**3GPP TSG-RAN WG4 Meeting #99-e R4-210xxxx**

**Online Meeting, 19 May – 27 May, 2021**

**Third Generation Partnership Project (3GPP™)**

**BSRF\_Test\_Demod Session Report for**

**RAN WG4  
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**Electronic Meeting, Online, 19/05/2021 to 27/05/2021**

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## 4 Rel-15 and previous release maintenance

### 4.1 Rel-15 New radio access technology

#### 4.1.3 UE EMC requirements maintenance

**R4-2108428 Email discussion summary for [99-e][303] NR\_EMC**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108669 (from R4-2108428).**

**R4-2108669 Email discussion summary for [99-e][303] NR\_EMC**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108469 WF on maximum measurement uncertainty for Effective radiated RF power between 12.75 GHz and 26 GHz**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2111046 CR to 38.124: TBD removal for the maximum measurement uncertainty for measurements above 12.75GHz, Rel-15**

*Type: CR For: Agreement  
 38.124 v15.5.0 CR-0035 rev Cat: F (Rel-15)  
  
 Source: Huawei*

**Abstract:**

Removal of the TBD for the maximum measurement uncertainty values for measurements of the effective radiated RF power above 12.75GHz.

**Decision: Revised to R4-2108470 (from R4-2111046).**

**R4-2108470 CR to 38.124: TBD removal for the maximum measurement uncertainty for measurements above 12.75GHz, Rel-15**

*Type: CR For: Agreement  
 38.124 v15.5.0 CR-0035 rev Cat: F (Rel-15)  
  
 Source: Huawei*

**Abstract:**

Removal of the TBD for the maximum measurement uncertainty values for measurements of the effective radiated RF power above 12.75GHz.

**Decision: Agreed.**

**R4-2111047 CR to 38.124: TBD removal for the maximum measurement uncertainty for measurements above 12.75GHz, Rel-16**

*Type: CR For: Agreement  
 38.124 v16.2.0 CR-0036 rev Cat: A (Rel-16)  
  
 Source: Huawei*

**Abstract:**

Removal of the TBD for the maximum measurement uncertainty values for measurements of the effective radiated RF power above 12.75GHz.

**Decision: Revised to R4-2108104 (from R4-2111047).**

**R4-2108104 CR to 38.124: TBD removal for the maximum measurement uncertainty for measurements above 12.75GHz, Rel-16**

*Type: CR For: Agreement  
 38.124 v16.2.0 CR-0036 rev Cat: A (Rel-16)  
  
 Source: Huawei*

**Abstract:**

Removal of the TBD for the maximum measurement uncertainty values for measurements of the effective radiated RF power above 12.75GHz.

**Decision: Agreed.**

#### 4.1.4 BS RF requirements maintenance

##### 4.1.4.1 General

**R4-2108426 Email discussion summary for [99-e][301] BSRF\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108670 (from R4-2108426).**

**R4-2108670 Email discussion summary for [99-e][301] BSRF\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

##### 4.1.4.2 TX/RX requirements maintenance (38.104)

**R4-2111112 CR to 38.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0333 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111113 CR to 38.141-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-0235 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Revised to R4-2108723 (from R4-2111113).**

**R4-2108723 CR to 38.141-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-0235 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111114 CR to 38.141-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0236 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111115 CR to 38.141-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0237 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111116 CR to 38.141-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0352 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Revised to R4-2108724 (from R4-2111116).**

**R4-2108724 CR to 38.141-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0352 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111117 CR to 38.141-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0353 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111118 CR to 38.141-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0354 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111119 CR to 36.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.104 v15.11.0 CR-4938 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Revised to R4-2108734 (from R4-2111119).**

**R4-2108734 CR to 36.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.104 v15.11.0 CR-4938 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111120 CR to 36.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.104 v16.9.0 CR-4939 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111121 CR to 36.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.104 v17.1.0 CR-4940 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111122 CR to 36.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.141 v15.12.0 CR-1311 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Revised to R4-2108735 (from R4-2111122).**

**R4-2108735 CR to 36.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.141 v15.12.0 CR-1311 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111123 CR to 36.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.141 v16.9.0 CR-1312 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111124 CR to 36.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 36.141 v17.1.0 CR-1313 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111125 CR to 37.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.104 v15.13.0 CR-0942 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Revised to R4-2108736 (from R4-2111125).**

**R4-2108736 CR to 37.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.104 v15.13.0 CR-0942 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111126 CR to 37.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.104 v16.9.0 CR-0943 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111127 CR to 37.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.104 v17.1.0 CR-0944 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111129 CR to 37.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.141 v16.9.0 CR-0982 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111130 CR to 37.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.141 v17.1.0 CR-0983 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111131 CR to 37.105: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.105 v15.12.0 CR-0236 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Revised to R4-2108738 (from R4-2111131).**

**R4-2108738 CR to 37.105: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.105 v15.12.0 CR-0236 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111132 CR to 37.105: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.105 v16.7.0 CR-0237 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111133 CR to 37.105: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.105 v17.1.0 CR-0238 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111134 CR to 37.145-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-1 v15.9.0 CR-0265 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Revised to R4-2108739 (from R4-2111134).**

**R4-2108739 CR to 37.145-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-1 v15.9.0 CR-0265 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111135 CR to 37.145-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-1 v16.6.0 CR-0266 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111136 CR to 37.145-1: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-1 v17.1.0 CR-0267 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111137 CR to 37.145-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-2 v15.10.0 CR-0308 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Revised to R4-2108740 (from R4-2111137).**

**R4-2108740 CR to 37.145-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-2 v15.10.0 CR-0308 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111138 CR to 37.145-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-2 v16.7.0 CR-0309 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111139 CR to 37.145-2: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.145-2 v17.1.0 CR-0310 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

**R4-2111154 CR to 38.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.104 v15.13.0 CR-0334 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Revised to R4-2108722 (from R4-2111154).**

**R4-2108722 CR to 38.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.104 v15.13.0 CR-0334 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Agreed.**

**R4-2111155 CR to 38.104: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0335 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS is however not aligned with MSR and LTE BS in terms of desensitization. The CR aligns the requirement by adding a note.

**Decision: Approved.**

**R4-2111173 CR to 37.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.141 v15.14.0 CR-0987 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Revised to R4-2108737 (from R4-2111173).**

**R4-2108737 CR to 37.141: In-band blocking for multi-band Base Stations**

*Type: CR For: Agreement  
 37.141 v15.14.0 CR-0987 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Multi-band support for MSR and LTE BS was introduced in 3GPP Rel-11 and in NR in Rel-15. The in-band blocking requirement for NR BS has a note clarifying how the requirement applies for a multi-band scenario. It is not clear how the note applies for near

**Decision: Agreed.**

##### 4.1.4.3 MSR specifications maintenance

**R4-2111140 CR to 37.104: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.104 v15.13.0 CR-0945 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Agreed.**

**R4-2108486 CR to 37.104: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.104 v15.13.0 CR-0945 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Withdrawn.**

**R4-2111141 CR to 37.104: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.104 v16.9.0 CR-0946 rev Cat: A->F Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Agreed.**

**R4-2111142 CR to 37.104: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.104 v17.1.0 CR-0947 rev Cat: A->F(Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Agreed.**

**R4-2111143 CR to 37.141: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.141 v15.14.0 CR-0984 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Agreed.**

**R4-2108487 CR to 37.141: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.141 v15.14.0 CR-0984 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Withdrawn.**

**R4-2111144 CR to 37.141: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.141 v16.9.0 CR-0985 rev Cat: A->F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Agreed.**

**R4-2111145 CR to 37.141: Correction of NR bands for MSR BS**

*Type: CR For: Agreement  
 37.141 v17.1.0 CR-0986 rev Cat: A->F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Support for NR is incorrectly stated for several operating bands in the MSR specification. The CR makes corrections to the bands table.

