3GPP TSG-RAN WG2 #109bis-e R2-20xxxxx

Electronic Meeting, April 20th – 30th 2020

Agenda Item: 6.21

Source: Ericsson

Title: [AT109bis-e][056][OdSIBconn] On demand SI Open issue

Document for: Discussion, Decision

# 1 Introduction

This document is to kick off the following email discussion:

* [AT109bis-e][056][OdSIBconn] On demand SI Open issue (Ericsson)

Scope: Treat papers under 6.21, by treating R2-2003204, R2-2003203 and taking into account comments. SIB9 should not be discussed until IIOT WI has made some conclusions.

Part 1: Agreed Solutions, Deadline: April 24 0700 UTC (can be extended if need)

Part 2: Agreed-in-principle CR(s)

# 2 Discussion

Companies are requested to add their comments for each of the treated CRs of this email discussion in the boxes below (one for each CR to be treated).

### 2.1 Summary of [Post109e#29][OdSIBconn] Open Issues ([R2-2003204](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003204))

|  |  |  |
| --- | --- | --- |
| Company | Proposal  (Agree/Disagree) | Comments |
| MediaTek | P1: Agree  P2: Option 2 (UE implementation) | For P1, we think the email discussion outcome was pretty clear. The benefit of \*not\* doing this would seem to be only to save a bit in the reconfiguration message, and we don’t find this a convincing motivation to reduce the flexibility. Also, not having an explicit indication would delay the failure of receiving the SIB in the case that a UE with no CSS faces a Rel-15 network or a Rel-16 network that does not support the feature—the UE has to send the request and wait to see that it gets no SIB in response, instead of immediately knowing that the network does not support it and the operation should fail.  For P2, we supported the original option 2 (no re-triggering after a failure to receive the SIB), but we think leaving it to UE implementation is acceptable. We understand that anyway a sensible UE implementation will not repeat the request and there is no need for a prohibit timer. Besides that, a prohibit timer could interfere with the case where two separate events trigger requests close together; the UE should be able to request a different SIB for a new reason even if it recently had a failed request. |
| Nokia | P1: Can accept  P2: Option 1 (prohibit timer) | On P1, our preference is to have a broadcast indication, but we can accept the indication in *RRCReconfiguration* since that seem to have majority support (compared to broadcast indication).  On P2, we prefer the prohibit timer option and have a standard UE behaviour specified to reduce the uplink signalling load. |
| OPPO | P1: can accept, but…..  P2: option 1 | For P1, we are not sure whether the explicit indication in RRCReconfiguration is necessary or not.  The Connected UE requests some SIB should be based on one feature configuration in RRCReconfiguraiton. I think this configuration is one kind of implicit indication for connected mode SI request. If the gNB does not support the connected mode SI request, then the gNB will ensure the concerned SI is configured to the UE. If not, of course the UE should be allowed to perform connected mode SI request. |
| Ericsson | P1: Agree  P2: Option 1 | For P1, as clearly understood from the email discussion, the curring si-BroadcastStatus flag it does not always work as an explicit indication to allow the UE to requests SIB on-demand. Therefore, an explicit indication is needed and this can be in the RRCReconfiguration message. However, if majority wants to have it in SIB, we are also open to this possibility.  For P2, we believe that a prohibit timer is the cleanest solution to be adopted in this case (i.e., as all the messages triggered autonomously by the UE). However, we are open also to option 2 as far as a note clarify the possible UE actions. |
|  |  |  |
|  |  |  |

## 2.2 Feature summary for on-demand SIB in CONNECTED ([R2-2003203](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003203))

|  |  |  |
| --- | --- | --- |
| Company | Proposal  (Agree/Disagree) | Comments |
| MediaTek | P1: Can accept  P2: Agree  P3: Nothing needed | P1: As expressed in our paper, we see reasons to request SIB9 apart from the IIoT WI. But we can wait to see if IIoT decisions render this question moot.  P2: Seems clear.  P3: We agree with the rapporteur’s analysis that there is no spec impact for this question. To us it seems to be a question of UE implementation. |
| Nokia | P1: wait on IIOT  P2: Agree  P3: OK to discuss | On P1, we agree to let IIOT session handle it. It was already the plan to let IIOT session discuss and decide about on-demand SIB9 in connected state.  On P3, if prohibit timer is agreed then it can address the lack of response from the network in the current cell but upon change of cell, we expect the prohibit timer to be reset and it is up to UE whether it wants to send the request in the new cell or not. If the UE behaviour upon lack of response from network is up to UE implementation, then we expect for this mobility scenario also it is up to UE implementation whether to send the request in the new cell. |
| OPPO | P1: wait for IIOT  P2: Agree  P3: OK | For P3, I think the UE should stop the prohibit timer after HO. It is up to UE implementation to perform connected mode SI request again.  I also wonder whether the SI request command is forward to the target gNB or not. if do, the UE should not perform connected mode SI request again. The target gNB already know the request from the UE.  If the concerned SIB is area specific and the target cell is within the system information area, the UE also does not need to trigger the connected mode SI request again. |
| Ericsson | P1: Need to wait for IIOT  P2: Agree  P3: Nothing is needed | Regarding P3, current specification is not impacted and therefore nothing is needed on this. Still, even if the prohibit timer is agreed, this issue is purely a UE implementation. |
|  |  |  |
|  |  |  |

