more companies preferring to add it. |
| CATT001 | RAN2#127bis meeting, we have following agreements,In on-demand SIB1 procedure, the UE considers RACH failure when PREAMBLE\_TRANSMISSION\_COUNTER = preambleTransMax + 1.So, the preambleTransMax needs to be included in SIB request configuration, which is not sure to be included in OD-SIB1-Config or not in current running CR. |  |
| Xiaomi001 | In current on-demand SI, if there is no SDT ongoing, the on-demand SI is not allowed. The on-demand SI is performed toward current serving cell and on-demand SIB1 is toward neighbour cell usually. It is not good idea to forbid the UE to perform on-demand SIB1 to neighbour NES cell, e.g., no other cell can be reselected except NES cell, and it will impact the UE mobility.According to current spec, after cell reselection occurs, the SDT will stop. However, performing on-demand SIB1 does not mean cell reselection will happen to this cell. This issue should be discussed online next meeting.  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 5 Conclusion