**Decision: Agreed.**

#### 4.1.5 BS conformance testing Maintenance

##### 4.1.5.1 General

**R4-2108427 Email discussion summary for [99-e][302] NR\_Conformance\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108671 (from R4-2108427).**

**R4-2108671 Email discussion summary for [99-e][302] NR\_Conformance\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2110081 CR to 37.145-1 to modify statement in Co-existence with other systems in the same geographical area in R15**

*Type: CR For: Agreement  
 37.145-1 v15.9.0 CR-0257 rev Cat: F (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify statement in Co-existence with other systems in the same geographical area in R15

**Decision: Revised to R4-2108490 (from R4-2110081).**

**R4-2108490 CR to 37.145-1 to modify statement in Co-existence with other systems in the same geographical area in R15**

*Type: CR For: Agreement  
 37.145-1 v15.9.0 CR-0257 rev Cat: F (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify statement in Co-existence with other systems in the same geographical area in R15

**Decision: Agreed.**

**R4-2110082 CR to 37.145-1 to modify statement in Co-existence with other systems in the same geographical area in R16**

*Type: CR For: Agreement  
 37.145-1 v16.6.0 CR-0258 rev Cat: A (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify statement in Co-existence with other systems in the same geographical area in R16

**Decision: Revised to R4-2108491 (from R4-2110082).**

**R4-2108491 CR to 37.145-1 to modify statement in Co-existence with other systems in the same geographical area in R16**

*Type: CR For: Agreement  
 37.145-1 v16.6.0 CR-0258 rev Cat: A->F (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify statement in Co-existence with other systems in the same geographical area in R16

**Decision: Agreed.**

**R4-2110083 CR to 37.145-1 to modify statement in Co-existence with other systems in the same geographical area in R17**

*Type: CR For: Agreement  
 37.145-1 v17.1.0 CR-0259 rev Cat: A (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify statement in Co-existence with other systems in the same geographical area in R17

**Decision: Revised to R4-2108492 (from R4-2110083).**

**R4-2108492 CR to 37.145-1 to modify statement in Co-existence with other systems in the same geographical area in R17**

*Type: CR For: Agreement  
 37.145-1 v17.1.0 CR-0259 rev Cat: A->F (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify statement in Co-existence with other systems in the same geographical area in R17

**Decision: Agreed.**

**R4-2110084 CR to 37.145-2 to modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R15**

*Type: CR For: Agreement  
 37.145-2 v15.10.0 CR-0300 rev Cat: F (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R15

**Decision: Revised to R4-2108493 (from R4-2110084).**

**R4-2108493 CR to 37.145-2 to modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R15**

*Type: CR For: Agreement  
 37.145-2 v15.10.0 CR-0300 rev Cat: F (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R15

**Decision: Agreed.**

**R4-2110085 CR to 37.145-2 to modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R16**

*Type: CR For: Agreement  
 37.145-2 v16.7.0 CR-0301 rev Cat: A (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R16

**Decision: Revised to R4-2108494 (from R4-2110085).**

**R4-2108494 CR to 37.145-2 to modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R16**

*Type: CR For: Agreement  
 37.145-2 v16.7.0 CR-0301 rev Cat: A->F (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R16

**Decision: Agreed.**

**R4-2110086 CR to 37.145-2 to modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R17**

*Type: CR For: Agreement  
 37.145-2 v17.1.0 CR-0302 rev Cat: A (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R17

**Decision: Revised to R4-2108495 (from R4-2110086).**

**R4-2108495 CR to 37.145-2 to modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R17**

*Type: CR For: Agreement  
 37.145-2 v17.1.0 CR-0302 rev Cat: A->F (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

modify AAS BS OTA Spurious emissions limits for co-existence with systems operating in other frequency bands in R17

**Decision: Agreed.**

##### 4.1.5.2 Conducted conformance testing (38.141-1)

**R4-2109828 CR to TS 38.141-1: NRTC2 correction**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-0216 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108489 (from R4-2109828).**

**R4-2108489 CR to TS 38.141-1: NRTC2 correction**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-0216 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2109829 CR to TS 38.141-1: NRTC2 correction**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0217 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2109830 CR to TS 38.141-1: NRTC2 correction**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0218 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2110624 CR to TS 38.141-1: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-0232 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2108496 (from R4-2110624).**

**R4-2108496 CR to TS 38.141-1: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-0232 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2110625 CR to TS 38.141-1: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0233 rev Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2110626 CR to TS 38.141-1: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0234 rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

##### 4.1.5.3 Radiated conformance testing (38.141-2)

**R4-2109897 Discussion on OTA co-location requirements for adjacent bands**

*Type: discussion For: Approval  
 Source: NEC*

**Decision: Noted.**

**R4-2110143 draftCR to 38.141-2: Addition of Plane Wave Synthesizer in OTA measurement system set-up**

*Type: draftCR For: Endorsement  
 38.141-2 v15.9.0 CR- rev Cat: F (Rel-15)  
  
 Source: CAICT, Rohde & Schwarz*

**Abstract:**

Abbreviation on Plane Wave Synthesizer added, and PWS chamber added to the corresponding annex E clauses on any suitable OTA chamber.

**Decision: Endorsed.**

**R4-2110146 draftCR to 38.141-2: Addition of Plane Wave Synthesizer in OTA measurement system set-up**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: F (Rel-16)  
  
 Source: CAICT, Rohde & Schwarz*

**Abstract:**

Abbreviation on Plane Wave Synthesizer added, and PWS chamber added to the corresponding annex E clauses on any suitable OTA chamber.

**Decision: Postponed.**

**R4-2110149 draftCR to 38.141-2: Addition of Plane Wave Synthesizer in OTA measurement system set-up**

*Type: draftCR For: Endorsement  
 38.141-2 v17.1.0 CR- rev Cat: F (Rel-17)  
  
 Source: CAICT, Rohde & Schwarz*

**Abstract:**

Abbreviation on Plane Wave Synthesizer added, and PWS chamber added to the corresponding annex E clauses on any suitable OTA chamber.

**Decision: Postponed.**

**R4-2110627 CR to TS 38.141-2: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0341 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2108497 CR to TS 38.141-2: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0341 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

**R4-2108719 CR to TS 38.141-2: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-? rev Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

**Discussion:**

**Decision: Agreed.**

**R4-2108720 CR to TS 38.141-2: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-? rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation*

**Abstract:**

**Discussion:**

**Decision: Agreed.**

**R4-2110628 CR to TS 38.141-2: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0342 rev Cat: A (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

**R4-2110629 CR to TS 38.141-2: Receiver IMD requirement corrections**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0343 rev Cat: A (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

**R4-2110922 Necessary corrections and alignments across BS specifications**

*Type: discussion For: Agreement  
 Source: Ericsson*

**Abstract:**

Discussion on the alignment across different BS specifications regarding the additional unwanted emission limits for bands 50,51, 75 and 76, testing under extreme conditions, spectrum emission mask for UTRA and other issues.

**Decision: Noted.**

**R4-2110923 TS 38.141-2: Correction of additional spurious emission limits for bands 50, 51, 75, 76**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0346 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Correction of the additional unwanted emission limit as it is not aligned with core specifications

**Decision: Revised to R4-2108498 (from R4-2110923).**

**R4-2108498 TS 38.141-2: Correction of additional spurious emission limits for bands 50, 51, 75, 76**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0346 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Correction of the additional unwanted emission limit as it is not aligned with core specifications

**Decision: Agreed.**

**R4-2110924 TS 38.141-2: Correction of additional spurious emission limits for bands 50, 51, 75, 76**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0347 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Correction of the unwanted emission limit as it is not aligned with core specifications

**Decision: Agreed.**

**R4-2110925 TS 38.141-2: Correction of additional spurious emission limits for bands 50, 51, 75, 76**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0348 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Correction of the unwanted emission limit as it is not aligned with core specifications

**Decision: Agreed.**

**R4-2111048 CR to 38.141-2: removal of outstanding TBDs, Rel-15**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0349 rev Cat: F (Rel-15)  
  
 Source: Huawei*

**Abstract:**

As per rapporteurs review, there were still some TBDs identified in the Rel-15 specification, which are resolved in this CR together with other editorial corrections.

