**3GPP TSG-RAN WG4 Meeting # 95-e R4-200xxxx**

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

**Agenda item:** 6.19

**Source:** Moderator (Huawei)

**Title:** Email discussion summary for [95e][311] OTA\_BS\_testing

**Document for:** Information

# Introduction

This is the email discussion summary for [95e][311] OTA\_BS\_testing on OTA BS testing WI, with the following topics covered:

* Topic 1: TPs to TR 37.941
* Topic 2: Conformance testing framework
* Topic 3: MU / TT values: derivation and tables
* Topic 4: CRs to legacy TR/TS

Conclusion of the first round should conclude if the submitted TPs and CRs can be agreed or need to be revised.

*List of candidate target of email discussion for 1st round and 2nd round*

* 1st round: TBA
* 2nd round: TBA

# Topic #1: TPs to TR 37.941

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2008137 | Huawei | TP to TR 37.941: editorial cleanup  It is expected that this TP may be revised during the meeting to incorporate more corrections. |
| R4-2007566 | Ericsson, Rohde & Schwarz | TP to TR 37.941: Improvement of technical background information in Clause 6  Continuation of the discussion from the previous meeting with additional improvements: improvements to the spatial definitions and requirements classification description. |
| R4-2007568 | Ericsson | TP to TR 37.941: Improvement of the Clause 6.3.3  Continuation of the discussion from the previous meeting with additional improvements to the “Angular alignment in TRP measurements” clause. |
| R4-2008005 | ROHDE & SCHWARZ | TP to TR 37.941 on editorial corrections for PWS references  PWS terminology corrections. |

## Open issues summary

### Sub-topic 1-1

### Sub-topic 1-2

## Companies views’ collection for 1st round

### Open issues

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2008137 | *Company A* |
| *Company B* |
|  |
| R4-2007566 | *Company A* |
| *Company B* |
|  |
| R4-2007568 | *Company A* |
| *Company B* |
|  |
| R4-2008005 | *Company A* |
| *Company B* |
|  |

## Summary for 1st round

### Open issues

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2008137 | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| R4-2007566 |  |
| R4-2007568 |  |
| R4-2008005 |  |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #2: Conformance testing framework

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2007914 | Huawei | TP to TR 37.941 MU budget procedure update  Based on the discussion last meetings, the conformance testing framework was updated to explain the proposed approach for the “single table vs. two tables” topic for MU derivation tables. |
| R4-2007915 | Huawei | TP to TR 37.941 EIRP MU budget procedure update  Based on the updated conformance framework in R4-2007914, the 9.2 clause (EIRP, Normal conditions) is updated to implement two tables approach as an example. |

## Open issues summary

### Sub-topic 2-1

### Sub-topic 2-2

## Companies views’ collection for 1st round

### Open issues

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2007914 | Company A |
| Company B |
|  |
| R4-2007915 | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2007914 | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| R4-2007915 |  |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #3: MU / TT values: derivation and tables

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2007595 | ROHDE & SCHWARZ | TP to 37.941: MU tables for additional Tx test cases for PWS  TP for the missing tables for additional PWS requirements which were introduced last meeting. It also introduces the text proposal for EVM MU value derivation for FR1. |
| R4-2007910 | Huawei | TX directional FR2 MU budget spreadsheet  This is resubmission of the RX FR2 MU calculation tables in R4-2004532. The tables were submitted to RAN4#94bis-e but were not approved the TE companies wished to confirm the TE MU values used.  In particular the value for the IAC in the frequency range 37<f<40GHz is 0.02dB larger than the previously agreed MU value. It was requested to have another meeting cycle to try to resolve this minor issue (it is not intended to change any agreed MU or TT values only resolve eth MU calculation table). |
| R4-2007911 | Huawei | TP to TR 37.941 FR2 TX directional  This TP updates the MU value derivation sections for the FR2 TX directional requirements, it is a resubmission of R4-2005505, which was noted in the last meeting to give more time to assess the TE values.  In particular the value for the CATR EIRP in the frequency range 37<f<40GHz is 0.02dB larger than the previously agreed MU value. It was requested to have another meeting cycle to try to resolve this minor issue (it is not intended to change any agreed MU or TT values only resolve the MU calculation table). |
| R4-2007912 | Huawei | RX directional FR2 MU budget spreadsheet  This is resubmission of the TX FR2 MU calculation tables R4-2004529. The tables were submitted to RAN4#94bis-e but were not approved the TE companies wished to confirm the TE MU values used.  In particular the value for the CATR EIRP in the frequency range 37<f<40GHz is 0.02dB larger than the previously agreed MU value. It was requested to have another meeting cycle to try to resolve this minor issue (it is not intended to change any agreed MU or TT values only resolve the MU calculation table). |
| R4-2007913 | Huawei | TP to TR 37.941 FR2 RX directional  This TP is a resubmission of R4-2004533 which was submitted in the last meeting but more time was requested to study the TE values used in the MU calculations.  In particular the value for the IAC in the frequency range 37<f<40GHz is 0.02dB larger than the previously agreed MU value. It was requested to have another meeting cycle to try to resolve this minor issue (it is not intended to change any agreed MU or TT values only resolve eth MU calculation table). |

