3GPP TSG-RAN Meeting #90-eRP-20xxxx

**Electronic Meeting, December 7 - 11, 2020**

Agenda Item: 9.1.4

Source: Email discussion moderator (Nokia)

Title: Report #1 from Email Discussion [90E][17][Band\_combo\_simplification]

Document for: Discussion and decision

# 1 Introduction

This document reports on the following email discussion during RAN#90-e:

**[90E][17][Band\_combo\_simplification]**

Goal: Find an agreeable way forward

Input contributions covered: 2619, 2671, 2670.

The target in this email thread is to make the contents, specifically objectives of SID proposal in RP-202670 stable:

* refine objectives in SID proposal in RP-202670
* identify additional ones and add them to the SID, if any

***Moderator’s view on observations in*** ***2619 and relations with 2670 and 2256***

* Observation 1: something quite generic so that this will not be handled in this thread.
* Observation 2: will be discussed in the Email thread of [90E][13][BCS4]
* Observation 3: can be covered by objective 2 in 2670
* Observation 4: the aspect would be overlapping with that of [90E][13][BCS4]. Clarification or coordination is needed which SID(2670) or WID(2256) should handle this objective.
* Observation 5: will be covered the TR in 2670
* Observation 6: is not covered by any objectives in 2670

Initial round of discussion: Please respond by Tuesday 8 December at 12:29h UTC.

## 2 Initial round discussion

### 2.1 Question 1: Necessity of additional objectives to RP-202670

**Q1: Companies are invited to provide their views on the necessity of adding the following two observations provided by RP-202619 to RP-202670 and if there are some other objectives which should be included, if any.**

Observation 4: RAN4 can consider a general approach to further improve the MSD exception requirements for solving the raised issues.

Observation 6: Some mechanisms/process are needed to treat the general issues which are identified in the basket WI agenda.

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| **Company** | **Comments** |
| Nokia | For observation 4, it depends on what is going to be addressed in BCS4 WI. We can make MSD objective as generic as possible at this moment. The potential SID can handle what BCS4 WID does not handle.  For observation 6, we would not need to add this to potential SID as an objective. This will be handled by each rapporteur of the basket WIs. If they identify general issues, they should inform RAN4 chairman for further solution. |
| ZTE | For observation 4, we are ok with a general MSD approach as part of the improvement/optimization on specifying band combinations.  For observation 6, it is a bit too vague for the time being, and we can see later whether or not the SID once there is a concrete issue identified. |
| Ericsson | These are good observations. But we agree with Nokia that some of the aspects will be covered in BCS4 WI. What is the intention of the proponent regarding process? Is the intention to document in a new TR? If so then we are ok. |
| Qualcomm | The observations are a bit vague. Is there any new idea to further improve the MSD exception requirements? And what’s the potential identified general issues for basket WI agenda? |
| Samsung | For observation 4, we agree that a general approach to further improve the MSD exception requirements is helpful for RAN4 solving the raised issues.  For observation 6, we have some question with Qualcomm, what’s the potential identified general issues for basket WI agenda? The detail issues should be firstly explicitly defined before further discussion. |
| Huawei | Thanks for comments on observation 4, we are considering some general approach to further simplify MSD. We can start BCS4 WID and further discuss how to deal with MSD. If a general solution could be found, it would be helpful especially considering there would be many band combinations which need be checked.  Regarding comments on observation 6, one example of general issue is to support 4Rx for DL intra-band non-contiguous CA n77(3A). It was identified during the discussion for intra-band non-contiguous CA. The discussion on UE architecture would be needed. |
| CHTTL | We also think the observations are a bit vague, not sure what exactly the general approach is, as some of the requirements are already implemented in the spec for a while, it is not preferred to have some big changes. Probably can be further discussed and refined. |

### 2.2 Question 2: SID objectives proposed in RP-202670

**Q2: Companies are invited to provide their specific amendments on the objectives of RP-202670. The objectives of the SID proposal in RP-202670 are the following:**

*The objectives of this study item is to improve and optimize specification of the band combination in the current RAN4 specifications. The study proceeds within the following scopes.*

1. *Analyse and identify the redundant contents in RAN4 specifications.*
2. *Study potential future-proof solutions for band combination configuration tables in RAN4 specifications for concise representation, better readability and better trackability and editability.*
3. *Study the potential influence on request sheet template due to RAN4 band combination specification optimization.*
4. *Study the possible optimizations on band combination indication.*