**Decision: Revised to R4-2108499 (from R4-2111048).**

**R4-2108499 CR to 38.141-2: removal of outstanding TBDs, Rel-15**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0349 rev Cat: F (Rel-15)  
  
 Source: Huawei*

**Abstract:**

As per rapporteurs review, there were still some TBDs identified in the Rel-15 specification, which are resolved in this CR together with other editorial corrections.

**Decision: Agreed.**

**R4-2111049 CR to 38.141-2: removal of outstanding TBDs, Rel-16**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0350 rev Cat: F (Rel-16)  
  
 Source: Huawei*

**Abstract:**

As per rapporteurs review, there were still some TBDs identified in the Rel-16 specification, which are resolved in this CR together with other editorial corrections.

**Decision: Revised to R4-2108500 (from R4-2111049).**

**R4-2108500 CR to 38.141-2: removal of outstanding TBDs, Rel-16**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0350 rev Cat: F (Rel-16)  
  
 Source: Huawei*

**Abstract:**

As per rapporteurs review, there were still some TBDs identified in the Rel-16 specification, which are resolved in this CR together with other editorial corrections.

**Decision: Agreed.**

**R4-2111050 CR to 38.141-2: removal of outstanding TBDs, Rel-17**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0351 rev Cat: A (Rel-17)  
  
 Source: Huawei*

**Abstract:**

As per rapporteurs review, there were some TBDs identified in the Rel-17 specification, which are resolved in this CR together with other editorial corrections.

**Decision: Agreed.**

**R4-2111503 CR to 38.141-2: BS conformance test, FR2 Rx OOB test MU value correction (4.1.2.3)**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0355 rev Cat: A (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2111504 about BS conformance test FR2 Rx out of band test MU calculation**

*Type: discussion For: Agreement  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2111505 CR to 38.141-2: BS conformance test, FR2 Rx OOB test MU value correction (4.1.2.3)**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0356 rev Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Revised to R4-2108501 (from R4-2111505).**

**R4-2108501 CR to 38.141-2: BS conformance test, FR2 Rx OOB test MU value correction (4.1.2.3)**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0356 rev Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2111506 CR to 38.141-2: BS conformance test, FR2 Rx OOB test MU value correction (4.1.2.3)**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0357 rev Cat: A (Rel-16)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

##### 4.1.5.4 eAAS specifications maintenance

**R4-2111210 CR to 37.145-1: Correction to ACLR limit in non-contiguous spectrum (Rel-15)**

*Type: CR For: Agreement  
 37.145-1 v15.9.0 CR-0268 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2111211 CR to 37.145-1: Correction to ACLR limit in non-contiguous spectrum (Rel-16)**

*Type: CR For: Agreement  
 37.145-1 v16.6.0 CR-0269 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2111213 CR to 37.145-2: Correction to ACLR limit in non-contiguous spectrum (Rel-15)**

*Type: CR For: Agreement  
 37.145-2 v15.10.0 CR-0311 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2111214 CR to 37.145-2: Correction to ACLR limit in non-contiguous spectrum (Rel-16)**

*Type: CR For: Agreement  
 37.145-2 v16.7.0 CR-0312 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2111215 CR to 37.145-2: Correction to ACLR limit in non-contiguous spectrum (Rel-17)**

*Type: CR For: Agreement  
 37.145-2 v17.1.0 CR-0313 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2111288 CR to 37.145-1: Correction to ACLR limit in non-contiguous spectrum (Rel-17)**

*Type: CR For: Agreement  
 37.145-1 v17.1.0 CR-0270 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

#### 4.1.6 BS EMC requirements Maintenance

**R4-2109646 Discussion on radiated emission limit of ancillary equipment**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2108471 Discussion on radiated emission limit of ancillary equipment**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

**R4-2109647 CR to TS 37.113: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 37.113 v15.10.0 CR-0112 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2108472 (from R4-2109647).**

**R4-2108472 CR to TS 37.113: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 37.113 v15.10.0 CR-0112 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2109648 CR to TS 37.113: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 37.113 v16.1.0 CR-0113 rev Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2109649 CR to TS 38.113: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 38.113 v15.13.0 CR-0037 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2108473 (from R4-2109649).**

**R4-2108473 CR to TS 38.113: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 38.113 v15.13.0 CR-0037 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2109650 CR to TS 38.113: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 38.113 v16.3.0 CR-0038 rev Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2110040 CR to TS 38.113 on Performance criteria for transient phenomena, Release 15**

*Type: CR For: Agreement  
 38.113 v15.13.0 CR-0039 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR updating performance criteria for transient phenomena in TS 38.113 Rel 15

**Decision: Revised to R4-2108474 (from R4-2110040).**

**R4-2108474 CR to TS 38.113 on Performance criteria for transient phenomena, Release 15**

*Type: CR For: Agreement  
 38.113 v15.13.0 CR-0039 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR updating performance criteria for transient phenomena in TS 38.113 Rel 15

**Decision: Agreed.**

**R4-2110041 CR to TS 38.113 on Performance criteria for transient phenomena, Release 16**

*Type: CR For: Agreement  
 38.113 v16.3.0 CR-0040 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR mirroring update in performance criteria for transient phenomena in 38.113 Rel 16

Session Chair Note: Please avoid to upload CAT A CR before corresponding source CR agreed!

**Decision: Revised to R4-2108475 (from R4-2110041).**

**R4-2108475 CR to TS 38.113 on Performance criteria for transient phenomena, Release 16**

*Type: CR For: Agreement  
 38.113 v16.3.0 CR-0040 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR mirroring update in performance criteria for transient phenomena in 38.113 Rel 16

**Decision: Agreed.**

**R4-2110077 Discussion on Performance criteria for transient phenomena for NR BS**

*Type: other For: Discussion  
 Source: Ericsson Inc.*

**Abstract:**

Discussion on Performance criteria for transient phenomena for NR BS

**Decision: Noted.**

#### 4.1.9 Demodulation and CSI requirements maintenance (38.101-4/38.104)

**R4-2108443 Email discussion summary for [99-e][318] Demod\_R15\_Maintenance**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108672 (from R4-2108443).**

**R4-2108672 Email discussion summary for [99-e][318] Demod\_R15\_Maintenance**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108502 Wayforward on AWGN power level**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108503 Wayforward on overhead consideration for multiplexing of UCI or PTRS on PUSCH**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**Agreements:**

* **Consider the overhead of UCI for channel bits calculation**
  1. **Consider the REs taken up by CSI part 1 and CSI part 2 in the “bits per slot” and “REs per slot” calculation.** 
     1. **Option 2:** 
        1. **The FRC should take into account all the REs that are taken up by PUSCH, including REs taken up by CSI part 1 and CSI part 2.**
        2. **Update the FRC, if required.**
        3. **Add a note to explain that “bits per slot” and “REs per slot” does include the REs taken up by CSI part 1 and CSI part 2.**

**R4-2108504 Wayforward on HARQ feedback for PDCCH demodulation tests**

*Type: other For: Approval  
 Source: Anristu*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108889 Noc levels for FR2 demodulation test cases**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0180 rev Cat: F (Rel-15)  
  
 Source: ANRITSU LTD*

**Abstract:**

a) In clause 4.5.3.3, update the derivation formula and remove the rounding up/CEILING function.

b) In Table 4.5.3.2-1, update the Noc values for each Power class and Operating band

**Decision: Revised to R4-2108505 (from R4-2108889).**

**R4-2108505 Noc levels for FR2 demodulation test cases**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0180 rev Cat: F (Rel-15)  
  