## Open issues summary

### Sub-topic 3-1

### Sub-topic 3-2

## Companies views’ collection for 1st round

### Open issues

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2007595 | *Company A* |
| *Company B* |
|  |
| R4-2007910 | *Company A* |
| *Company B* |
|  |
| R4-2007911 | *Company A* |
| *Company B* |
|  |
| R4-2007912 | *Company A* |
| *Company B* |
|  |
| R4-2007913 | *Company A* |
| *Company B* |
|  |

## Summary for 1st round

### Open issues

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2007595 | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| R4-2007910 |  |
| R4-2007911 |  |
| R4-2007912 |  |
| R4-2007913 |  |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #4: CRs to legacy TR/TS

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2007451 | Huawei | CR to TR 37.842: internal TR references corrections and content redundancy removal (wrt. TR 37.941 for OTA BS testing), Rel-15  This CR provides corrections to the internal TR references (i.e. TR 37.840) in TR 37.842 and removes content (i.e. multiple sections removed/voided) which was already captured in the TR 37.941. Modifications include scope clarification. |
| R4-2007452 | Huawei | CR to TR 37.843: internal TR references corrections and content redundancy removal (wrt. TR 37.941 for OTA BS testing), Rel-15  This CR provides corrections to the internal TR references (i.e. TR 37.840, TR 37.842) in TR 37.843 842 and removes content (i.e. multiple sections removed/voided) which was already captured in the TR 37.941. Modifications include scope clarification. |
| R4-2007453 | Huawei | CR to TR 38.817-02: internal TR references corrections and content redundancy removal (wrt. TR 37.941 for OTA BS testing), Rel-15  This CR provides corrections to the internal TR references (i.e. TR 37.842 and TR 37.843) in TR 38.817-02 and removes content (i.e. multiple sections removed/voided) which was already captured in the TR 37.941. Modifications include scope clarification. |
| R4-2007454 | Huawei | CR to TS 37.145-2: internal TR references corrections (wrt. TR 37.941 for OTA BS testing), Rel-15  This CR provides correction to the internal TR references (i.e. TR 37.842 and TR 37.843) in TS 37.145-2. |
| R4-2007455 | Huawei | CR to TS 37.145-2: internal TR references corrections (wrt. TR 37.941 for OTA BS testing), Rel-16  Cat. A CR: This CR provides correction to the internal TR references (i.e. TR 37.842 and TR 37.843) in TS 37.145-2. |
| R4-2007456 | Huawei | CR to TS 38.141-2: internal TR references corrections (wrt. TR 37.941 for OTA BS testing), Rel-15  This CR provides correction to the internal TR references (i.e. TR 38.817-02, TR 37.842 and TR 37.843) in TS 38.141-2. |
| R4-2007457 | Huawei | CR to TS 38.141-2: internal TR references corrections (wrt. TR 37.941 for OTA BS testing), Rel-16  Cat. A CR: This CR provides correction to the internal TR references (i.e. TR 38.817-02, TR 37.842 and TR 37.843) in TS 38.141-2. |
| R4-2007458 | Huawei | CR to TS 37.114: internal TR reference corrections, Rel-15  This CR provides correction to the internal TR references (i.e. TR 37.842) in TS 37.114 (AAS BS EMC specification). |

## Open issues summary

### Sub-topic 4-1

### Sub-topic 4-2

## Companies views’ collection for 1st round

### Open issues

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2007451 | *Company A* |
| *Company B* |
|  |
| R4-2007452 | *Company A* |
| *Company B* |
|  |
| R4-2007453 | *Company A* |
| *Company B* |
|  |
| R4-2007454  /  R4-2007455 | *Company A* |
| *Company B* |
|  |
| R4-2007456  /  R4-2007457 | *Company A* |
| *Company B* |
|  |
| R4-2007458 | *Company A* |
| *Company B* |
|  |

## Summary for 1st round

### Open issues

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2007451 | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| R4-2007452 |  |
| R4-2007453 |  |
| R4-2007454 |  |
| R4-2007455 |  |
| R4-2007456 |  |
| R4-2007457 |  |
| R4-2007458 |  |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |