3GPP TSG-RAN #93-e RP-21

Online, 13-17 September 2021

Agenda Item: 5.3

Source: RAN3 Chair (ZTE)

Title: Summary of Offline Discussion - Update to RAN3 TU Planning

Document for: Discussion

# Introduction

Some WIs approval/updates with RAN3 scope will bring updates to the endorsed TUs for RAN3 in RAN#92e.

# Proposals, Company Comments

According to the RAN3 TU discussion in RAN#92e in RP-211498, pls note that for each RAN3 WG meeting, 0.5 TU overload per meeting should be manageable, further TU addition is not acceptable only if TU cutting is available.

LS in RP-211672 was agreed in RAN3#113e.

*RAN3 would like to kindly request RAN to update the work item and allocate to RAN3 proper TU(s) for RAN3 to complete the work on UE Power Saving Enhancements, taking into account the schedule capacity of RAN3 in the remaining meetings of Rel-17.*

In RP-212233, RP-212413, it is proposed to update the WID to include RAN3 on paging sub-grouping for reducing unnecessary UE paging reception. However, the detail information of subgroup information to be transferred over backhaul interfaces are highly correlated with solution discussion in RAN2, it seems better to start RAN3 work in Q1 2022.

1. **UE Power Saving Enhancements WI**

**If the WI scope update with RAN3 is approved, allocate 0.5 TU at RAN3 #114bis-e.**

1. **New WI “User Plane Integrity Protection support for EPC connected architectures using LTE and NR”**

**If this WI is approved in RAN#93e, then include it to the basket for "late" Rel-17 WIs as needed (IoT over NTN, Multi SIM, UP Integrity Protection) with 0.5 TU at RAN3 #114bis-e and RAN3#115-e.**

In RP-211999, it is proposed to Spreading the allocated 1 TU of RAN3#114e into 0.5 in RAN3#113bis-e and 0.5 in RAN3#114-e for Enhancement for data collection for NR and ENDC SI (R17 AI RAN SI) in order to ensure continuous discussion on technical details.

1. **AI RAN SI: Spreading the allocated 1 TU of RAN3#114bis-e into 0.5 in RAN3#114e and 0.5 in RAN3#114bis-e.**
2. **TU adjustments as below based on workload estimation:**

**NB IOT/MTC enh. WI: Accept 0.5 TU reduction at RAN3#115-e.**

**SON/MDT WI: Accept 0.5 TU reduction at RAN3#114-e.**

The above proposal is based on the observation of discussion in RAN3 meetings.

1. **Allocate 0.5 TU for corrections in RAN3#115-e**

The continuous 0.5TU for correction/TEI is needed and only essential corrections are allowed for frozen releases, e.g., R15, R16.

According to the above observations, the updated RAN3 TU allocation is proposed in RP-211741 as below:



**Q:Any comments on the updated RAN3 TU planning as proposed in RP-211741?**

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| **Company** | **Comment** |
| MediaTek | We support the TU plan and will propose WID revision in RAN#93-e. |
| Ericsson | We have comments on Proposal 3) AI RAN SI: Spreading into two 0.5 TU.  We should keep the time allocation as it is.  We have reached a rather good state with the work on AI. We should wait and work on more concrete enhancements to the use cases, which we could do at the Jan meeting with the 1TU planned. |
| CMCC | We support to spread AI SI TU into two 0.5TU. AI for NG-RAN is a new topic in 3GPP RAN, although we have achieved some initial agreements on the functional framework, and prioritized Use Cases and Solutions, there still exists many contentious topics, e.g., details in Functional Framework, solutions and standard impacts, which may not be easily converged through e-meeting. Therefore, it is quite important to have a continuous discussion on the technical details. |
| InterDigital | We support the TU plan |
| Vodafone | For LTE UPIP, time should be spent in the November RAN 3 meeting and one of the RAN 3 meetings in Q1 2022 (probably the second of the is best). This is so that RAN 3 can raise any questions/proposals with SA3 and SA2 (and possibly RAN 2) and there be time to get answers back. |
| Futurewei | We support the updated RAN3 TU planning as proposed in RP-211741.  In regard to TU allocation for AI RAN SI, we also think that spreading the allocated 1 TU of RAN3#114bis-e into 0.5 in RAN3#114e and 0.5 in RAN3#114bis-e could help progress discussions of and reach consensus on solutions and standards impact with more checked pace. |
| Nokia | We support the updated TU plan, including Proposal 3 (AI RAN SI) which avoids what would otherwise be a 5-month break from the topic. |
| CATT | We support the updated TU plan. |
| Intel | We also support the updated TU plan. |
| NEC | For 3) AI RAN SI (Spreading the allocated 1 TU of RAN3#114bis-e into 0.5 in RAN3#114e and 0.5 in RAN3#114bis-e), we think this is reasonable approach, and we would like to support this, in order to keep continuing discussion without breaking.  For 5) Allocate 0.5 TU for corrections in RAN3#115-e, we think it is reasonable. |
| Samsung | We support the updated TU plan. |
| Lenovo, Motorola Mobility | We support the updated TU plan including TU allocation for AI SI |
| Verizon | Support the updated TU plan. For AI RAN SI, spreading of TUs across 2 meetings might help make better progress. |
| Huawei | Remove 0.5 TU on NB-IoT/MTC Enh. WI is acceptable for us as rapporteur  The LTE UP IP Integrity protection should start early in Q4, RAN3#114 due to dependency with SA2/SA3 and liaison triggering by RAN3 more than possible  Why do UE power saving with 0.5 TU, late WI as special treatment compare other late and low TU items? The LS from RAN3 should not preclude to put UE power saving item in the Basket. The overall Basket TU could be increase over 0.5 … It seems also a bit un usual to open and close a WI in single meeting in RAN3 for such topic …. That’s make also more sense for Basket application …  We are not keen on TU manipulation between SON and AI/ML this will ensure full SI discussion. We noted over 1 TU discussion on SI last meeting. Particularly when WI have pressure of completion, see line above as example. Say that we will not go again a majority view by compromised spirit.  We also wondering if the discussion on IAB and possible down selection will not have impact on RAN3 which will free some TU for Basket as example. |
| ZTE | We support the updated TU plan. |
| Qualcomm | First, we recognize that the reductions of SON/MDT and NB-IOT are feasible, and can also accept the TU spreading for AI/ML. We also fully agree that some work is needed in RAN3 for UE Power Savings, and (possibly more) for UP IP, assuming approval.  However, we do not understand why Power Savings has a specific allocation, rather than be placed in the basket as e.g. UP IP. This should be clarified. In our view, there seem to be two approaches: (1) place all new items in the basket and try to dimension the basket accordingly, or (2) extract all items out of the basket and plan TUs for these, accepting that RAN3 is overloaded according to existing metrics. Since option 2 seems difficult at this stage, we would expect option 1 to be the way forward - but certainly not a mixed approach. |