 Source: ANRITSU LTD*

**Abstract:**

a) In clause 4.5.3.3, update the derivation formula and remove the rounding up/CEILING function.

b) In Table 4.5.3.2-1, update the Noc values for each Power class and Operating band

**Decision: Agreed.**

**R4-2108890 Noc levels for FR2 demodulation test cases**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0181 rev Cat: A (Rel-16)  
  
 Source: ANRITSU LTD*

**Abstract:**

a) In clause 4.5.3.3, update the derivation formula and remove the rounding up/CEILING function.

b) In Table 4.5.3.2-1, update the Noc values for each Power class and Operating band

**Decision: Agreed.**

**R4-2108891 Noc levels for FR2 demodulation test cases**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0182 rev Cat: A (Rel-17)  
  
 Source: ANRITSU LTD*

**Abstract:**

a) In clause 4.5.3.3, update the derivation formula and remove the rounding up/CEILING function.

b) In Table 4.5.3.2-1, update the Noc values for each Power class and Operating band

**Decision: Agreed.**

**R4-2110741 AWGN level for conformance testing of demodulation requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Proposal to enable flexibility in AWGN level

**Decision: Noted.**

**R4-2111468 CR to TS 38.101-4: Editorial corrections (R15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0258 rev Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108507 (from R4-2111468).**

**R4-2108507 CR to TS 38.101-4: Editorial corrections (R15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0258 rev Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2111469 CR to TS 38.101-4: Editorial corrections (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0259 rev Cat: A (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2111470 CR to TS 38.101-4: Editorial corrections (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0260 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

##### 4.1.9.1 UE demodulation requirements

**R4-2108846 CR to the definition of explicitly HARQ feedback timing in DCI format 1\_0 for PDCCH demodulation tests**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0177 rev Cat: F (Rel-15)  
  
 Source: Anritsu corporation*

**Decision: Revised to R4-2108754 (from R4-2108846).**

**R4-2108754 CR to the definition of explicitly HARQ feedback timing in DCI format 1\_0 for PDCCH demodulation tests**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0177 rev Cat: F (Rel-15)  
  
 Source: Anritsu corporation*

**Decision: Agreed.**

**R4-2108847 CR to the definition of explicitly HARQ feedback timing in DCI format 1\_0 for PDCCH demodulation tests**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0178 rev Cat: A (Rel-16)  
  
 Source: Anritsu corporation*

**Decision: Agreed.**

**R4-2108848 CR to the definition of explicitly HARQ feedback timing in DCI format 1\_0 for PDCCH demodulation tests**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0179 rev Cat: A (Rel-17)  
  
 Source: Anritsu corporation*

**Decision: Agreed.**

**R4-2109186 CR on NR UE demodulation performance requirements maintenance (R15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0186 rev Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108508 (from R4-2109186).**

**R4-2108508 CR on NR UE demodulation performance requirements maintenance (R15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0186 rev Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2109187 CR on NR UE demodulation performance requirements maintenance (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0187 rev Cat: A (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2109188 CR on NR UE demodulation performance requirements maintenance (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0188 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2110489 CR: Uptadets to PDSCH demodulation requirements and CSI requirements (Rel-15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0219 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108510 (from R4-2110489).**

**R4-2108510 CR: Uptadets to PDSCH demodulation requirements and CSI requirements (Rel-15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0219 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110490 CR: Uptadets to PDSCH demodulation requirements and CSI requirements (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0220 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110491 CR: Uptadets to PDSCH demodulation requirements and CSI requirements (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0221 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

##### 4.1.9.2 CSI requirements

**R4-2109328 CR to 38.101-4 on RI test parameters in FR2-R15**

*Type: CR For: Approval  
 38.101-4 v15.9.0 CR-0195 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision:** The document was **withdrawn**.

**R4-2109329 CR to 38.101-4 on RI test parameters in FR2 - R16**

*Type: CR For: Approval  
 38.101-4 v16.4.0 CR-0196 rev Cat: A (Rel-16)  
  
 Source: Apple*

**Decision:** The document was **withdrawn**.

**R4-2109331 CR to 38.101-4 on RI test parameters in FR2-R15**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0197 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision: Merged (with R4-2110489).**

**R4-2109332 CR to 38.101-4 on RI test parameters in FR2 - R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0198 rev Cat: A (Rel-16)  
  
 Source: Apple*

**Decision: Withdrawn.**

**R4-2109333 CR to 38.101-4 on RI test parameters in FR2 - R17**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0199 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Withdrawn.**

**R4-2110630 Correction of variable name for PMI test metric**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0239 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

This CR corrects the variable name for PMI test metric.

**Decision: Agreed.**

**R4-2110631 Correction of variable name for PMI test metric**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0240 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR corrects the variable name for PMI test metric.

**Decision: Agreed.**

**R4-2110632 Correction of variable name for PMI test metric**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0241 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR corrects the variable name for PMI test metric.

**Decision: Agreed.**

##### 4.1.9.3 BS demodulation requirements

**R4-2108744 CR for 38.141-1: Add AWGN Offset note to FR1 demod noise levels**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-? rev Cat: F (Rel-15)  
  
 Source:* Ericsson, Nokia, Nokia Shanghai Bell

**Decision: Agreed.**

**R4-2108745 CR for 38.141-1: Add AWGN Offset note to FR1 demod noise levels**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-? rev Cat: F (Rel-16)  
  
 Source:* Ericsson, Nokia, Nokia Shanghai Bell

**Decision: Agreed.**

**R4-2108746 CR for 38.141-1: Add AWGN Offset note to FR1 demod noise levels**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-? rev Cat: A (Rel-17)  
  
 Source:* Ericsson, Nokia, Nokia Shanghai Bell

**Decision: Agreed.**

**R4-2108747 CR for 38.141-2: Add AWGN Offset notes to FR1 and FR2 demod noise levels**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-? rev Cat: F (Rel-15)  
  
 Source:* Nokia, Nokia Shanghai Bell, Ericsson

**Abstract:**

**Discussion:**

**Decision: Agreed.**

**R4-2108748 CR for 38.141-2: Add AWGN Offset notes to FR1 and FR2 demod noise levels**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-? rev Cat: F (Rel-16)  
  
 Source:* Nokia, Nokia Shanghai Bell, Ericsson

**Abstract:**

**Discussion:**

**Decision: Agreed.**

**R4-2108749 CR for 38.141-2: Add AWGN Offset notes to FR1 and FR2 demod noise levels**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-? rev Cat: A (Rel-17)  
  
 Source:* Nokia, Nokia Shanghai Bell, Ericsson

**Abstract:**

**Discussion:**

**Decision: Agreed.**

**R4-2110202 CR to 38.141-1: BS PUSCH demod requirement error correction (8.2.1)**

*Type: CR For: Agreement  
 38.141-1 v15.8.0 CR-0222 rev Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2110205 CR to 38.141-2: BS PUCCH Format 1 demod test AWGN level correction (8.3.2)**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0330 rev Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Revised to R4-2108509 (from R4-2110205).**

**R4-2108509 CR to 38.141-2: BS PUCCH Format 1 demod test AWGN level correction (8.3.2)**

*Type: CR For: Agreement  
 38.141-2 v15.9.0 CR-0330 rev Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2110206 CR to 38.141-1: BS PUCCH Format 3 demod requirement error correction (8.3.4)**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0223 rev Cat: F (Rel-16)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2110207 CR to 38.141-2: BS PUCCH Format 1 demod test AWGN level error correction (8.3.2)**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0331 rev Cat: F (Rel-16)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2110208 CR to 38.141-1: BS PUCCH Format 3 demod requirement error correction (8.3.4)**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0224 rev Cat: A (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2110209 CR to 38.141-2: BS PUCCH Format 1 demod test AWGN level error correction (8.3.2)**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0332 rev Cat: A (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Endorsed.**

**R4-2110210 R15 BS demod test item error correction on TS38.141-1 and -2, summary of CRs**

*Type: discussion For: Information  
 Source: Keysight Technologies UK Ltd*

**RDecision: Noted.**

**R4-2110492 Discussions on FRC of PUSCH requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110596 BS demod testability, signal levels, and link budget**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have discussed the issues of test feasibility and test validity due to required extreme test signal levels in BS demodulation testing.

