**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.

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| --- | --- | --- |
| 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 |
| vivo | Jianhui Li | jianhui.li@vivo.com |
| Samsung | Anil Agiwal | anilag@samsung.com |
| LGE | SangWon Kim | sangwon7.kim@lge.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.

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| **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. [Apple] We think RAN1 agreement in RAN121b is not conflicted with RAN2#127b agreement. According to our RAN1 colleague, some company in RAN1 had some misunderstanding on Alt3 (up to UE implementation)/Alt4 is not aligned with RAN2 agreement. But it was clarified during followed RAN1 discussion.Anyway, we need to close this issue. Suggest discussing online. I can remove the normal uplink EN unless complains appear. Did not do that yet in V01.[Samsung]: RAN1 has not discussed whether the SIB1 request procedure is applicable only for NUL or SUL or both. They have designed a generic procedure. RAN2 needs to discuss this aspect and we need an EN for this |
| 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
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| Google001 | Propose to change the condition of “unable to acquire SIB1” (in 5.2.2.3.3x) as follows. 5.2.2.3.3x Request for on demand SIB1The UE shall, while SDT procedure is not ongoing:1> trigger the lower layer to initiate the Random Access procedure on normal uplink in accordance with TS 38.321 [3] using the PRACH preamble(s) and PRACH resource(s) in *sib1-RequestConfig* corresponding to the SIB1 message that the UE requires to operate within the cell;2> if indication that maximum number of PRACH attempts is reached is received from lower layers:3> perform the actions as specified in clause 5.2.2.5.2> if acknowledgement for on demand SIB1 request is received from lower layers:3> acquire the requested SIB1 message as defined in FFS, immediately;3> upon acquiring SIB1, perform the actions specified in clause 5.2.2.4.2;1> if cell reselection occurs while waiting for the acknowledgment for SIB1 request from lower layers:2> reset MAC;1> if the UE is unable to acquire the SIB1 **as defined in FFS**:2> perform the actions as specified in clause 5.2.2.5.The change is to align the UE behavior in the same section w.r.t. the SIB1 acquisition in the SIB1 monitoring window, assuming the FFS part specifies the UE behavior during the SIB1 monitoring window. This is also related to the RAN2#129bis agreement “If UE has not received the PDCCH scheduling SIB1 upon the expiry of the SIB1 monitoring window, UE may consider the cell as being barred”. |  |
| LGE | RAN2 agreed:SIBX that was acquired during RRC connected state can be used for OD-SIB1 request in RLF.It is still FFS which stored version of SIB X can be considered as valid while T311 is running. According to the current TS 38.331, UE uses information received from current serving cell for SIB validity check, but there is no serving cell while T311 is running. We need a new/modified validity check for the RLF case.[vivo] Agree with LGE’S observation. We understand that:1. SIBX that is acquired during IDLE can also be used for OD-SIB1 request in RLF. Why is it limited to “was acquired during RRC connected state”?
