3GPP TSG-RAN WG4 Meeting # 100-e R4-211xxxx

Electronic Meeting, August 16-27, 2021

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **37.145-2** | **CR** | **-** | **rev** | **1** | **Current version:** | **15.11.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **x** | Core Network |  |

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| ***Title:*** | Draft CR to TS 37.145-2: AWGN noise level for BS demodulation requirements for NR, Rel-15 | | | | | | | | | |
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| ***Source to WG:*** | Huawei, Ericsson, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Perf | | | | |  | ***Date:*** | | | 2021-07-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | During review of the TS 37.145-2, it was found that there is an outstanding TBD value (and [] brackets) in the test procedure for radiated performance requirements for NR.  Referring to TS 37.145-2, section 8.5.5.2 step 8, there is an empty placeholder for the AWGN power level at the BS in Table 8.2.1.4.2-2 (which is left TBD). It shall be the noted that the sentence above that table refers to the reader to the NR specification TS 38.141-2, e.g. Table 8.2.1.4.2-2 of TS 38.141-2 provides related AWGN power levels, reduced already by the - ΔOTAREFSENS. Please note that there are multiple tables specifying the AWGN power levels for various BS demodulation tests.  As this AAS BS specification refers to the Single RAT specifications for the details of the radiated BS demodulation requirements, there is no need to double the information among the NR and AAS BS specifications. Therefore that missing table 8.2.1.4.2-2 is proposed to be Voided.  In this Draft CR, TBD value (and [] brackets) for the AWGN power level at the BS inputs is resolved for the NR radiated performance requirements. | | | | | | | | |
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| ***Summary of change:*** | | Table 8.2.1.4.2-2 is Voided.  Outstanding [] brackets are removed. | | | | | | | | |
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| ***Consequences if not approved:*** | | Forbidden TBD value would exist in the frozen release of the TS 37.145-2 specification. | | | | | | | | |
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| ***Clauses affected:*** | | 8.5.5.2 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

*------------------------------ Modified section ------------------------------*

## 8.5 Radiated performance requirements for NR

*------------------------------ Unchanged part omitted ------------------------------*

#### 8.5.5.2 Procedure

1) Place the OTA AAS BS with its manufacturer declared coordinate system reference point in the same place as calibrated point in the test system, as shown in annex D.3.

2) Align the manufacturer declared coordinate system orientation of the OTA AAS BS with the test system.

3) Set the OTA AAS BS in the declared direction to be tested.

4) Connect the BS tester generating the wanted signal, interference signal(s), multipath fading simulators and/or AWGN generators (depending on the required OTA test procedure) to a test antenna via a combining network in OTA test setup, as shown in annex D.3.

5) Apply the performance test procedure appropriate to the requirement as described in clause 8 of TS 38.141-2 [34]. One of the RX antenna signals should be transmitted on each polarization of the test antenna(s).

6) The characteristics of the wanted/interfering signal shall be configured according to the corresponding UL reference measurement channel defined in annex A in TS 38.141-2 [34], and according to additional test parameters listed in respective performance test procedures. In case of PUCCH requirements, the characteristics of the wanted signal shall be configured according to TS 38.211 [36].

7) The multipath fading emulators shall be configured according to the corresponding channel model defined in TS 38.141-2 [34], annex J.

8) Adjust the test signal mean power so the calibrated radiated SNR value at the BS receiver is as specified in requirement's specific clause 8 of TS 38.141-2 [34], and that the SNR at the BS receiver is not impacted by the noise floor.

The power level for the transmission may be set such that the AWGN level at the RIB is set according to the respective PUSCH, PUCCH, or PRACH test procedures of TS 38.141-2 [34].

Table 8.2.1.4.2-2: Void

9) If RX diversity is not supported, ensure the *polarisation match* is achieved among test antenna(s) and the OTA AAS BS under test, in order to maximize the power at the BS receiver.

10) For reference channels applicable to the BS, measure the appropriate performance metric for the requirement as described in clause 8 of TS 38.141-2 [34].

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