3GPP TSG-RAN WG1 Meeting #106bis-e Tdoc R1- 21XXXXX

E-meeting, October 11th – 19th, 2021

Agenda Item: 8

Source: Moderator (Ericsson)

Title: Summary of Email discussion on Rel-17 RRC parameters for LS to RAN2

Document for: Discussion, Decision

# 1 Introduction

This document summarizes the discussions in input contributions and during RAN1#106bis-e under the following email thread assigned by RAN1 Chair:

[106bis-e-R17-RRC] Email discussion on Rel-17 RRC parameters for LS to RAN2 – Sorour (Ericsson)

* Email discussion to start on October 18
* LS to RAN2 to be finalized and endorsed on October 22

There have been ongoing email discussions since Post RAN1#106-e meeting across Rel-17 WIs in order to provide the preliminary RRC parameter list for supported PHY functionalities by RAN1. The discussions on RRC parameters in respecitve Rel-17 WIs are resumed in RAN1#106bis-e with a final check point on October 19th. Moreover, aiming for a consistent and efficient approach for preparing RRC parameters in RAN1, [1] was prepared that suggests a set of recommendations and guidelines to achieve this goal.

Within this email discussion, i.e. [106bis-e-R17-RRC], the RRC parameter lists across different WIs are merged into an Excelsheet for final review by the group and approval by Chair to be sent via an LS to RAN2/RAN3 by October 22nd.

**Moreover, as described in [1], it is benficail to consider only stable (not necessarily complete) RRC parameters in the LS to RAN2. The remaining RRC parameters can be discussed further in RAN1 at the next meetings and be included in the earleist LS to RAN2, when identified as stable**.

Please note that due to the ongoing RRC parameter email discussions per WI, the coordination between RRC email discussions per WI and this email discussion is considered as the following:

* The Moderator of each WI RRC email discussion [106bis-e-R17-RRC-WI], has provided the “WI input RRC list”. These lists are collected in an Excelsheet by the Moderator of [106bis-e-R17-RRC].
* The collective Excelsheet is reviewed under [106bis-e-R17-RRC] email discussion using section 2.1 below.
* If the collective Excelsheet is subject to update based on any input from a WI RRC email discussion Moderator, for example due to the agreements made at the late stage of the meeting, the update of the Excelsheet would be announced in this email discussion.
  + Each WI input RRC list includes a column at the end for “Status” to identify most impotantly the “stable” rows in the list. Please note that this column is for RAN1 information only and will not be included in the LS to RAN2.

Comapnies are encouraged to consider the discussion in the following section and provide their input, if any.

# 2 Discussion

## 2.1 RRC parameter lists of Rel-17 Ws

The sub-sections below are organized for collection of comments on RRC parameters per WI. Please provide you comments, if any, for the input RRC list of a WI in the corresponding sub-section using the **latest version of Excelsheet** available at folder [Collection of RRC parameters](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_106b-e/Inbox/drafts/8/%5B106bis-e-R17-RRC%5D/Collection%20of%20RRC%20parameters).