2. If it has to be limited to “was acquired during RRC connected state”, then it should be “was acquired during RRC connected state at the last serving cell”
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# 4 RRC CR

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| **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.[Apple] Thanks to add EN. I saw Samsung also provided another alternative of spec change (Sam001). We can further discuss which is best way in next meeting.  |
| 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.LGE: Since the change of *si-BroadcastStatus* does not result in SI change notification, if this change is not captured, the UE in RRC\_CONN (if CSS for other SI is configured in the active BWP) will try to acquire SIB1 before initiating SI request procedure and eventually consider the cell as barred due to no SIB1. However, the UE supporting OD-SIB1 should consider the stored SIB1 is the latest SIB1 only just before initiating the SI request procedure to OD-SIB1 cell. The UE supporting OD-SIB1 should re-acquire SIB1 if the serving cell is not the OD-SIB1 cell, or upon reception of SI change notification even from OD-SIB1 cell. Therefore, it seems better to capture it in 5.2.2.3.5 as a NOTE as follows:NOTE: The UE supporting OD-SIB1 in RRC\_CONNECTED considers the *si-BroadcastStatus* in the stored SIB1 as the latest *si-BroadcastStatus*, if the UE has a stored valid version of od-SIB1-Config for PCell (the intention is ‘if UE camps on a OD-SIB1 NES Cell’).Huawei: Our view is that something is needed in RRC for this case, Apple’s TP is a good start. | [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.[LGE] We are OK with current running CR. The change just means UE supporting OD-SIB1 should try to (re-)acquire SIBxx. |
| 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?[Apple] We agree with OPPO to make this field mandatory, which can resolve all issues.  |
| 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.[vivo] Agree with CATT.[Samsung]: Agree[Apple]: Agree.  |  |
| 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.  |  |
| vivo001 | In SIB2 and SIB4: ***odsib1-CellReselectionPriority, odsib1-CellReselectionSubPriority***Cell reselection priorities to be considered by UEs instead of *cellReselectionPriority*, *cellReselectionSubPriority* as specified in TS 38.304 [20].**[vivo]** The applicable UE should be added here, which is also aligned with the filed description of  ***intraFreqODSIB1-ExcludedCellList*** and ***interFreqODSIB1-ExcludedCellList.*** Cell reselection priorities to be considered by UEs supporting OD-SIB1 instead of *cellReselectionPriority*, *cellReselectionSubPriority* as specified in TS 38.304 [20]. |  |
| vivo002 | ***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.**[vivo]** 1. Preambles in totalNumberOfRA-Preambles are also not used for SIB1 request. Thus, the SIB1 request case should be also added.

**“…** excluding preambles used for other purposes (e.g. for SI request including SIB1 request). If the field is absent, all 64 preambles are available for RA”1. We have similar question as OPPO003 points out “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?”. It is possible that this IE is absent in legacy RACH configuration, e.g. OSIs are not operated on-demand and thus there’s no need to allocate a dedicated preamble for OSI acquisition.

However, OD-SIB1 cell needs to allocate at least one preamble for OD-SIB1 request. Besides, OD-SIB1 UE needs this IE to correctly decode RAR as agreed in last RAN2 meeting. Therefore, we agree with OPPO’s suggestion to make this field mandatory as a simplest solution. Otherwise, we may need to discuss what’s the UE assumption when this field is absent, which is not preferred from our side.[Apple]: We agree with vivo’s suggestion. Making this field mandatory is the simplest solution. |  |
| vivo003 | pagingAdaptationNAndPagingFrameOffset CHOICE { oneT NULL, halfT INTEGER (0..1), quarterT INTEGER (0..3), oneEighthT INTEGER (0..7), oneSixteenthT INTEGER (0..15), oneThirtySecondT INTEGER (0..31)}**[vivo]** pagingAdaptationNAndPagingFrameOffset IE should be optional, need R. **[Samsung]: Agree**[Apple]: Agree**[OPPO] But just to confirm, by making it optional with need-R, will we have a case where pagingAdaptation-NS-r19 is configured but pagingAdaptationNAndPagingFrameOffset is not configured, and how for R19 UE to know the T and offset? refering to legacy value or?** |  |