**Decision: Noted.**

#### 4.1.11 Testability Maintenance (38.810)

### 4.2 LTE maintenance (up to Rel15)

#### 4.2.1 BS RF requirements

**R4-2111202 CR of updating the subPRB BS aspect**

*Type: CR For: Agreement  
 36.141 v15.12.0 CR-1314 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

in this CR, declaration of BS for subPRB support for LTE-M is added with related test specificaton updates.

Session Chair Note: Move to this AI from AI 4.2.2

**Decision: Revised to R4-2108488 (from R4-2111202).**

**R4-2108488 CR of updating the subPRB BS aspect**

*Type: CR For: Agreement  
 36.141 v15.12.0 CR-1314 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

in this CR, declaration of BS for subPRB support for LTE-M is added with related test specificaton updates.

Session Chair Note: Move to this AI from AI 4.2.2

**Decision: Agreed.**

**R4-2111203 CR of updating the subPRB BS aspect**

*Type: CR For: Agreement  
 36.141 v16.9.0 CR-1315 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

in this CR, declaration of BS for subPRB support for LTE-M is added with related test specificaton updates.

Session Chair Note: Move to this AI from AI 4.2.2

**Decision: Agreed.**

**R4-2111204 CR of updating the subPRB BS aspect**

*Type: CR For: Agreement  
 36.141 v17.1.0 CR-1316 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

in this CR, declaration of BS for subPRB support for LTE-M is added with related test specificaton updates.

Session Chair Note: Move to this AI from AI 4.2.2

**Decision: Agreed.**

**R4-2109825 CR to TS 36.141: ETC2 correction**

*Type: CR For: Agreement  
 36.141 v15.12.0 CR-1304 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108484 (from R4-2109825).**

**R4-2108484 CR to TS 36.141: ETC2 correction**

*Type: CR For: Agreement  
 36.141 v15.12.0 CR-1304 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2109826 CR to TS 36.141: ETC2 correction**

*Type: CR For: Agreement  
 36.141 v16.9.0 CR-1305 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2109827 CR to TS 36.141: ETC2 correction**

*Type: CR For: Agreement  
 36.141 v17.1.0 CR-1306 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2109898 CR to TS 37.104: Regional requirements for band 41 and n41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.104 v15.13.0 CR-0937 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108480 (from R4-2109898).**

**R4-2108480 CR to TS 37.104: Regional requirements for band 41 and n41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.104 v15.13.0 CR-0937 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109899 CR to TS 37.104: Regional requirements for band 41, n41, and n90 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.104 v16.9.0 CR-0938 rev Cat: F (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108481 (from R4-2109899).**

**R4-2108481 CR to TS 37.104: Regional requirements for band 41, n41, and n90 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.104 v16.9.0 CR-0938 rev Cat: F (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108091 (from R4-2108481).**

**R4-2108091 CR to TS 37.104: Regional requirements for band 41, n41, and n90 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.104 v16.9.0 CR-0938 rev Cat: F (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109900 CR to TS 37.104: Regional requirements for band 41, n41, and n90 in Japan, Rel-17**

*Type: CR For: Agreement  
 37.104 v17.1.0 CR-0939 rev Cat: A (Rel-17)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109901 CR to TS 37.105: Regional requirements for band 41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.105 v15.12.0 CR-0230 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108750 (from R4-2109901).**

**R4-2108750 CR to TS 37.105: Regional requirements for band 41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.105 v15.12.0 CR-0230 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109902 CR to TS 37.105: Regional requirements for band 41 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.105 v16.7.0 CR-0231 rev Cat: A (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109903 CR to TS 37.105: Regional requirements for band 41 in Japan, Rel-17**

*Type: CR For: Agreement  
 37.105 v17.1.0 CR-0232 rev Cat: A (Rel-17)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109904 CR to TS 37.141: Regional requirements for band 41 and n41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.141 v15.14.0 CR-0976 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108482 (from R4-2109904).**

**R4-2108482 CR to TS 37.141: Regional requirements for band 41 and n41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.141 v15.14.0 CR-0976 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109905 CR to TS 37.141: Regional requirements for band 41, n41, and n90 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.141 v16.9.0 CR-0977 rev Cat: F (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108483 (from R4-2109905).**

**R4-2108483 CR to TS 37.141: Regional requirements for band 41, n41, and n90 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.141 v16.9.0 CR-0977 rev Cat: F (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109906 CR to TS 37.141: Regional requirements for band 41, n41, and n90 in Japan, Rel-17**

*Type: CR For: Agreement  
 37.141 v17.1.0 CR-0978 rev Cat: A (Rel-17)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109907 CR to TS 37.145-1: Regional requirements for band 41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.145-1 v15.9.0 CR-0254 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108751 (from R4-2109907).**

**R4-2108751 CR to TS 37.145-1: Regional requirements for band 41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.145-1 v15.9.0 CR-0254 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109908 CR to TS 37.145-1: Regional requirements for band 41 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.145-1 v16.6.0 CR-0255 rev Cat: A (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109909 CR to TS 37.145-1: Regional requirements for band 41 in Japan, Rel-17**

*Type: CR For: Agreement  
 37.145-1 v17.1.0 CR-0256 rev Cat: A (Rel-17)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109910 CR to TS 37.145-2: Regional requirements for band 41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.145-2 v15.10.0 CR-0297 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Revised to R4-2108752 (from R4-2109910).**

**R4-2108752 CR to TS 37.145-2: Regional requirements for band 41 in Japan, Rel-15**

*Type: CR For: Agreement  
 37.145-2 v15.10.0 CR-0297 rev Cat: F (Rel-15)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109911 CR to TS 37.145-2: Regional requirements for band 41 in Japan, Rel-16**

*Type: CR For: Agreement  
 37.145-2 v16.7.0 CR-0298 rev Cat: A (Rel-16)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

**R4-2109912 CR to TS 37.145-2: Regional requirements for band 41 in Japan, Rel-17**

*Type: CR For: Agreement  
 37.145-2 v17.1.0 CR-0299 rev Cat: A (Rel-17)  
  
 Source: NEC, SoftBank, KDDI, Nokia*

**Decision: Agreed.**

#### 4.2.4 Demodulation and CSI requirements

**R4-2108807 Correction of LTE 5DL CA demodulation requirements**

*Type: CR For: Agreement  
 36.101 v14.18.0 CR-5736 rev Cat: F (Rel-14)  
  
 Source: Ericsson*

**Abstract:**

This CR sets test points for SDR test for 5DL tests and removes [ ] from CQI test for 5DL CA.

**Decision: Agreed.**

**R4-2108808 Correction of LTE 5DL CA demodulation requirements**

*Type: CR For: Agreement  
 36.101 v15.14.0 CR-5737 rev Cat: A (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

This CR sets test points for SDR test for 5DL tests and removes [ ] from CQI test for 5DL CA.

**Decision: Agreed.**

**R4-2108809 Correction of LTE 5DL CA demodulation requirements**

*Type: CR For: Agreement  
 36.101 v16.9.0 CR-5738 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR sets test points for SDR test for 5DL tests and removes [ ] from CQI test for 5DL CA.

**Decision: Agreed.**

**R4-2108810 Correction of LTE 5DL CA demodulation requirements**

*Type: CR For: Agreement  
 36.101 v17.1.0 CR-5739 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR sets test points for SDR test for 5DL tests and removes [ ] from CQI test for 5DL CA.

