**3GPP TSG-RAN WG4 Meeting # 106 draft R4-2302914**

**Athens, Greece, February 27 – March 3, 2022**

**Agenda Item: 9.17.3**

**Source: Xiaomi**

**Title: WF on UE EMC**

**Document for:** Approval

# Background

According to the WID [1], the phase 1 study is due RAN#99 and hence the work plan [2] has proposed to conclude the study results in the phase 1. With many agreed WFs [3][4] during the phase 1, it is proposed to conclude the study phase outcome. In the WF, some of the agreements on the UE features to be further discussed in phase 2.

For issue 3-1 the frequency range study, it is proposed to further study in phase 2.

Fissue 2-2 the agreement which has been reached during the online meeting is captured while further WF is proposed.

Objectives captured from the WID [1]:

**Phase 1 (Study phase till RAN#99):**

1. Study on the need and motivation for additional UE features as per priority outlined below (highest to lowest):
	1. NR UE: CA, DC
	2. NR UE: SUL, UL MIMO and V2X
	3. EUTRA UE: CA, DC (Based on the NR study outcome), other features as captured in subclause 4.3A of TS 36.101.

NOTE: Limit the scope within FR1 as currently the UE EMC specification only covers FR1 UE.

1. Investigate current 3GPP UE EMC radiated emission limit as whether current test frequency range is suitable, including the lower and upper test frequency range.
2. Investigate how to establish the communication link for NR and LTE UEs with different features:
	1. Possible deltaRIB to be considered.
	2. Possible MSD to be considered.

Note: These do not apply to UL MIMO.

# Wayforward

**Issue 3-1: FR2 handling**

* Option 1: To leave the FR2-2 topic out of scope of the UE EMC enhancement WID (Xiaomi)
* Option 2: To not limit the scope to FR1 for the UE EMC enhancement WID (Huawei)

WF：

Further study the test frequency range.

**Issue 3-2: Test dependency on UE features**

* Proposal 1: Adopt a feature agnostic framework for the UE EMC testing (Huawei)
* Proposal 2: CA and DC as the only UE features to be enhanced in phase 2.
* Discussion:
	+ Xiaomi: Follow previous agreement and WID, we propose to start phase 2 work for CA and DC features only.
	+ Huawei: We are ok to prioritize CA and DC meanwhile we shall not exclude feature agonistic framework.
	+ ZTE: We agree CA and DC shall be considered, for proposal 1 need more study.
	+ Xiaomi: Can we conclude phase 1 study and study the work for phase 2 ?

Agreement: At least CA and DC can be considered in phase 2, FFS whether feature agnostic framework shall be considered

WF: For phase 2, study the CA and DC test simplification with limited tests and in parallel study the feasibility of feature agnostic framework.

# 3 References

[1] RP-220916 New WID: BS/UE EMC enhancements, Ericsson

[2] R4-2216168 Rel-18 UE EMC work plan, Xiaomi

[3] R4-2217463 WF on continuation of study phase for UE EMC enhancements, Xiaomi

[4] R4-2220252 WF on UE EMC, Xiaomi