**3GPP TSG-RAN WG2 Meeting #109bis R2-200xxxx**

**Online, April 2020**

**Agenda Item: 6.11.3**

**Source: MediaTek Inc. (Rapporteur)**

**Title: Outcome of [AT109bis-e][504][PowSav] CP/UE assistance Open and ASN.1 Issues**

**Document for: Discussion and decision**

1 Introduction

As all issues raised in the documents submitted to section 6.11.3 were concluded in [1], this document focusses solely on the remaining open class 3 RIL issues that were raised in [2], [3]. Please note: class 2 RIL issues will be discussed as part of the ASN.1 review thread according to the proposed conclusion in [2]

2 Class 3 RIL issues

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| ID | Section | Description (detailed in [3]) | Proposed Change | Comments | Proposed Conclusion |
| Z110 | 5.7.4.3 Actions related to transmission of UEAssistanceInformation message | The fields inside drx-Preference and minSchedulingOffsetPreference are optional. | Add “optionally” before the setting of preferredDRX-LongCycle, preferredDRX-InactivityTimer, preferredDRX-ShortCycle, preferredDRX-ShortCycleTimer, preferredK0-SCS-15kHz, preferredK0-SCS-30kHz, preferredK0-SCS-60kHz, preferredK0-SCS-120kHz, preferredK2-SCS-15kHz, preferredK2-SCS-30kHz, preferredK2-SCS-60kHz, preferredK2-SCS-120kHz. | [Rapporteur] – The text will be updated to reflect the delta signalling agreements. This issue will be addressed as part of that change.  [Chenli] I agree with Rapporteur. We will update this part based on the agreements on the delta signalling.  [CATT] Agree with Rapporteur. |  |
| N024 | – SIB2 | This is unnecessarily complicated: The intention seems to indicate whether “and” or “or” is used with the conditions when both evaluation criteria are present, and then the condition becomes “A OR notB” or “A AND notB”. This could be simply replaced by simple enumeration of “and” and “or” without a loss of generality. Reading the description in 38.304, it seems that the field is not even clearly used there: The text checks usage of “and” and if that doesn’t match, uses “or”. Therefore, this whole field is about whether to use “and” in the first place – otherwise UE uses either of the conditions. Therefore, the field could simply be ENUMERATED{true} for the usage of “and”, with “or” being used if the field is not configured. | Use the following: combineRelaxedMeasConditions-r16 ENUMERATED {true} OPTIONAL, -- Cond MultRelaxCriteria with the field description as relaxedMeasCondition When both lowMobilityEvaluation and cellEdgeEvaluation are present in SIB2, this parameter configures whether UE combines the two conditions when determining whether to relax measurements (see TS 38.304 [20], clause 5.2.4.X.0). | [Rapporteur] – Nokia’s solution is clear and elegant. Suggest to accept this change. An equivalent update to 38.304 will be needed as a result  [Chenli] I am OK with either changing it as suggested by Nokia or leaving as it is. The reason is:  In futher, we may define other criteria for this part (as proposed by some companies during study item phase). In this way, there may be more use case for this and/or issue. Keeping the current signalling structure will be helpful for the possible forward compatibility extension.  If Nokia’s solution is agreeable, I will update the 38.304 specification accordingly.  [CATT] We would be OK with Nokia’s proposed change. |  |
| N023 | – CellGroupConfig | These field descriptions are very hard to read: The whole “inside/outside active time” is not easily understood (nor explained elsewhere in RRC), so suggest to simpälify the field descriptions. | Suggest to use the following simpler field descriptions: outsideActiveTimeToAddModList List of SCell groups to be added or modified for the use of the “Dormancy outside active time” as specified in TS 38.213 [13]. withinActiveTimeToAddModList List of SCell groups to be added or modified for the use of the “Dormancy within active time” as specified in TS 38.213 [13]. | [Rapporteur] – Not related to power saving, rather this belongs to DCCA discussions. Has been flagged to Hakan.  [Chenli] I suppose this belongs to power saving WI and DC/CA WI, as it is related to dormancy outside active time (which is introduced in DCP in power saving).  We are OK with Nokia’s suggestion to just refer to physical specification.  [CATT] Agree with Rapporteur. | No action |
| S403 | – PhysicalCellGroupConfig | “when the drx-onDurationTimer does not start” is ambiguous because usually it does not start. It is meant to be “should have started but does not start” | Indicates the UE to transmit periodic L1-RSRP report(s) when if the drx-onDurationTimer does not start because of DCI format 2-6 (see TS 38.321 [3], clause 5.7). If the field is absent, the UE does not transmit periodic L1-RSRP report(s) when the drx-onDurationTimer does not start. | [Rapporteur] – The reference to the MAC specification already clarifies ‘when the drx-onDurationTimer does not start’. We typically don’t duplicate conditions in different specifications.  [Chenli] We share the same view as Rapporteur. In MAC spec, the meaning of all parameters are captured clearly:  *ps-TransmitPeriodicL1-RSRP* (optional): the configuration to transmit periodic L1-RSRP report(s) during the time duration indicated by *drx-onDurationTimer* in case DCP is configured but associated *drx-onDurationTimer* is not started.  [CATT] Agree with rapporteur |  |
| S404 | – PhysicalCellGroupConfig | Same issue as S403. “when the drx-onDurationTimer does not start” is ambiguous because usually it does not start. It is meant to be “should have started but does not start” | Indicates the UE to transmit periodic CSI report(s) when if the drx-onDurationTimer does not start because of DCI format 2-6 (see TS 38.321 [3], clause 5.7). If the field is absent, the UE does not transmit periodic CSI report(s) when the drx-onDurationTimer does not start. | [Rapporteur] – Same as S403  [Chenl] Same as above.  [CATT] Same as above. |  |
| S406 | – UEAssistanceInformation | The Power saving information should be grouped alike for every UE assistance reporting feature | Create an IE as shown below PowerSavingAssistance-r16 ::= SEQUENCE {     drx-Preference-r16                  DRX-Preference-r16                  OPTIONAL,     maxBW-Preference-r16                MaxBW-Preference-r16                OPTIONAL,     maxCC-Preference-r16                MaxCC-Preference-r16                OPTIONAL,     maxMIMO-LayerPreference-r16         MaxMIMO-LayerPreference-r16         OPTIONAL,     minSchedulingOffsetPreference-r16   MinSchedulingOffsetPreference-r16   OPTIONAL,     releasePreference-r16               ENUMERATED {idle, inactive, idleOrInactive}         OPTIONAL,     nonCriticalExtension                SEQUENCE {}                         OPTIONAL } | [Rapporteur] – While this issue was marked as class 2, we have already discussed this in the first session and agreed that ‘No further grouping is considered.’  [Chenli] Agree with Rapporteur this has been discussed and concluded.  [CATT] Agree with Rapporteur. | Rejected |
| Q003 | – SIB2 | The entire structure, use of need codes and presence conditions are confusing. It is our understanding that: In case of low mobility based relaxation, s-SearchDeltaP-r16 is mandatory present and t-SearchDeltaP-r16 is optional. In case of not-at-cell-edge based relaxation, at least one of s-SearchThresholdP-r16 and s-SearchThresholdQ-r16 shall be configured. We should capture too many logics here when they are sufficiently clear from 38.304, e.g. the relaxed measurement requires either low mobility based or not-at-cell-edge based condition to be configured. | Make the following changes - s-SearchDeltaP-r16 > mandatory present. - t-SearchDeltaP-r16 > need R - lowMobilityEvalutation-r16 > need R (remove the condition) - cellEdgeEvalutation-r16 > Need R (remove the condition) | [Rapporteur] – While the issue was marked as class 2, some of the aspects (s-SearchThreshold) were discussed in the PS WI. No strong view on the suggested need code changes. Unclear why s-SearchDeltaP is considered as mandatory while t-SearchDeltaP is considered optional.  [Chenli] I am a littler confuse about the comment, maybe the comment misunderstood the condition OptMandatory. Based on the latest agreement:  *When cellEdgeEvalutation is configured, SSearchThresholdP should be mandatory while SSearchThresholdQ is optional.*  I think we should only make the following change:  s-SearchThresholdP > mandatory  For the condition OptMandatory, I prefer to keep it, since we have the agreement:  *The network broadcasts corresponding parameters of relaxation triggering criteria to enable RRM measurement relaxation feature*We didn’t have such clarification in other specifications/parts.  [CATT] Regarding these fields, the current RRC spec is correctly implemented following RAN2#109-e recommendations:  **RRC rapporteur should be able to use this as a baseline and companies can provide further views over email:**  Proposal 17: The parameter SSearchDeltaP is optional and default value can be 6dB.  Proposal 12: The parameter TSearchDeltaP is optional, and the default value can be 1 minute or 60s.  If we keep the above proposals as a baseline, then the need code should remain unchanged and if the above parameters are absent, the default values will be used. Then the need code should be S. If we don’t want to follow the above proposals (i.e. there is no default value for the above parameters) and think if the parameter is absent, the parameter is deleted, then the need code is R. However, based on the current CR 38.304, there is no case where t-SearchDeltaP nd s-SearchDeltaP are not used within low-mobility criterion. Hence, there are only two options: 1) keep the current ASN.1 or 2) make both s-SearchDeltaP-r16 and t-SearchDeltaP-r16 mandatory. |  |

3 Conclusion

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4 References

1. R2-2003127 - Summary of [Post109e#43][PowSav] UE Assistance and RRC open issues
2. R2-2003310 - RIL list TS 38.331 Rel-16 ASN.1 review file, phase 1
3. R2-2003309 - TS 38.331 Rel-16 ASN.1 review file, phase 1