| vivo004 | **Where:** 5.2.2.1 General UE requirements:The UE supporting OD-SIB1 shall ensure having a valid version of SIBxx.**[vivo]**In legacy text, the UE shall ensure the valid version of an OSI when: 1. it supports certain feature; 2. it needs the OSI for the feature related operation. For Example:**“**The UE in RRC\_IDLE and RRC\_INACTIVE shall ensure having a valid version ofand *SIB13*, *SIB14* (if UE is capable of V2X sidelink communication and is configured by upper layers to receive or transmit V2X sidelink communication)*SIB16* (if the UE is capable of slice-based cell reselection and the UE receives NSAG information for cell reselection from upper layer),**”**Similarly, only when the UE requires SIB1 that it needs to ensure a valid version. The yellow-highlighted part should be revised as, taking the legacy relevant text as reference:The UE capable of OD-SIB1 request shall ensure having a valid version of SIBxx if *SIB1* acquisition is required for the UE.[Apple]: Agree with vivo’s suggestion.  |  |
| vivo005 | 5.2.2.2.2 SI change indication and PWS notificationUEs in RRC\_CONNECTED shall monitor for SI change indication in any paging occasion except those for paging adaptation at least once per modification period ......ETWS or CMAS capable UEs in RRC\_CONNECTED shall monitor for indication about PWS notification in any paging occasion except those only for paging adaptation at least once every defaultPagingCycle ......[vivo]RAN2 only agrees on paging adaptation is not supported for CONNECTED UE, but not on this understanding as the draft CR ‘except those only for paging adaptation’. From our understanding, capture the RAN2 agreement “Paging adaptation is not supported for the UE in RRC\_CONNECTED.” in stage-2 spec is enough.The legacy text ‘UEs in RRC\_CONNECTED shall monitor for SI change indication in any paging occasion at least once per modification period’ does not need any change. Once 38300 captures the RAN2 agreement, the legacy text also applies to the R19 UE supporting paging adapatation without any further issue.[Samsung]: We do not agree with Vivo. Stage 3 text is needed. [vivo] We see companies have different understanding on how to capture the agreement. Let’s put EN FFS here and discuss it in the upcoming meeting. |  |
| vivo006 | 5.2.2.3.1 Acquisition of *MIB* and *SIB1*1> if the UE is in RRC\_IDLE or in RRC\_INACTIVE; or1> if the UE is in RRC\_CONNECTED while T311 is running:2> if *ssb-SubcarrierOffset* indicates *SIB1* is transmitted in the cell (TS 38.213 [13]) and if *SIB1* acquisition is required for the UE:<blahblah>2> else if *SIB1* acquisition is required for the UE and *ssb-SubcarrierOffset* indicates that *SIB1* is not scheduled in the cell:3> if the UE has a stored valid version of *od-SIB1-Config* for this cell:4> if the UE is in RRC\_IDLE or in RRC\_INACTIVE; or4> if the UE is in RRC\_CONNECTED while T311 is running:5> perform the actions as specified in clause 5.2.2.3.3x;3> else:4> perform the actions as specified in clause 5.2.2.5.[vivo]In early releases, when the cell turns from sending CD-SSB to sending NCD-SSB, the UE can read the latest *ssb-SubcarrierOffset* in MIB and know SIB1 is not scheduled in the cell and then ‘perform the actions as specified in clause 5.2.2.5.’ to bar the cell.Now, as the running CR drafts, we are not sure how to understand the UE behavior. It seems that the text implies when the cell turns from sending CD-SSB to sending NCD-SSB, the UE needs to follow the green-highlighted part to request OD-SIB1. But this is not a cell reselection case, and RAN2 has not agreed that the UE can request OD-SIB1 in this case. I don’t have a clear suggestion in mind for now. Maybe it is better to put an EN here to check whether/how the draft text here needs to be revised, and RAN2 discusses it in next meeting.[Apple]: We agree with vivo’s comment: the current text leads to the outcome that the UE is mandated to trigger OD-SIB1 request when it doesn’t detect SIB1. According to RAN2 agreement, OD-SIB1 procedure is triggered only when cell reselection criteria is met for IDLE/INACTIVE UE, or cell selection criteria is met for CONNECTED UE when T311 is running. Thus, the current UE behavior is not correct. [OPPO] not fully understand vivo’s point here, we thought that the running 5.2.2.3 still follows*The UE shall apply the SI acquisition procedure as defined in clause 5.2.2.3 upon cell selection (e.g. upon power on), cell-reselection, return from out of coverage, after reconfiguration with sync completion, after entering the network from another RAT, upon receiving an indication that the system information has changed, upon receiving a PWS notification, upon receiving request (e.g., a positioning request) from upper layers; and whenever the UE does not have a valid version of a stored SIB or posSIB or a valid version of a requested SIB.*we are not sure what is the scenario "cell turns from sending CD-SSB to sending NCD-SSB", in our view, NES cell would keep using Kssb >=24/12 @ MIB[vivo] @OPPO, RAN plenary has agreed that a cell A can configure the UL WUS configuration of its own. In other words, it’s possible that the cell A first sends CD-SSB and AO-SIB1, and configures its own UL WUS configuration. And then at some point, the cell A turns into NES cell(maybe at mid-night or what...) and the UE has stored the corresponding UL WUS configuration, and then according to the current running CR, the UE behavior will be requesting OD-SIB1 since the ssb-SubcarrierOffset indicates that SIB1 is not scheduled in the cell, and the UE has the valid OD-SIB1 configuration. However, RAN2 never agreed on this. We think this should not be allowed. |  |
| Sam 001 | We have agreed that paging adaptation is not applied in RRC\_CONNECTED. So  *pagingAdaptation-NS* and *pagingAdaptationNAndPagingFrameOffset* are not applied in RRC\_CONNECTED.***pagingAdaptation-NS***Number of paging occasions per paging frame for paging adaptation. The UE supporting paging adaptation ignores this field in RRC\_CONNECTED.***pagingAdaptationNAndPagingFrameOffset*** Used to derive the number of total paging frames in T (corresponding to parameter N in TS 38.304 [20]) and paging frame offset (corresponding to parameter PF\_offset in TS 38.304 [20]). A value of oneSixteenthT corresponds to T / 16, a value of oneEighthT corresponds to T / 8, and so on. The UE supporting paging adaptation ignores this field in RRC\_CONNECTED. |  |
| Sam 002 | 5.2.2.3.1 Acquisition of *MIB* and *SIB1*:2> else if *SIB1* acquisition is required for the UE and *ssb-SubcarrierOffset* indicates that *SIB1* is not scheduled in the cell:3> if the UE has a stored valid version of *od-SIB1-Config* for this cell:4> if the UE is in RRC\_IDLE or in RRC\_INACTIVE; or4> if the UE is in RRC\_CONNECTED while T311 is running: 5> perform the actions as specified in clause 5.2.2.3.3x;3> else:4> perform the actions as specified in clause 5.2.2.5. *ssb-SubcarrierOffset* is parameter included in MIB. SIB1 request or not depends on KSSB determinedbased on  *ssb-SubcarrierOffset* in MIB. KSSB is not always *ssb-SubcarrierOffset*.So reword the condition as follows: 2> else if *SIB1* acquisition is required for the UE and KSSB determined(as specified in TS 38.213) based on *ssb-SubcarrierOffset* in MIBis >= 12 for FR2 or >= 24 for FR1:OR2> else if *SIB1* acquisition is required for the UE and *ssb-SubcarrierOffset* indicates that *SIB1* is not scheduled in the cell:3> if KSSB determined(as specified in TS 38.213) based on *ssb-SubcarrierOffset* in MIBis >= 12 for FR2 or >= 24 for FR1; and3> if the UE has a stored valid version of *od-SIB1-Config* for this cell:4> if the UE is in RRC\_IDLE or in RRC\_INACTIVE; or4> if the UE is in RRC\_CONNECTED while T311 is running: 5> perform the actions as specified in clause 5.2.2.3.3x;3> else:4> perform the actions as specified in clause 5.2.2.5.[OPPO] Indeed Kssb has to be determined based on *ssb-SubcarrieOffset* together with the additional bit in PBCH for FR1, yet considering that the condition of SIB1 presence was specified based on *ssb-SubcarrieOffset* already in legacy, we are not sure whether there is a need to do that change now (NOTE that the condition check sentence is to be used by legacy UE as well).[vivo] We understand “*ssb-SubcarrierOffset* indicates that *SIB1* is not scheduled in the cell” equals to “ if KSSB determined(as specified in TS 38.213) based on *ssb-SubcarrierOffset* in MIBis >= 12 for FR2 or >= 24 for FR1” as Samsung suggests? The revision seems not needed. |  |
| Sam 003 | 5.2.2.3.3x Request for on demand SIB11. trigger the lower layer to initiate the Random Access procedure on normal uplink in accordance with TS 38.321 [3] using the PRACH preamble(s) and PRACH resource(s) in *sib1-RequestConfig* corresponding to the SIB1 message that the UE requires to operate within the cell;

 The green text is copied from OD-OSI. In case of SIB1 request, configuration is only for SIB1 unlike OD-OSI where configuration is per SI message. So, we do not need this text for OD-SIB1.Also from text it is not clear which *sib1-RequestConfig* is used.Suggest to reword as follows1. trigger the lower layer to initiate the Random Access procedure on normal uplink in accordance with TS 38.321 [3] using the PRACH preamble(s) and PRACH resource(s) in *sib1-RequestConfig* included in stored valid version of *od-SIB1-Config* for this cell ~~corresponding to the SIB1 message that the UE requires to operate within the cell~~;
