**3GPP TSG-RAN WG4 Meeting #95-e R4-2008931**

**Electronic Meeting, 25 May – 5 June, 2020**

**Source:** NTT DOCOMO, INC.

**Title:** Simplification of band combinations

**Agenda item:** 14.1

**Document for:** Approval

1. Introduction

To address increasing number of band combinations, RAN4#954-e-bis discussed how to reduce the RAN4 work load on handling of band combinations. There are two topics on the discussion: One is replacement of template for request sheet, status report, and basket WI from word template to excel template. Another is simplification on EN-DC configuration table in TS 38.101-3 and simplification on procedure to introduce new EN-DC configuration. This paper provides some modification on new excel template and explanation on draft CR approach for EN-DC including FR2.

1. Discussion











2.1

## 2.2 Simplification on procedure to specify new band combinations.

In RAN4#94-e-bis, there was concerns raised about use of wild card approach approved in [2]. To focus on possible simplification on Rel-17 procedure, this paper focus on draft CR approach at this stage.

As proposed in [3], we proposed to apply draft CR approach approved in [4] for inter-band EN-DC including FR2. There were concerns raised about this approach that people has less opportunity to check the content of band combination proposals since the current procedure of TP -> TR -> big CR is simplified to draft CR -> big CR. However, we would like to note that proposals for inter-band EN-DC including FR2 contain just EN-DC configuration but does not contain any additional technical analysis such as UE to UE co-existence and MSD analysis. In addition, the benefit of this approach is to reduce the number of T-doc. Currently TPs are submitted per band-basis band combination per basket WI, but if we take draft CR approach, proponents can merge their TPs to one draft CR per basket WI. Furthermore, draft CR is described based on specification, and thus people can easily check if the content of draft CR is correct or not.

**Proposal : Draft CR approach approved in [4] should also apply EN-DC configuration including FR2.**

* **The following should be considered.**
  + **In case there are some exceptional cases are found and explanation is necessary, submitting TPs is needed.** 
    - **Example: In case the number of CCs for UL for one of the bands for a certain CA configuration increases, the noise level falling into Rx band of the other band(s) fr the CA configuration may increase. Hence, reference sensitivity degradation must be evaluated.**
    - **For cases which is not exceptional cases above mentioned, whether or not submitting TPs are allowed is FFS.**
  + **Submitting the draft CR does not mean that that is automatically endorsed.**
  + **The draft CR shall have requirements for certain configurations beloinging to the “same” basket WI.**
  + **The configurations shall be already reflected in the corresponding WIDs.**

1. Conclusion

In this contribution, in order to reduce the RAN4 work load on handling band combinations, we further discussed this topic. Our proposal is summarized as below:

**Proposal : Draft CR approach approved in [4] should also apply EN-DC configuration including FR2.**

* **The following should be considered.**
  + **In case there are some exceptional cases are found and explanation is necessary, submitting TP is needed.** 
    - **Example: In case the number of CCs for UL for one of the bands for a certain CA configuration increases, the noise level falling into Rx band of the other band(s) fr the CA configuration may increase. Hence, reference sensitivity degradation must be evaluated.**
    - **For cases which is not exceptional cases above mentioned, whether or not submitting TPs are allowed is FFS.**
  + **Submitting the draft CR does not mean that that is automatically endorsed.**
  + **The draft CR shall have requirements for certain configurations beloinging to the “same” basket WI.**
  + **The configurations shall be already reflected in the corresponding WIDs.**

1. Reference

[1] R4-2005168, “WF on new format for band combinations”, Huawei, Hisilicon

[2] R4-1910908, “Further discussion on EN-DC configuration including FR2”, NTT DOCOMO, INC.

[3] R4-2003880, ” Further discussion on simplification of EN-DC configuration including FR2”, NTT DOCOMO, INC.

[4] RP‑181126, “WF to reduce further TPs due to band combination in RAN4”, NTT DOCOMO, INC., Nokia, Nokia Shanghai Bell