3GPP TSG-RAN #92-e Draft RP-21xxxx
Online, 14-18 June 2021

Agenda Item: 5.2

Source: RAN2 Chairman (Moderator)

Title: Report of Offline Discussion [03] RAN2 TU Plan

Document for: Discussion

# Introduction

This discussion includes general aspects of RAN2 planning and specifically the TU plan. It includes tdoc RP-211256 on R4 Measurement Gap Enh and can include other impact to RAN2 plan, e.g. the discussions on Cov Enh, feMIMO also relate to R2 TU, and possibly discussions on IAB and SDT.

# Contacts

Please provide a company contact that the email discussion moderator can contact if required.

|  |  |
| --- | --- |
| **Company** | **Contact name and email** |
| RAN2 Chairman | Johan.Johansson@mediatek.com |
| Futurewei | Hao.bi@futurewei.com |
| T-Mobile USA | John.Humbert2@T-Mobile.com |
| OPPO | shicong@oppo.com |
| Qualcomm Incorporated | mkitazoe@qti.qualcomm.com |
| Intel | Sudeep.k.palat@intel.com |
| MediaTek | Chun-fan.tsai@mediatek.com |
| Ericsson | Mattias.a.bergstrom@ericsson.com |

# General RAN2 TUs

Related Proposal 1 from [1]: Plenary to discuss which objectives from which WIs are to be reduced to free up RAN2 TUs for NR measurement gap enhancements WI.

How to handle new/not yet covered requests for RAN2 TUs.

|  |  |
| --- | --- |
| **Company** | **Comment** |
| RAN2 Chairman | In principle there are the following options for adding TUs to RAN2 TU plan: a) For 2020Q4 and 2021Q1 there may be the possibility to move 0.5-2.5 TU from R17 Other to specific work items. The R17 Other includes R2 reserve TUsb) There could be the possibility to let RAN2 have negative total for available TUs. The principal result of such negative budget would be that RP then plans and allocates > 40TUs of RAN2, and Thus Reduces the Chairman-plannable margin (25%, ~14TUs).c) We could deprioritize some scope to reduce the TU consumption of some currently ongoing item, to free up resources. Note That the Proposal 1 in [1], Option c) indeed has some relevance, as currently in RAN2 the chair planning margin (CB time) is distributed between WIs roughly according to their size (except for particular urgencies), and currently in RAN2 on-line time is a highly needed scarce asset for any WI (=high load). As c) is in general difficult, I’d suggest to not make additions to RAN2 TU allocation be conditional to subtractions, but still can discuss both. If possible use the R2 reserve by reducing the TUs for “R17 other”. If the end result anyway would be a Small negative sum for the TU budget for some RAN2 meeting it could still work.  |
| Futurewei | In principle, we should not make other WIs suffer due to a WI failing to properly budget RAN2 workload.We suggest no action in RAN#92e, and to task RAN4 to converge on major issues and provide analysis of RAN2 impact to RAN#93e. Need of RAN2 TUs for this WI and if and how to obtain them can be discussed in RAN#93e.  |
| T-Mobile USA | We support adding the TU’s, however the TU’s should be allocated before new SID’s or WID’s are approved in Plenary i.e. NTN.  |
| OPPO | It seems not likely to drop this WI entirely. Meanwhile, RAN4 will be likely to converge on some major issues for this topic and RAN2 seems need to start the work in Q4.Our view is:* No harm to the current TUs allocated to WI in progress;
* Further judge in RAN#93 whether RAN2 can use the TUs allocated for R17 others (3.5 TUs in Q4 2021, RP-210824);
* Task RAN4 converge on controversial issues closely related to RAN2 so that RAN2 work can be concrete.
 |
| Qualcomm Incorporated | We can try to identify the RAN2 impact before dropping objectives from other WIs. This may become clearer in a quarter. |
| Intel | We can try to accommodate it within the RAN2 TUs and consider downscoping of WIs in general next plenary.  |
| MediaTek | It is unlikely to drop the MG WI entirely. But it also not so reasonable to down scope other WI for this particular reason.In general, we understand that almost all RAN4 WIs (and RAN1 WIs) have capability and configuration impact to RAN2. So, there is R17 other and Chairman spare TU to address this. Some feature (e.g. R16 UL TX switching) may request more online discussion to understand R1/R4 design and it has been handled properly in Rel-16. If the overall R2 impact due to R17 MG WI is small, there is no need to have immediate action now.For R17 MG WI, the requested R2 TU is highly depends whether R4 LS could clear indicate the required R2 change. It seems reasonable to ask R4 to have a clear suggestion on the R2 procedure (as normal practice, not sure RP guide is needed). Adding TU from R17 other is okay for us (as R17 other is somehow reserve for R1/R4 impact to R2). |
| Ericsson | First of all, it is important we all have a common view of the current TU budget in RAN2. For us the budget is found in RP-210925 which is the endorsed TU budget from RAN#91. In that budget there is a line for "TEI and other not planned issues" with 1-2 TUs per meeting. Is this the "R17 Other" mentioned by the RAN2 chairman?If the RAN2 chairman can find needed TUs for each item, then we are happy. To us, option b seems to have a significant risk of overloading RAN2 further, so we are hesitant to go in that direction.From an planning point of view, we think it is important to have explicitly allocated time for the WIs with RAN2 objectives. This both in order to plan the work in 3GPP but for companies to plan their staffing, etc. To have a "bucket" wherein several e.g. RAN1 objectives are hiding is not clear enough like we have now. For example, from the current TU-schedule (RP-210925) it is not clear to us when Coverage Enhancements or DSS start in RAN2. We hope that as an outcome of this plenary meeting the RAN2 TU plan would clearly state which items have TUs allocated when. |