 |  |
| Sam 004 | 5.2.2.3.3x Request for on demand SIB11. trigger the lower layer to initiate the Random Access procedure on normal uplink in accordance with TS 38.321 [3] using the PRACH preamble(s) and PRACH resource(s) in *sib1-RequestConfig* corresponding to the SIB1 message that the UE requires to operate within the cell;

RAN1 has not discussed whether the SIB1 request procedure is applicable only for NUL or SUL or both. They have designed a generic procedure. RAN2 needs to discuss this aspect and we need an EN for this. |  |
| Sam 005 | 5.2.2.3.3x Request for on demand SIB1The UE shall, while SDT procedure is not ongoing:1> trigger the lower layer to initiate the Random Access procedure on normal uplink in accordance with TS 38.321 [3] using the PRACH preamble(s) and PRACH resource(s) in *sib1-RequestConfig* corresponding to the SIB1 message that the UE requires to operate within the cell;2> if indication that maximum number of PRACH attempts is reached is received from lower layers:3> perform the actions as specified in clause 5.2.2.5.2> if acknowledgement for on demand SIB1 request is received from lower layers:3> acquire the requested SIB1 message as defined in FFS, immediately;3> upon acquiring SIB1, perform the actions specified in clause 5.2.2.4.2;1> if cell reselection occurs while waiting for the acknowledgment for SIB1 request from lower layers:2> reset MAC;1> if the UE is unable to acquire the SIB1:2> perform the actions as specified in clause 5.2.2.5.Text should be modified as follows to reflect the RAN2 agreement.5.2.2.3.3x Request for on demand SIB1The UE shall, while SDT procedure is not ongoing:1> trigger the lower layer to initiate the Random Access procedure on normal uplink in accordance with TS 38.321 [3] using the PRACH preamble(s) and PRACH resource(s) in *sib1-RequestConfig* corresponding to the SIB1 message that the UE requires to operate within the cell;2> if indication that maximum number of PRACH attempts is reached is received from lower layers:3> perform the actions as specified in clause 5.2.2.5.2> if acknowledgement for on demand SIB1 request is received from lower layers:3> acquire the requested SIB1 message as defined in FFS, immediately;3> if the UE is unable to acquire the SIB1:3> perform the actions as specified in clause 5.2.2.5.3>else:4~~3~~> upon acquiring SIB1, perform the actions specified in clause 5.2.2.4.2;1> if cell reselection occurs while waiting for the acknowledgment for SIB1 request from lower layers:2> reset MAC;~~1> if the UE is unable to acquire the SIB1:~~~~2> perform the actions as specified in clause 5.2.2.5.~~ |  |
| Sam 006 | Validity/applicability aspects of OD-SIB1 request configurations from SIBxx are missing. We can include these in 5.2.2.4.2x or 5.2.2.3.3xText to be addedSIBxx includes OD-SIB1 request configurations of one or more cells. OD-SIB1 request configuration of another cell in the SIBxx valid in the camped cell is applicable for requesting SIB1 of another cell for cell reselection. OD-SIB1 request configuration of a cell in the SIBxx valid in the cell is applicable for requesting SIB1 of the cell while the UE is camped in that cell. [OPPO] Sorry if i missed any point, but what is the delta part on top of the association between OD-SIB1 request configuration and targeted cell that motivates this text here, which (if needed) i thought can be clarified via FD for the field? |  |
| Sam 007 | 5.2.2.3.1 Acquisition of *MIB* and *SIB1*:1> if the UE is in RRC\_CONNECTED with an active BWP with common search space configured by *searchSpaceSIB1* and the UE has not stored a valid version of a SIB or posSIB, in accordance with clause 5.2.2.2.1, of one or several required SIB(s) or posSIB(s) in accordance with clause 5.2.2.1, and, UE has not acquired SIB1 in current modification period; or1> if the UE is in RRC\_CONNECTED with an active BWP with common search space configured by *searchSpaceSIB1*, and, the UE has not stored a valid version of a SIB or posSIB, in accordance with clause 5.2.2.2.1, of one or several required SIB(s) or posSIB(s) in accordance with clause 5.2.2.1, and, *si-BroadcastStatus* for the required SIB(s) or *posSI-BroadcastStatus* for the required posSIB(s) is set to *notBroadcasting* in acquired *SIB1* in current modification period; orThese condition are affected by RAN2 agreement* + 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.