**Decision: Agreed.**

**R4-2110493 CR: cleanup for square brackets (Rel-12)**

*Type: CR For: Agreement  
 36.101 v12.26.0 CR-5778 rev Cat: F (Rel-12)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110494 CR: cleanup for square brackets (Rel-13)**

*Type: CR For: Agreement  
 36.101 v13.20.0 CR-5779 rev Cat: F (Rel-13)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108506 (from R4-2110494).**

**R4-2108506 CR: cleanup for square brackets (Rel-13)**

*Type: CR For: Agreement  
 36.101 v13.20.0 CR-5779 rev Cat: F (Rel-13)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108756 (from R4-2108506).**

**R4-2108756 CR: cleanup for square brackets (Rel-13)**

*Type: CR For: Agreement  
 36.101 v13.20.0 CR-5779 rev Cat: F (Rel-13)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110495 CR: Updates to LTE V2V PSSCH/PSCCH requirements and cleanup for square brackets in TS 36.101 (Rel-14)**

*Type: CR For: Agreement  
 36.101 v14.18.0 CR-5780 rev Cat: F (Rel-14)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110496 CR: Updates to LTE V2V PSSCH/PSCCH requirements and cleanup for square brackets in TS 36.101 (Rel-15)**

*Type: CR For: Agreement  
 36.101 v15.14.0 CR-5781 rev Cat: A (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110497 CR: Updates to LTE V2V PSSCH/PSCCH requirements and cleanup for square brackets in TS 36.101 (Rel-16)**

*Type: CR For: Agreement  
 36.101 v16.9.0 CR-5782 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110579 CR: Updates to LTE V2V PSSCH/PSCCH requirements and cleanup for square brackets in TS 36.101 (Rel-17)**

*Type: CR For: Agreement  
 36.101 v17.1.0 CR-5783 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

## 5 Rel-16 maintenance

### 5.1 NR maintenance

#### 5.1.1 Enhancements on MIMO for NR

##### 5.1.1.2 Demodulation and CSI requirements (38.101-4)

###### 5.1.1.2.1 UE Demodulation requirements

**R4-2108444 Email discussion summary for [99-e][319] Demod\_R16\_Maintenance\_Part1**

*Type: other For: Information  
 Source: Moderator (Apple)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108673 (from R4-2108444).**

**R4-2108673 Email discussion summary for [99-e][319] Demod\_R16\_Maintenance\_Part1**

*Type: other For: Information  
 Source: Moderator (Apple)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2109202 Simulation results for mTRP Tx schemes**

*Type: other For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109203 CR to TS 38.101-4: Performance requirements for single-DCI based multi-TRP Repetition Tx schemes (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0189 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108541 (from R4-2109203).**

**R4-2108541 CR to TS 38.101-4: Performance requirements for single-DCI based multi-TRP Repetition Tx schemes (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0189 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2109204 CR to TS 38.101-4: Performance requirements for single-DCI based multi-TRP Repetition Tx schemes (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0190 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2109338 CR to 38.101-4 on TRS config update for multi-TRxP test cases - R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0200 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Revised to R4-2108542 (from R4-2109338).**

**R4-2108542 CR to 38.101-4 on TRS config update for multi-TRxP test cases - R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0200 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Merged (with R4-2108558).**

**R4-2109339 CR to 38.101-4 on TRS config update for multi-TRxP test cases - R17**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0207 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Withdrawn.**

**R4-2109809 Simulation results summary for eMIMO performance requirements**

*Type: discussion For: Information  
 Source: Samsung*

**Decision: Noted.**

**R4-2110572 CR on 38.101-4 Updating PDSCH requirement with Single-DCI based SDM scheme**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0235 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108543 (from R4-2110572).**

**R4-2108543 CR on 38.101-4 Updating PDSCH requirement with Single-DCI based SDM scheme**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0235 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110573 CR on 38.101-4 Updating PDSCH requirement with Multi-DCI based transmission scheme**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0236 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108544 (from R4-2110573).**

**R4-2108544 CR on 38.101-4 Updating PDSCH requirement with Multi-DCI based transmission scheme**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0236 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110574 CR on 38.101-4 Updating PDSCH requirement with Single-DCI based SDM scheme(Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0237 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110575 CR on 38.101-4 Updating PDSCH requirement with Multi-DCI based transmission scheme(Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0238 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110638 Update of simulation results of PDSCH with multi-TRP transmission**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution updates our PDSCH simulation results with multi-TRP transmission.

**Decision: Noted.**

###### 5.1.1.2.2 CSI requirements

**R4-2109269 Corrections to align the description of PMI test cases with TS 38.214**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0193 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Alignment of description and parameter configuration with TS 38.214

**Decision: Revised to R4-2108545 (from R4-2109269).**

**R4-2108545 Corrections to align the description of PMI test cases with TS 38.214**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0193 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Alignment of description and parameter configuration with TS 38.214

**Decision: Revised to R4-2108078 (from R4-2108545).**

**R4-2108078 Corrections to align the description of PMI test cases with TS 38.214**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0193 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Alignment of description and parameter configuration with TS 38.214

**Decision: Agreed.**

**R4-2109270 Corrections to align the description of PMI test cases with TS 38.214**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0194 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Alignment of description and parameter configuration with TS 38.214

**Decision: Agreed.**

**R4-2109810 Clear up CR for Rel-16 eMIMO PMI test cases**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0213 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Agreed.**

**R4-2109811 Clear up CR for Rel-16 eMIMO PMI test cases**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0214 rev Cat: A (Rel-17)  
  
 Source: Samsung*

**Decision: Agreed.**

#### 5.1.2 UE power saving in NR

##### 5.1.2.1 Demodulation and CSI requirements (38.101-4)

**R4-2110168 CR on corrections of PDCCH-WUS requirements (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0217 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2110169 CR on corrections of PDCCH-WUS requirements (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0218 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

#### 5.1.4 Physical layer enhancements for NR URLLC

##### 5.1.4.1 Demodulation and CSI requirements

**R4-2108540 Summary of simulation results of NR UE demod with higher BLER (FR1 and FR2)**

*Type: other For: Information  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Noted.**

###### 5.1.4.1.1 UE demodulation requirements

**R4-2109190 Simulation results for UE URLLC pre-emption indication demodulation requirements**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109344 CR to 38.101-4 on URLLC requirements for PDSCH slot aggregation in FR2 - R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0201 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

**R4-2109345 CR to 38.101-4 on URLLC requirements for PDSCH slot aggregation in FR2 - R17**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0202 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

**R4-2110561 CR to TS 38.101-4 Cleanup of UE performance requirements for FR1 URLLC PDSCH repetitions over multiple slots (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0233 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

Session Chair Note: Revised to address cover page error.

**Decision: Revised to R4-2108707 (from R4-2110561).**

**R4-2108707 CR to TS 38.101-4 Cleanup of UE performance requirements for FR1 URLLC PDSCH repetitions over multiple slots (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0233 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110562 CR to TS 38.101-4 Cleanup of UE performance requirements for FR1 URLLC PDSCH repetitions over multiple slots (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0234 rev Cat: F->A (Rel-17)  
  
 Source: Huawei, HiSilicon*

Session Chair Note: Revised to address cover page error.