### 2.1.1 feNR-MIMO [106bis-e-R17-RRC-MIMO]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.**  **Please note that status Column is not available for this list. The assumption is that the entries are “stable”. If an issue raised in this email discussion for an entry that can not be resolved, changes the status of that entry to “unstable”.** | |
| **Company** | **Comment** |
| Ericsson | Row 5:  There is an important piece of information missing in the excel sheet for SourceRS-Info\_r17. According to RAN1 agreements, the possibly RS types included in SourceRS-Info\_r17 is different for UL and DL TCI states. This makes it impossible for RAN2 to design the signaling.  Propose to add the following to the description of SourceRS-Info\_r17:  The applicable source RS type is different for UL and joint/DL TCI states: SRS is applicable for UL TCI states, but not for joint/DL TCI states. |
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### 2.1.2 60GHz [106bis-e-R17-RRC-60GHz]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
| **Company** | **Comment** |
| vivo | Comment 1:  Row 16, need to add new IE and the value range of *DL-DataToUL-ACK-r17* inside *PUCCH-Config* is (-1 .. 127) applicable to 480 and 960 kHz  Comment 2:  Row 17, need to add new IE and the value range of *DL-DataToUL-ACK-DCI-1-2-r17* inside *PUCCH-Config* is (0 .. 127) applicable to 480 and 960 kHz  Agreement:  For NR operation with 480 kHz and/or 960 kHz SCS, the value range of k1 indicated in RRC is -1 ~ 127 for DCI format 1\_1 and 0 ~ 127 for DCI format 1\_2.   * Note: this does not imply that DCI format 1\_2 supports multi-PDSCH scheduling   Comment 3:  Row 26, need to add to Column J “when the field k2 is absent, the UE applies the value 11 when PUSCH SCS is 480 kHz; and the value 21 when PUSCH SCS is 960 kHz for k2.” and add to column P with the following agreement  Agreement:   * When the field k2 is absent in RRC, the UE applies the value 11 when PUSCH SCS is 480 kHz; and the value 21 when PUSCH SCS is 960 kHz for k2. |
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### 2.1.3 IIoT&URLLC [106bis-e-R17-RRC-IIoT-URLLC]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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### 2.1.4 NR-NTN [106bis-e-R17-RRC-NR-NTN]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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### 2.1.5 Positioning [106bis-e-R17-RRC-NR-ePos]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
| **Company** | **Comment** |
| Ericsson | Row 5 and 6: the parameter srs-PosResourceSetId and srs- PosResourctId are use both for UL-TDOA (where it goes via RRC from the UE to the gNB) as well as in multi-RTT (where it goes from the UE to the LMF via LPP). We suggest to clarify that both the RRC and LPP protocols are impacted.  Regarding row 63, 64, 65, the PRS priority window, measurement gap activation and priority indicator, are not yet fully resolved in RAN1 (for example, whether to use MAC CE or RRC to signal the processing window). We think they could be marked as “unstable”. The parameters could be either omitted from the table for now until we have a more stable design, or put in brackets. |
| CATT | Row 5 and 6: Share the similar as Ericsson. “FFS for RAN2” can be changed to. “FFS for RAN2/RAN3”  Regarding the parameters for measurement gap activation (Row 75, 77, 78 in the latest spreadsheet), the parameters can be considered as stable based on the latest agreements.  Agreement:  Support the following options (in the agreement made in RAN1#106-e) for a new mechanism of MG activation request for the purpose of positioning.   * Option 2: by UE (via UCI or UL MAC CE)   + Select only one of UCI and UL MAC CE in RAN1#106bis-e * Option 1: by LMF (via an NRPPa message)   + Note: This is transparent to the UE   Agreement:  Support using UL MAC CE for MG activation request by UE (Option 2) for the purpose of positioning.    Agreement:  Support the following option (from the agreement made in RAN1#106-e) for a new MG activation procedure to be performed by the gNB for the purpose of positioning.   * Option 2: DL MAC CE   FFS: Deactivation process  For the parameter for priority window and PRS priority indicator (Row 79, 80), we think they can also be considered as stable based on the following agreement.  Agreement:  • With regards to UE determining the PRS priority with other DL signal/channels within the PRS processing window for PRS measurement outside MG, **support the priority indicated by gNB**.   * FFS: What are the other DL signals/channels   • With regards to the PRS processing window for PRS measurement outside MG, ***at least support the window indicated by gNB***. |
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### 2.1.6 RedCap [106bis-e-R17-RRC-REDCAP]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
| **Company** | **Comment** |
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### 2.1.7 Power saving [106bis-e-R17-RRC-PowSav]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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### 2.1.8 Coverage [106bis-e-R17-RRC-CovEnh]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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### 2.1.9 eIAB [106bis-e-R17-RRC-eIAB]

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### 2.1.10 Sidelink [106bis-e-R17-RRC-Sidelink]

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### 2.1.11 MBS [106bis-e-R17-RRC-MBS]

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### 2.1.12 DSS [106bis-e-R17-RRC-DSS]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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### 2.1.13 MR-DCs Scell Act. [106bis-e-R17-RRC-NR-DC]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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### 2.1.14 NB-IoT&eMTC [106bis-e-R17-RRC-NB-IoT-eMTC]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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### 2.1.15 IoT NTN [106bis-e-R17-RRC-IoT-NTN]

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### 2.1.16 5G-Broadcast [106bis-e-R17-RRC-LTE-Bcast]

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| **If you have any comment for a row in the Sheet corresponding to this WI, please provide your comment below by indicating the Row number.** | |
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## 2.2 Draft LS to RAN2 on RRC parameters

A draft for LS to RAN2 is provided and available at folder [Draft LS](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_106b-e/Inbox/drafts/8/%5B106bis-e-R17-RRC%5D/Draft%20LS). Please provide your comments, if any, on the **latest version of draft LS**. Your review, specially from 20th of Oct. ia very appreciated.

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## 2.3 Improve RRC parameters preparation activity

The document in [1] was an attempt to address our challenges in RAN1 for the task of RRC parameters preparation based on our previous experiences. However, it was not feasible to seek input from all delegates in RAN1 on identify what the challenges are and how they can be handled.

Please consider this section to share your questions, comments and suggestions that could help to further improve our WoW within RAN1, as well as inter-action with RAN2 with respect to RRC parameter preparation. The more we know, the more we can improve. Thank You!

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# 3 Conclusion

TBD

# 4 References

1. R1-2110415, Recommendations for RAN1 RRC Parameter Preparation; Moderator (Ericsson)