*The target is that after the completion of the study item, a guidance on optimized specification of band combinations for RAN4 specifications will be approved and then applied to the latest RAN4 specifications.*

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| **Company** | **Comments** |
| ZTE | With the increasing demands, and under the current way of specifying band combinations, something should be done in order to guarantee specs quality and efficient standardization efforts. |
| Ericsson | The band combination improvement is a regular process and is handled under specific AI in RAN4 (e.g. 17.1 Simplification of band combinations in RAN4 specifications). So, we do not see the need to have a SI for improving the readability, simplification, optimization etc., of the specs for band combos. |
| Intel | We support to have simplifications of band combinations. But we prefer to handle it as TEI or contribution driven manner. SI is not preferred since this is optimization of RAN4 specification rather than technical improvement |
| Qualcomm | We support the simplification of band combinations. We did a good job in RAN4 specific AI on simplification of band combinations before. Not sure why we need a new SI, we can have the related simplification/optimization discussion with current approach i.e., contribution driven in specific AI/TEI. |
| Apple | We do support the simplification of band combinations. At least for further simplification/optimisation discussions RAN WG4 can continue the same process through contributions submitted to the corresponding AI. |
| AT&T | We fully support the simplification of band combinations and guaranteeing specification quality. We support the comments from Ericsson, Intel, Qualcomm, and Apple that we can handle these improvements as part of the normal RAN4 process without the need of a new SI. |
| Huawei | In current RAN4 work, the discussion is organized under a dedicated agenda and the outcome is good. |
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### 2.3 Question 3: Views on matters in RP-202670 other than objective

**Q3: Companies are invited to provide their Views on matters in RP-202670 other than objective.**

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## 3 Round 2 of discussion

**Moderator’s summary of the first-round discussions**

With respect to the necessity of this SI, no consensus has been made. Companies generally support the simplification of band combinations and guaranteeing specification quality and have views that the currently on-going process to handle this activity works very well by setting up a specific agenda item in RAN4. More specifically, six companies do not see the necessity to have a SI for this activity. Note that there is one support from which is the proponent of the SI. Hence, from moderator’s perspective, it would not be realistic and not productive to keep discussing in order to seek for the consensus during this RAN.

There is, however, one aspect commonly observed in 2619 and 2670, which is capturing all the agreements into an official document. And if the SID was approved, it could be a straightforward for a TR for the SID to address this.

Considering all the above, the following recommendation is provided.

**Recommendation: Not approve the SID(RP-202670) in RAN#90-e. If there are companies which believe capturing all the agreements into an official document is useful, they are encouraged to share its necessity and specific alternatives to TR in future RAN4 meetings, if any.**

In addition to the above, one question was raised by ZTE.

**Question: Should these regular activities be visible in the RAN4 TU budget table?**

Companies are invited to provide their views on the recommendation and question.

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| **Company** | **Comments** |
| Qualcomm | We support the recommendation from moderator that does not approve the SID. We’re OK to have an official document e.g. TR to capture the agreements. But not sure if 3GPP allow to have a TR without a specific SI. Alternatively, we can have a RAN4 doc to capture all the agreements from previous and future RAN4 meetings. |
| Intel | In moderator’s recommendation, we support to not create a new SI. On the other hand, we also recognize it may be helpful to maintain a document capturing all agreements for simplification/optimization and update the document from meeting to meeting. Such document serves as guidelines which should be followed in the RAN4 work. |
| Samsung | We support moderator’s recommendation that not approving the SID(RP-202670). For the suggestion to set up a document/TR to capture agreements, we are OK for it. However, we’d like to emphasis the content in this document/TR shall only include the consensus for BC simplification in RAN4. |
| ZTE | First of all, there is no doubt on the ongoing RAN4 activities related to improvements on specifying band combinations. The point is whether or not to cover these activities under an SI or just simply under an agenda item as it is now. We respect the outcome of the discussion, however we still have two concerns: 1) There should be some placeholder, e.g., a TR to capture all of the agreements related to specifying band combinations. Until now, these agreements are sporatic and not handy for these outside the loop, even in RAN4. 2) Whether or not the ongoing activities related to improvements on specifying band combinations should be reflected in the RAN4 TU budget table. Not any single basket WID can cover this. For us at least these regular efforts should be visible in the RAN4 TU budget table. |
| Apple | Our view is that we do need to have a document where RAN4 can capture consistently all agreements and principles for band combination simplifications. The TR would be the ideal candidate for that, but it should be checked with Joern and MCC whether we can have it without SI. If it is not possible, we can consider having a “running” RAN4 Tdoc that will be updated from the meeting to meeting in a same way as we use to draft and agree way forwards. |