## 2.3 Introduction of on-demand SIB in CONNECTED with positioning ([R2-2003787](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003787))

|  |  |
| --- | --- |
| Company | Comments |
| MediaTek | We find a few detailed issues with this CR as follows:   * Section 5.2.2.3.3a refers to RRCPosSystemInfoRequest as if it were a separate message, which it isn’t (it’s a critical extension of RRCSystemInfoRequest). So this section should talk about initiating transmission of the RRCSystemInfoRequest for positioning, rather than initiating transmission of the RRCPosSystemInfoRequest „message“. * Similarly, section 5.2.2.3.4a should be merged into section 5.2.2.3.4. * Section 5.2.2.3.6 has a grammatical problem: It should say „include requestedSIB-List in the onDemandSIB-RequestList to indicate the requested SIB(s)“ (and mutatis mutandis for posSIBs). * In section 5.2.2.4.2, the posSIB requirements talk about „required posSIB(s), in accordance with sub-clause 5.2.2.1“, but there are no posSIB requirements in 5.2.2.1; it’s not actually clear that there should be any requirements on acquiring posSIBs in response to receiving SIB1, as opposed to in response to receiving a positioning request from upper layers. * In the field description table for the message DedicatedSIBRequest, the description for requested-posSIB-List is missing its field name. * Per the ASN.1 conventions, the field name should be requestedPosSIB-List (without the first hyphen). * In RRCReconfiguration-v1600-IEs, the OCTET STRING should just contain SystemInformation; there is no PosSystemInformation message. * In PosSI-SchedulingInfo, the conditional MSG-1 is not defined (should be cloned from SI-SchedulingInfo). * In PosSI-SchedulingInfo, it seems wrong for posSI-BroadcastStatus to be OPTIONAL. What does it mean for it to be absent? This field is mandatory in SchedulingInfo for regular SI. |
| Nokia | The instructions for this email discussion says “Treat papers under 6.21, by treating R2-2003204, R2-2003203 and taking into account comments”. Why is this R2-2003787 and ASN.1 class 2 issues (section 2.4) part of this email discussion? The background on R2-2003787 is not described this discussion document and the CR cover for R2-2003787 is not clear as to which Tdoc containing the last agreed running CR for OSI for positioning was used to implement on top of 38.331 v16.0.0. |
|  |  |
|  |  |
|  |  |
|  |  |

## 2.4 ASN.1 class 2 Review issues

According to the agenda item 6.0.1, the following RILs have been added concerning the on-demand SIB procedure (i.e., including positioning).

On-demand SI in Connected

[R2-2003634](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_109bis-e\Docs\R2-2003634.zip) [H207][H208][H209][H211][H218] DraftCR for on-demand SI request for positioning in RRC\_CONNECTED Huawei, HiSilicon draftCR Rel-16 38.331 16.0.0 NR\_pos-Core Late

[R2-2003635](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_109bis-e\Docs\R2-2003635.zip) [H221] DraftCR for DedicatedSIB-Request Huawei, HiSilicon draftCR Rel-16 38.331 16.0.0 NR\_pos-Core Late

[R2-2003636](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_109bis-e\Docs\R2-2003636.zip) [H215][H216][H217][H219] DraftCR for Actions upon reception of the SIB1 Huawei, HiSilicon draftCR Rel-16 38.331 16.0.0 NR\_pos-Core Late

[R2-2003637](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_109bis-e\Docs\R2-2003637.zip) [H222] DraftCR for on-demand SI request for positioning in RRC\_CONNECTED Huawei, HiSilicon draftCR Rel-16 38.331 16.0.0 NR\_pos-Core Late

For what concern these contributions, the tdocs R2-2003634, R2-2003635, and R2-2003636 have been already addressed in the latest version of the Draft CR that has been submitted in this meeting (i.e., in R2-2003787). However, companies may provide additional comments on this three CRs.

|  |  |  |
| --- | --- | --- |
| R2-2003634, R2-2003635, and R2-2003636 | | |
| Company | Tdoc | Comments |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

For the tdoc R2-2003637, instead, a further checking is needed since this Draft CR it was not implemented on top of the CR that I provided. Therefore, we would like to ask company to double check this contribution and provide comment on what should be implemented with respect to the Draft CR currently submitted in R2-2003787.

|  |  |
| --- | --- |
| R2-2003637 | |
| Company | Comments |
| MediaTek | Adding „request from higher layer for posSIB“ to section 5.2.2.3.5 seems needed, and we slightly prefer this tdoc’s construction of section 5.2.2.3.6, as the version of 5.2.2.3.6 in R2-2003787 could be read to suggest that the procedure is either for SIBs or posSIBs (not both). |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# Conclusion

In the previous sections we made the following observations:

Based on the discussion in the previous sections we propose the following:

# References

[1]