## Intermediate Round

**Feedback on the comments received:**

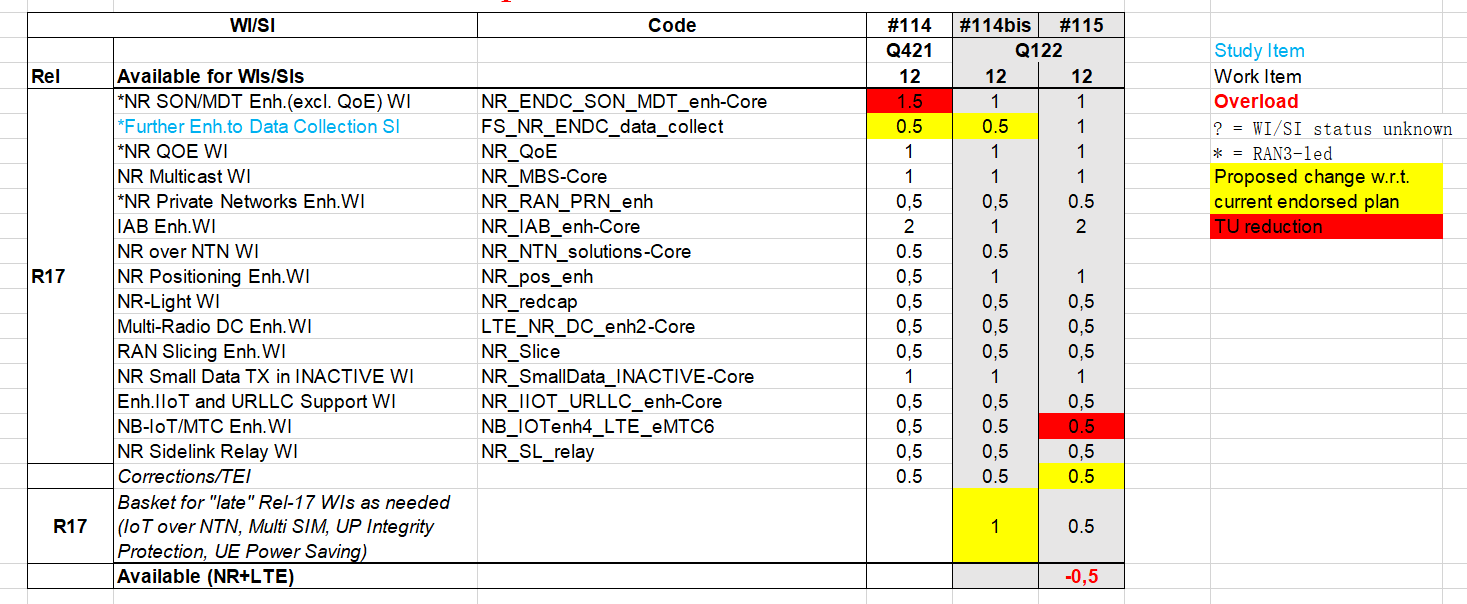
1. For the new approved LTE UP IP Integrity protection WI, we can observe from the Email#[93e-07-UserPlane-Integrity], the work in RAN3 seems much clear and limited, therefore, I suggest to add this into the basket item, while for the possible early co-ordination with SA2/SA3, I noticed that there is an LSin RP-212494 (cc RAN3) which will be received in next RAN3 meeting. If needed (contribution driven on this topic), we can treat it in AI8.1 in RAN3#114e.
2. For UE Power Saving WI, as I explained in last meeting, 2~3 items (each item with limited RAN3 impact) to be treated in this basket with 0.5 TU seems bearable, we’ve already had multi-SIM and IoT over NTN in this basket item, if we add LTE UP IP Integrity protection WI to this basket item as well, there are 3 items, endless list expansion is not allowed, abuse of this basket item is definitely should be avoided. Therefore, since this UE Power Saving WI already has its own WID, and we already had the common understanding in RAN3#113e to work on paging subgroups information transmission over backhaul interfaces, e.g., what’s the definition of paging subgroups information, NAS/AS solution progress in RAN2, signalling and procedures support, it obviously has more technical details to be discussed in RAN3, therefore, I think 0.5TU allocation in RAN3#114bis-e is reasonable for this WI.
3. Since majority companies are fine with spreading of TU for AI RAN SI, I would suggest to keep the update as it is.
4. If there is a clear conclusion on TU reduction based on down scope for current ongoing RAN3 WI/SIs, we may accept new late R17 WI work in RAN3, else, RAN3 TU allocation is fully booked, and I propose to keep the endorsed TU update in this meeting unchanged till the end of R17 timeline, March, 2022.
5. It's highly appreciated for companies to take potential R18 RAN3 work load into account in advance when discussing the objectives for R18 WI/SIs, else RAN3 will face the same situation that the load of RAN3 will blow up at the end of release.

