**3GPP TSG-RAN WG4 Meeting # 104-e R4-22**

**Electronic Meeting, August 15 – August 26, 2022**

**Source:** Huawei, HiSilicon

**Title:** Work plan on NR BS RF requirement evolution

**Agenda Item:** 11.4.1

**Document for:** Approval

# 1 Introduction

New SID on NR BS RF requirement evolution was approved in RAN#95-e [1]. This contribution provides a work plan for the SI.

# 2 Discussion

2.1 Objectives of the SI

The objective of the study item is to study the following aspects for FR2 multi-band BS:

* + - Example bands:
      * 26+28 GHz: n258 + n261
      * 28+39 GHz: n257/n261 + n260
      * 26+40 GHz: n258 + n259/n262
      * 28+40 GHz: n257/n261 + n259/n262
    - Investigate the feasibility and performance of wideband RF and antenna architectures covering multiple FR2 bands
    - Investigate if FR1 multi-band methods are re-usable for FR2, and (if so) agree on the appropriate inter-RF BW gaps
    - Investigate if FR1 exceptions are acceptable for FR2
    - Investigate whether a generic solution for all combinations within FR2-1 is possible and/or a solution for all or a part of the frequency range should be targeted
      * Frequency range 24-29 GHz which includes n257/n258/n261
      * Frequency range 37-48 GHz which includes n260/n259/n262
    - Study the definition of FR2 multi-band BS

## 2.2 Work Plan

Following work plan is proposed for the SI.

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| **3GPP Meeting** | **TU** | **Task** |
| RAN4#104 | 0.5 | Work kick-off   * Discussion on the work plan/agreement * Discussion on the TR skeleton/agreement * Preliminary feasibility |
| RAN4#104bis | 0.5 | * Study on the feasibility study   + BS architectures   + Wideband RF   + Wideband antenna * Assess the applicability of FR1 multi-band methods to FR2 * Discussion on the definition of FR2 multi-band BS |
| RAN4#105 | 0.5 | * Study on the feasibility study * Assess the applicability of FR1 multi-band methods to FR2 * discussion on the definition of FR2 multi-band BS * Discussion on if FR1 exceptions are acceptable for FR2 * Study on other RF requirements if any |
| RAN4#106 | 0.5 | * Conclude the feasibility study * Conclude the definition of FR2 multi-band BS * Conclude whether to reuse FR1 multi-band methods * Conclude whether to reuse FR1 exceptions * Study on other RF requirements if any |
| RAN4#106bis | 0.5 | * Study on the remaining issues for RF requirements |
| RAN4#107 | 0.5 | * Conclude the discussion on RF requirements * Conclude the SI * Finalize the TR |

# 2.3 Conclusion

It is proposed to approve the work plan on the SI of NR BS RF requirement evolution.

# References

[1] RP-221001, “New SID: NR BS RF requirement evolution”, Huawei, HiSilicon