# RAN2 TU modification for specific WIs

## Measurement Gap Enhancements

In [1], the Observation 1 states: RAN2 needs a non-negligible TU allocation for the measurement gap enhancements WI in Rel-17. Likely 2-3 TUs are needed in total spread between 2-3 RAN2 meetings.

Furthermore [1] states the expectation that RAN4 will provide LS and conclusions such that RAN2 work can start in 2021 Q4 (November meeting).

|  |  |
| --- | --- |
| **Company** | **Comment** |
| RAN2 Chairman | I believe that indeed Measurement Gap Enhancement discussions in RAN2 might be controversial and associated with certain level of confusion, and 3 meetings should be expected, and RAN4 Should really conclude such that RAN2 can start work in November. On the exact TU allocation, IMHO the need would depend on to what extent RAN4 can/cannot converge on mechanisms. If several major mechanism decisions are left open to RAN2 there is indeed a risk that significant discussion is required.It may be feasible to allocate 0.5 TUs for 3 consecutive meetings starting Nov, without impacting TU allocation for other items. If needed additional CB time can be used.  |
| Futurewei | The priority should be given to properly complete those WIs already with committed RAN2 TUs.0.5 TUs for 3 meetings starting from Nov. may be considered. The decision should be made in RAN#93, pending on RAN4 progress.  |
| OPPO | We also think the principle should avoid jeopardizing TUs already allocated to WIs in progress. It would be good to see the progress in RAN4 in August, it would be even better to task RAN4 to converge on controversial issues which is closely related to RAN2. |
| Qualcomm Incorporated | Agree to Futurewei’s comment “0.5 TUs for 3 meetings starting from Nov. may be considered.”To us, the WI objectives require new RRC configurations and almost no procedural impact.For objective (1), it should be noted that it is already clear in the current RAN2 specifications in what conditions the UE requires measurement gap for SSB based measurements. It is based on whether the measured SSB is intra-frequency/inter-frequency, is within the active BWP, what the UE reports in RRC Reconfiguration Complete, and combination of reported UE capabilities. Essentially the network knows if the UE requires measurement gap for each BWP when it becomes the active BWP. It is today’s network behaviour to configure measurement gap when the UE requires measurement gap in at least one active BWP. Only addition is to a flag for dynamic on/off.The objectives (2) and (3) are to purely add RRC configurations. |
| Intel  | We agree with RAN2 chair’s suggestion to consider 0.5 TUs for 3 meetings starting Nov.  Depending on RAN4 progress, this can be revisited in next plenary.   |
| MediaTek | Based on the progress on MG WI so far, we think “adding 0.5 TUs for 3 meetings starting from Nov without impact other WI” is a reasonable approach. We can also confirm this in next RP meeting.  |
| Ericsson | We agree with the RAN2 chairman that it would be good if RAN2 discusses this topic in 3 meetings. RAN4 is likely to send an LS to RAN2 in the August meeting meaning that RAN2 can start the work in November. As to the amount of TUs in each meeting, 0.5 TUs is perhaps sufficient. Less than that would probably not be meaningful.As indicated above, to take comeback time and use it for WIs is questionable in our view. The comeback time is commonly shared among all other WIs and using for e.g. the measurement gaps WI would remove precious time from the other WIs and hence limit the progress for those. |
|  |  |

## Other WIs

Moderator proposes to not discuss in the initial Round potential TU impact for WIs for which there are dedicated Offline discussions. Could bring all RAN2 TU impacts into this discussion e.g. for final round (TBD)

Moderator invites for comments on aspects or WI possibly otherwise missed:

|  |  |
| --- | --- |
| **Company** | **Comment** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# References

[1] RP-211256 RAN2 TUs for measurement gaps enhancements Ericsson