**Decision: Revised to R4-2108708 (from R4-2110562).**

**R4-2108708 CR to TS 38.101-4 Cleanup of UE performance requirements for FR1 URLLC PDSCH repetitions over multiple slots (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0234 rev Cat: F->A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110742 Finalization of URLLC pre-emption and mapping type B requirements**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0245 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Removes square brackets

**Decision: Revised to R4-2108546 (from R4-2110742).**

**R4-2108546 Finalization of URLLC pre-emption and mapping type B requirements**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0245 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Removes square brackets

**Decision: Agreed.**

**R4-2110743 Finalization of URLLC pre-emption and mapping type B requirements**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0246 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Removes square brackets

**Decision: Agreed.**

**R4-2110942 CR for TS38.101-4, Editorial correction to UE performance requirements for FR1 pre-emption and FR2 PDSCH mapping Type B R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0249 rev Cat: F (Rel-16)  
  
 Source: MediaTek inc.*

**Decision: Revised to R4-2108547 (from R4-2110942).**

**R4-2108547 CR for TS38.101-4, Editorial correction to UE performance requirements for FR1 pre-emption and FR2 PDSCH mapping Type B R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0249 rev Cat: F (Rel-16)  
  
 Source: MediaTek inc.*

**Decision: Agreed.**

**R4-2110943 CR for TS38.101-4, Editorial correction to UE performance requirements for FR1 pre-emption and FR2 PDSCH mapping Type B R17**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0250 rev Cat: A (Rel-17)  
  
 Source: MediaTek inc.*

**Decision: Agreed.**

**R4-2111349 CR on Corrections for FR2 URLLC Requirements**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0257 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Merged (with R4-2111349).**

**R4-2111529 CR on Corrections for FR2 URLLC Requirements**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0263 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

###### 5.1.4.1.2 CSI requirements

**R4-2109346 CR to 38.101-4 on CQI Reporting requirements with Table3 - R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0203 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

**R4-2109347 CR to 38.101-4 on CQI Reporting requirements with Table3 - R17**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0204 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

###### 5.1.4.1.3 BS demodulation requirements

**R4-2109191 Simulation results for BS URLLC demodulation requirements**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109602 Simulation results for URLLC PUSCH repetation A demodulation**

*Type: other For: Information  
 38.104 v CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

simulation results for URLLC PUSCH repetation A demodulation

**Decision: Noted.**

**R4-2109603 CR for removing SNR brackets in URLLC PUSCH repetation A demodulation in TS38.104 (catF)**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0311 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR for removing [ ] for URLLC PUSCH repetation A demodulation in TS38.104

**Decision: Merged (with R4-2109803).**

**R4-2109604 CR for removing SNR brackets in URLLC PUSCH repetation A demodulation in TS38.141-1 (catF)**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0210 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR for removing [ ] for URLLC PUSCH repetation A demodulation in TS38.141-1

**Decision: Merged (with R4-2110565).**

**R4-2109605 CR for removing SNR brackets in URLLC PUSCH repetation A demodulation in TS38.141-2 (catF)**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0323 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR for removing [ ] for URLLC PUSCH repetation A demodulation in TS38.141-2

**Decision: Merged (with R4-2109706).**

**R4-2109606 CR for removing SNR brackets in URLLC PUSCH repetation A demodulation in TS38.104 (catA)**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0312 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR for removing [ ] for URLLC PUSCH repetation A demodulation in TS38.104

**Decision: Withdrawn.**

**R4-2109607 CR for removing SNR brackets in URLLC PUSCH repetation A demodulation in TS38.141-1 (catA)**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0211 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR for removing [ ] for URLLC PUSCH repetation A demodulation in TS38.141-1

**Decision: Withdrawn.**

**R4-2109608 CR for removing SNR brackets in URLLC PUSCH repetation A demodulation in TS38.141-2 (catA)**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0324 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR for removing [ ] for URLLC PUSCH repetation A demodulation in TS38.141-2

**Decision: Withdrawn.**

**R4-2109710 CR for TS 38.141-2 Updates of performance requirements of PUSCH repetition type A for URLLC**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0325 rev Cat: F (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Decision: Revised to R4-2108548 (from R4-2109710).**

**R4-2108548 CR for TS 38.141-2 Updates of performance requirements of PUSCH repetition type A for URLLC**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0325 rev Cat: F (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Decision: Agreed.**

**R4-2109711 CR for TS 38.141-2 Updates of performance requirements of PUSCH repetition type A for URLLC**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0326 rev Cat: A (Rel-17)  
  
 Source: NTT DOCOMO, INC.*

**Decision: Agreed.**

**R4-2109803 CR on correction of PUSCH repetition type A and PUSCH mapping type B radiated performance requirements for TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0313 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Revised to R4-2108549 (from R4-2109803).**

**R4-2108549 CR on correction of PUSCH repetition type A and PUSCH mapping type B radiated performance requirements for TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0313 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Agreed.**

**R4-2109804 CR on correction of PUSCH repetition type A and PUSCH mapping type B radiated performance requirements for TS 38.104**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0314 rev Cat: A (Rel-17)  
  
 Source: Samsung*

**Decision: Agreed.**

**R4-2110563 CR to TS38.104 Cleanup of BS performance requirements for URLLC FR1 PUSCH repetition Type A (Rel-16)**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0326 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-2109803).**

**R4-2110564 CR to TS38.104 Cleanup of BS performance requirements for URLLC FR1 PUSCH repetition Type A (Rel-17)**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0327 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

Session Chair Note: Please avoid to upload CAT A CR before corresponding source CR agreed!

**Decision: Not pursued.**

**R4-2110565 CR to TS38.141-1 Cleanup of BS conformance testing for URLLC demodulation requirements with higher BLER (Rel-16)**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0226 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108550 (from R4-2110565).**

**R4-2108550 CR to TS38.141-1 Cleanup of BS conformance testing for URLLC demodulation requirements with higher BLER (Rel-16)**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0226 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110566 CR to TS38.141-1 Cleanup of BS conformance testing for URLLC demodulation requirements with higher BLER (Rel-17)**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0227 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

Session Chair Note: Please avoid to upload CAT A CR before corresponding source CR agreed !

**Decision: Revised to R4-2108551 (from R4-2110566).**

**R4-2108551 CR to TS38.141-1 Cleanup of BS conformance testing for URLLC demodulation requirements with higher BLER (Rel-17)**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0227 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110567 CR to TS38.141-2 Cleanup of BS conformance testing for FR2 URLLC PUSCH repetition Type A (Rel-16)**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0333 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-2109710).**

**R4-2110568 CR to TS38.141-2 Cleanup of BS conformance testing for FR2 URLLC PUSCH repetition Type A (Rel-17)**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0334 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

Session Chair Note: Please avoid to upload CAT A CR before corresponding source CR agreed !

**Decision: Not pursued.**

**R4-2110581 Simulation result summary sheet for URLLC PUSCH demodulation**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

Simulation results summary for URLLC PUSCH demodulation

**Decision: Noted.**

**R4-2110588 CR for 38.104: Low latency and ultra-low BLER FR1 BS demodulation requirements**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0330 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Fixing implementation issues of the last CR.

**Decision: Agreed.**

**R4-2110589 CR for 38.104: Low latency and ultra-low BLER FR1 BS demodulation requirements**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0331 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Fixing implementation issues of the last CR.

**Decision: Agreed.**

#### 5.1.5 Add support of NR DL 256QAM for FR2

##### 5.1.5.1 Demodulation and CSI requirements (38.101-4)

###### 5.1.5.1.1 UE demodulation requirements

**R4-2108445 Email discussion summary for [99-e][320] Demod\_R16\_Maintenance\_Part2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108674 (from R4-2108445).**

**R4-2108674 Email discussion summary for [99-e][320] Demod\_R16\_Maintenance\_Part2**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2109189 Discussion on a simplified LOS channel model**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109764 CR for 38.101-4 Rel-17 correction on demodulation performance requirements for FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0212 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Merged (with R4-2110557).**

**R4-2110557 CR on correction of FRC for DL 256QAM (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0229 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110558 CR on correction of FRC for DL 256QAM (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0230 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110636 CR: Update of TDLD30 delay profile**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0243 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR updates the TDLD30 delay profile table.

**Decision: Merged (with R4-2111206).**

**R4-2110777 Channel matrix of LOS path in TDLD30**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the channel matrix used for TDLD30.

**Decision: Noted.**

**R4-2110778 CR: Update of TDLD30 delay profile**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0247 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR updates the TDLD30 delay profile table.