 If *searchSpaceSIB1* is configured and SIB1 is provided on demand, UE will check *si-BroadcastStatus* from the latest acquired SIB1 i.e. UE does not need to re-acquire SIB1. Network ensures to deliver the latest SIB1.Text proposal:1> if the UE is in RRC\_CONNECTED with an active BWP with common search space configured by *searchSpaceSIB1* and the UE has not stored a valid version of a SIB or posSIB, in accordance with clause 5.2.2.2.1, of one or several required SIB(s) or posSIB(s) in accordance with clause 5.2.2.1, and, UE has not acquired SIB1 in current modification period and SIB1 is not being broadcasted; or1. if the UE is in RRC\_CONNECTED with an active BWP with common search space configured by *searchSpaceSIB1*, and, the UE has not stored a valid version of a SIB or posSIB, in accordance with clause 5.2.2.2.1, of one or several required SIB(s) or posSIB(s) in accordance with clause 5.2.2.1, and, *si-BroadcastStatus* for the required SIB(s) or *posSI-BroadcastStatus* for the required posSIB(s), is set to *notBroadcasting* in acquired *SIB1* in current modification period or is set to *notBroadcasting* in the latest acquired *SIB1* if the SIB1 is not being broadcasted; or

[OPPO] i thought given the addition of "4> if the UE is in RRC\_CONNECTED while T311 is running:", SIB1 re-acquisition by “RRC\_CONNECTED UE if T311 is not running” has already been prevented. Besides, "and SIB1 is not being broadcasted", wouldn't this change affect legacy UE / network behavior?And "is set to notBroadcasting in the latest acquired SIB1 if the SIB1 is not being broadcasted", i thought this branch as a whole is not applicable to an NES cell since there would not be a case for a RRC\_CONNECTED UE to acquire the SIB1 via broadcast manner? |  |
| Sam 008 | It should be possible to configure the list intraFreqODSIB1-ExcludedCellList-r19 of size 0.Example 1:Cell A, Cell B supports OD-SIB1. Network includes Cell A and Cell B in intraFreqExcludedCellList so that legacy UEs not supporting OD-SIB1 exclude these cells. Network does not include any cell in intraFreqODSIB1-ExcludedCellList-r19 as network does not want NES UE supporting OD-SIB1 to exclude any cell.If network does not signal intraFreqODSIB1-ExcludedCellList-r19 as it is empty, the consequence is that NES UE supporting OD-SIB1 will apply intraFreqExcludedCellList and exclude Cell A and Cell B, which is not correct.There are two ways to handle this* Option 1: Support intraFreqODSIB1-ExcludedCellList-r19 of size zero. UE applies intraFreqODSIB1-ExcludedCellList-r19, if configured. Otherwise, UE applies intraFreqExcludedCellList.
