3GPP TSG-RAN WG4 Meeting # 100-e R4-2119474

Electronic Meeting, August 16-27, 2021

**Source:** Huawei

**Title:** TP to TS 38.114 for sections 4.3, 5.3, 6.3, 6.4

**Agenda Item:** 8.5.4

**Document for:** Approval

# Introduction

Last RAN4 meeting a WF [1] was agreed on the work-split for the TPs to the TS 38.114.

Huawei was assigned sections 4.3, 5.3, 6.3, 6.4.

In this contribution, we provide TP to TS 38.114 (NR Repeater EMC) for sections 4.3, 5.3, 6.3, 6.4.

# Discussion

Last meeting we have provided TP to TS 38.114, covering the whole specification [2]. The TP below is re-using inputs to the assigned section from [2].

# Conclusion

**Proposal 1:** it is proposed to agree on the attached TP to TS 38.114.

# References

[1] R4-2115775 Email discussion summary for [99-e][303] NR\_EMC, RAN4#100-e

[2] R4-2114563 TP to TR 38.114: EMC requirements for NR repeater, RAN4#100-e

# Annex A: TP to TS 38.114

*------------------------------ Modified sections ------------------------------*

## 4.3 Narrow band responses

Responses on receivers or duplex transceivers occurring during the immunity test at discrete frequencies which are narrow band responses (spurious responses), are identified by the following method:

- if during an immunity test the quantity being monitored goes outside the specified tolerances (clause 6), it is necessary to establish whether the deviation is due to a narrow band response or to a wide band (EMC) phenomenon. Therefore, the test shall be repeated with the unwanted signal frequency increased, and then decreased by 2 x BWChannel MHz, where BWChannel is the channel bandwidth as defined in TS 38.106 [x], clause x;

- if the deviation disappears in either one or both of the above MHz offset cases, then the response is considered as a narrow band response;

- if the deviation does not disappear, this may be due to the fact that the offset has made the frequency of the unwanted signal correspond to the frequency of another narrow band response. Under these circumstances the procedure is repeated with the increase and decrease of the frequency of the unwanted signal set to 2.5 x BWChannel MHz;

- if the deviation does not disappear with the increased and/or decreased frequency, the phenomenon is considered wide band and therefore an EMC problem and the equipment fails the test.

For immunity test narrow band responses are disregarded.

For EUT capable of multi-band operation, all supported *operating bands* shall be considered for narrowband responses.

*------------------------------ Next modified section ------------------------------*

## 5.3 Ancillary equipment

At the manufacturer's discretion the test may be performed on the *ancillary equipment* separately or on a representative configuration of the combination of radio and *ancillary equipment*. In each case EUT is tested against all applicable immunity and emission clauses of the present document and in each case, compliance enables the *ancillary equipment* to be used with different radio equipment.

*------------------------------ Next modified section ------------------------------*

## 6.3 Performance criteria for continuous phenomena for Ancillary equipment

The apparatus shall continue to operate as intended during and after the test. No degradation of performance or loss of function is allowed below the performance level specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible performance loss. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

*------------------------------ Next modified section ------------------------------*

## 6.4 Performance criteria for transient phenomena for Ancillary equipment

The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below the performance level specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible performance loss. During the test, degradation of performance is however allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

*------------------------------ End of modified section ------------------------------*