**Proposal1: With above clarifications, the updated RAN3 TU planning as proposed in RP-211741 can be endorsed.**

**Q:Any further comments on Proposal1 as above?**

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| **Company** | **Comment** |
| Ericsson | For the AI/ML TU spread, we can compromise. But it would be good to highlight in the TU planning that the 0,5 TU would have a visible reduced scope in the meeting Agenda.  RAN3 Chair: Appreciated with your cooperative spirit. TU allocation will be reflected in the number of email discussion and online GTW time. I will take this into account for meeting preparation. |
| Huawei | We have few comments, we likely see minuted:  As explain already, the completion of UE Power saving enh. WI in a single meeting looks challenging for us. We want to see this item completed on time, means not subject to correction later on, if possible. Considering also dependency to other WG like UP IP integrity protection, we would see more than one meeting for these items with one or two CBs per meeting. The Basket looks more appropriated, it will allow discussion over multiple meetings.  According to previous section above, we have doubt that statement is possible; 4) “keep the endorsed TU update in this meeting unchanged till the end of R17 timeline, March, 2022.” To be honest with our self, we got agreement on TU at beginning of rel-17 and we accommodate its for various reason every TSG now.  If there is strong wish to limit the Basket, e.g. 2… Then there are 2 proposals this meeting why one goes to the basket not other? From 2)’s argumentation, it seems that the relation with other group is more complex for UP IP Integrity protection, both topics are well-known by RAN3, UPIP Integrity as already NR component in standard, Qualcomm proposal makes more sense … All thoughts, no strong view on this last point, but we have pain to understand the logical which apply.  RAN3 Chair: The logic from my side is that if the items for basket is full, then we need to consider additional TU request case by case. But the point on the risk that one meeting may not be able to complete UE Power Saving WI makes sense. I will include UE Power Saving WI into the basket item, while this basket item will get 1 TU in RAN3#114bis-e and 0.5 TU in RAN3#115e.  Ideally, we make the good TU allocation for all WI/SIs at the beginning of the release, but the reality is full of change. That’s why 5) is raised here, which should be considered for all R18 WI/SIs.  The updated RAN3 TU allocation is shown as below, any further comments are welcome. |
| Nokia | Regarding basket TU, we believe it should be used only for WIs which have small RAN3 impact, i.e. impact less than the 0.5 TU granularity used in TU planning. Thus, we agreed with the original logic of the RAN3 Chair to allocate separate 0.5 TU for UE Power Saving because RAN3 had identified rather significant RAN3 impacts and was the reason why the LS from RAN3 requested RAN to “allocate to RAN3 proper TU(s)” (i.e. dedicated TUs). In short, any WI that requires at least 0.5 TU effort should have dedicated TUs.  Thus, we prefer the original proposal from the RAN3 Chair. However, we also recognize that there may not always be a common view about whether a WI requires at least 0.5 TU so are fine with whatever the RAN3 Chair finally decides. |
| Qualcomm | We are fine with the proposal below (we also noticed that MUSIM was in exactly the same situation as UE Power Savings, i.e. existing WI without RAN3 allocation). I think we all agree that all (or most) of these WIs should have dedicated TUs but we are effectively in an overload condition which requires some careful and equitable management. |

## The updated RAN3 TU planning shown as below is proposed to endorsed:



## Final Round

# Conclusion