* Option 2: In a cell supporting SIBX, UE always ignore intraFreqExcludedCellList irrespective of whether intraFreqODSIB1-ExcludedCellList-r19 is configured or not. It applies intraFreqODSIB1-ExcludedCellList-r19, if configured.

Same issue exists for interFreqODSIB1-ExcludedCellList-r19[Apple] We are a bit confused. In this case (size of dedicated exclusive cell list is 0), it seems a more reasonable way is that NW can just make it absent. Furthermore, this should be the common issue for all dedicated cell list and frequency priority introduced in other features.  |  |
| Sam 009 | ***Following are missing from*** R1-2501645frequencyBandListPrach-ConfigurationIndexmsg1-FDMmsg1-FrequencyStartzeroCorrelationZoneConfigpreambleReceivedTargetPowerpreambleTransMaxpowerRampingStepra-ResponseWindowKSSB |  |
| Sam 010 | ***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, or SIB1 request). If the field is absent, all 64 preambles are available for RA.This configuration is part of SIB1 request. This means that preambles are reserved for at least SIB1 request. So this field cannot be absent. It should be mandatory. Also there is no *RACH-ConfigCommon* in SIB1 request configuration. So it is not clear what it refers to in current explanation of  ***totalNumberOfRA-Preambles******totalNumberOfRA-Preambles*** Total number of preambles used for contention based and contention free 4-step or 2-step random access in the RACH resources configured in the corresponding OD-SIB1-Config ~~defined in~~ *~~RACH-ConfigCommon~~*, excluding preambles used for other purposes (e.g. for SI request, or SIB1 request). ~~If the field is absent, all 64 preambles are available for RA.~~ |  |
| Sharp 001 | Section 5.2.2.3.3x:2> if indication that maximum number of PRACH attempts is reached is received from lower layers:3> perform the actions as specified in clause 5.2.2.5.In current MAC spec, if PREAMBLE\_TRANSMISSION\_COUNTER = preambleTransMax + 1, MAC indicates a Random Access problem to upper layers. And for legacy on-demand OSI, “RACH failure” is used in RRC spec. To align the legacy style and align MAC/RRC spec, suggest to change as below:2> if RACH failure ~~indication that maximum number of PRACH attempts is reached~~ is received from lower layers:3> perform the actions as specified in clause 5.2.2.5. |  |
| Sharp 002 | Agree the issue raised in Sam 008, and prefer Option 1. The clarification for the case that intraFreqExcludedCellList/ interFreqExcludedCellList is absent should be added in the field description. |  |
| HW001 | Section 6.3.1It should be specified that legacy *interFreqExcludedCellList* is ignored by OD-SIB1 UEs if *interFreqODSIB1-ExcludedCellList* is provided, the same for *intraFreq(…)* |  |
| HW002 | Section 6.3.1Regarding OD-SIB1-CellConfig-r19and agreement:**10. WUS configuration can be associated with a list of cells if the whole WUS configuration is same.** > I assume this implies that the list is not only PCI but full NES-CellId. |  |
| HW003 | 5.2.1It should be added that SIB1 can be transmitted on demand, similar to what we have in stage-2 section 7.3.1. |  |
| HW004 | RAN1 agreement on UL WUS parameters and mandatory/optional status:**Agreement**From RAN1 perspective, for agreed UL WUS parameters, regarding their mandatory or optional presence and applicability to TDD and/or FDD, adopt the followings:* *PhysCellId* and *ARFCN-ValueNR* are mandatory
* *frequencyBandList* and *absoluteFrequencyPointA* are present in IE *FrequencyInfoUL* for FDD (as in the legacy specification)
* *K\_SSB* is mandatory
* *searchSpaceZero* and *controlResourceSetZero* are mandatory
* *ra*-*PreambleStartIndex*, *od-sib1-duration*, *offsetToTimeWindow* are mandatory

I understand the Rapporteur includes only the parameters from the RAN1 LS in the running CR, but the above agreement it is worth noting.  |  |
|  |  |  |
|  |  |  |

# 5 Conclusion