## 4 Intermediate Summary

**Moderator’s summary of the second-round discussions**

It seems that companies are OK with the recommendation of “Not approve the SID(RP-202670) in RAN#90-e”. That means TR cannot be used to collect all the agreement as official document. On the other hand, companies prefer to capture all the agreement into one document. With respect to a raised question by ZTE that should RAN4 counts the time to discuss this simplification activity or not, due to lack of time, no comments have been received. And from moderator perspective, the question would be important but not urgent.

Considering all the above, the following is proposed.

**Proposal: Not approve the SID(RP-202670) in RAN#90-e. That means that capturing all the agreements into an *official* document is not possible. RAN4 keeps discussing if there are any other alternatives.**

* **One possible alternative is to use Permanent Documents that is defined in Section 9.1 in TS21.900. If companies are positive for this alternative, it is encouraged to provide the details in the next RAN4 meetings that who responsible for this document, the process of handling of this document in RAN as well as RAN4, etc.**
* **Note that other alternatives are not precluded.**

Note that specific examples of Permanent Document can be seen [here](https://www.3gpp.org/ftp/tsg_ran/WG5_Test_ex-T1/PRD).

Note that the permanent does not mean that the document cannot be updated. The permanent here would mean that the document must be running permanently. As you can see from the specific example above, the document can be updated, but the document itself is not formal one so that it cannot be visible in a way like TS and TR.

## 9.1 Terminology

Written contributions to 3GPP meetings are called "TDocs".

NOTE: The term "TDoc" is an abbreviation of "Temporary Document" and is a legacy of when such documents were prepared in paper form. Temporary Documents were not intended to be retained after the end of the meeting at which they were discussed, contrasted with Permanent Documents which were retained after the end of the meeting for longer term (permanent?) reference. 3GPP retains all TDocs in electronic form and thus there is no need for a separate "PDoc" class, although some working groups do retain some documents informally referred to as "permanent reference documents".

In addition to the above, one question was raised by ZTE.

**Question: Should these regular activities be visible in the RAN4 TU budget table?**

Companies are invited to provide their views on the proposal and question.

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| **Company** | **Comments** |
| Intel | Support Moderator’s proposal. Regarding the question, we don’t have strong view. The activities should be contribution driven. |
| Qualcomm | We support Moderator’s recommendation. Using permanent document is a possible way. We can further discuss the details in next RAN4 meeting. |
| ZTE | We would reiterate that enforcing the TU budget table would be able to improve the overloading situation in RAN4. The ongoing efforts related to improving band combination specification are not trivial and should be reflected in the TU budget table.  Having a SI for the ongoing activity is a proper and clean way forward, in which we can have a formal TR to capture all related agreements. We would like to understand other companies’ main concern against this zero-additional-cost and clean way. |
| Huawei | Many thanks for moderator driving the discussion. (we capture our comments in the email here)  We would like to suggest consider the alternative approaches:   * RAN4 can continue discussion in the dedicated agenda, which will be allocated in my view. And the agreement would be documented. Then when the document stable. We can have an SI within one Quarter with limited number of TU to treat the TP for TR. The purpose is just to generate the TR. * Or since the dedicated agenda is there and time is allocated, the alternative is that we have SI and reuse the TU for that dedicated agenda to discuss and generate the TR. But I am not sure if other company will OK with this. |
| Ericsson | We also support moderator’s recommendation. Our main concern is that the scope of such SI is too broad. Any improvement on band combination specification work is a regular process and should be contribution driven.  Regarding TU budget for any such activities related to CA/DC combos e.g. for section 9.1 in TS21.900. It is better to asses this in RAN4 whether such activity can be covered within TU allocated for CA/DC. Another option is to slightly increase TU budget for CA/DC whose work load has also increased over time. But in general such discussion should better take place first in RAN4. |
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## 5 Contacts

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

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| **Company** | **Contact name and email** |
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