**Decision: Withdrawn.**

**R4-2111206 CR on clarification of TDL-D channel model (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0252 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108086 (from R4-2111206).**

**R4-2108086 CR on clarification of TDL-D channel model (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0252 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2111207 CR on clarification of TDL-D channel model (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0253 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2111290 CR on FRC Correction for FR2 DL 256QAM Requirements**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0255 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Merged (with R4-21110557).**

**R4-2111291 CR on FRC Correction for FR2 DL 256QAM Requirements**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0256 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

###### 5.1.5.1.2 CSI requirements

**R4-2109139 CR on finalization on the FR2 256QAM CQI report test case**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0185 rev Cat: F (Rel-17)  
  
 Source: China Telecom*

**Decision: Revised to R4-2108552 (from R4-2109139).**

**R4-2108552 CR on finalization on the FR2 256QAM CQI report test case**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0185 rev Cat: F->A (Rel-17)  
  
 Source: China Telecom*

**Decision: Agreed.**

**R4-2108555 CR on finalization on the FR2 256QAM CQI report test case**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-? rev Cat: F (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Session Chair note: Contact with MCC to get CR number**

**Decision: Agreed.**

**R4-2110559 CR on correction of FR2 256QAM CQI applicability rules (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0231 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110560 CR on correction of FR2 256QAM CQI applicability rules (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0232 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

###### 5.1.5.1.3 SDR

**R4-2110556 CR on SDR requirements for DL 256QAM for FR2 (Rel-15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0228 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108554 (from R4-2110556).**

**R4-2108554 CR on SDR requirements for DL 256QAM for FR2 (Rel-15)**

*Type: CR For: Agreement  
 38.101-4 v15.9.0 CR-0228 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

#### 5.1.6 NR performance requirement enhancements

##### 5.1.6.1 UE demodulation requirements

**R4-2110633 CR: Correction of the applicability of requirements**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0242 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR adds new subclauses for applicability of requirements.

**Decision: Agreed.**

**R4-2110785 CR: Correction of the applicability of requirements**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0248 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR adds new subclauses for applicability of requirements.

**Decision: Agreed.**

**R4-2111172 CR on Applicability Rule for TDD LTE-NR Coexistence Tests**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0251 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

**R4-2111212 CR on Applicability Rule for TDD LTE-NR Coexistence Tests**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0254 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

##### 5.1.6.2 CSI requirements

**R4-2109812 Correction on PMI test cases with Rel-15 Type I, TypeII codebook**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0215 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Revised to R4-2108556 (from R4-2109812).**

**R4-2108556 Correction on PMI test cases with Rel-15 Type I, TypeII codebook**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0215 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Agreed.**

**R4-2109813 Correction on PMI test cases with Rel-15 Type I, TypeII codebook**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0216 rev Cat: A (Rel-17)  
  
 Source: Samsung*

**Decision: Agreed.**

##### 5.1.6.3 BS demodulation requirements

**R4-2110590 CR for 38.141-2: Demodulation performance enhancement specification maintenance**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0337 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

8.2.1.5.1-15 to 18: Wrong appendix cited in 30% TPUT tables.

Session Chair Note: Revision assigned to address cover page error

**Decision: Revised to R4-2108709 (from R4-2110590).**

**R4-2108709 CR for 38.141-2: Demodulation performance enhancement specification maintenance**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0337 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

8.2.1.5.1-15 to 18: Wrong appendix cited in 30% TPUT tables.

**Decision: Agreed.**

**R4-2110591 CR for 38.141-2: Demodulation performance enhancement specification maintenance**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0338 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

8.2.1.5.1-15 to 18: Wrong appendix cited in 30% TPUT tables.

**Decision: Agreed.**

#### 5.1.7 Other WIs

##### 5.1.7.1 BS RF requirements

**R4-2109029 Correction of the channel raster of n259 for TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0304 rev Cat: F (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108485 (from R4-2109029).**

**R4-2108485 Correction of the channel raster of n259 for TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0304 rev Cat: F (Rel-16)  
  
 Source: CATT*

**Decision: Agreed.**

**R4-2109030 Correction of the channel raster of n259 for TS 38.104**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0305 rev Cat: A (Rel-17)  
  
 Source: CATT*

**Decision: Agreed.**

##### 5.1.7.4 Demodulation and CSI requirements

**R4-2111472 CR to TS 38.101-4: FRC index update and Editorial corrections (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0261 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

Session Chair Note: Please avoid to upload CAT A CR before corresponding source CR agreed!

**Decision: Revised to R4-2108561 (from R4-2111472).**

**R4-2108561 CR to TS 38.101-4: FRC index update and Editorial corrections (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0261 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2111473 CR to TS 38.101-4: FRC index update and Editorial corrections (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0262 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108562 (from R4-2111473).**

**R4-2108562 CR to TS 38.101-4: FRC index update and Editorial corrections (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0262 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108103 (from R4-2108562).**

**R4-2108103 CR to TS 38.101-4: FRC index update and Editorial corrections (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0262 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

###### 5.1.7.4.1 UE demodulation requirements

**R4-2109205 CR to TS 38.101-4: HST-DPS channel model clarification (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0191 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108557 (from R4-2109205).**

**R4-2108557 CR to TS 38.101-4: HST-DPS channel model clarification (R16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0191 rev Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2109206 CR to TS 38.101-4: HST-DPS channel model clarification (R17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0192 rev Cat: A (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Agreed.**

**R4-2109348 Discussion on applicability of HST-DPS test cases**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109349 CR to 38.101-4 on TRS config update for HST-DPS test cases- R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0205 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Revised to R4-2108558 (from R4-2109349).**

**R4-2108558 CR to 38.101-4 on TRS config update for HST-DPS test cases- R16**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0205 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

**R4-2109350 CR to 38.101-4 on TRS config update for HST-DPS test cases- R17**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0206 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

**R4-2109521 CR on HST-SFN requirements for TDD**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0208 rev Cat: F (Rel-16)  
  
 Source: CMCC*

**Decision: Agreed.**

**R4-2109522 CR on HST-SFN requirements for TDD**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0209 rev Cat: A (Rel-17)  
  
 Source: CMCC*

**Decision: Agreed.**

**R4-2110552 CR on correction of FRC for HST (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0224 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon, Ericsson*

**Decision: Agreed.**

**R4-2110553 CR on correction of FRC for HST (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0225 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon, Ericsson*

**Decision: Agreed.**

**R4-2110554 CR on removal of square brackets for HST requirements (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0226 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110555 CR on removal of square brackets for HST requirements (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0227 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

###### 5.1.7.4.2 CSI requirements

###### 5.1.7.4.3 BS demodulation requirements

**R4-2109106 Summary of ideal and impairment results for NR HST BS demodulation requirements**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109107 CR for TS 38.141-2: Introduction of NR PUSCH UL TA performance requirement(Rel-16)**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0317 rev Cat: F (Rel-16)  
  
 Source: CATT*

**Decision: Agreed.**

**R4-2109108 CR for TS 38.141-2: Introduction of NR PUSCH UL TA performance requirement(Rel-17)**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0318 rev Cat: A (Rel-17)  
  
 Source: CATT*

**Decision: Agreed.**

**R4-2109600 CR for TS38.141-2 remove SNR brackets for HST PUSCH demodulation (catF)**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0321 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Removing [ ] for HST PUSCH demodulation requirements in TS38.141-2

**Decision: Agreed.**

**R4-2109601 CR for TS38.141-2 remove SNR brackets for HST PUSCH demodulation (catA)**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0322 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Removing [ ] for HST PUSCH demodulation requirements in TS38.141-2

**Decision: Agreed.**

**R4-2109708 CR for TS 38.141-1 Updates of NR PUSCH performance requirements for HST**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0212 rev Cat: F (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Decision: Agreed.**

**R4-2109709 CR for TS 38.141-1 Updates of NR PUSCH performance requirements for HST**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0213 rev Cat: A (Rel-17)  
  
 Source: NTT DOCOMO, INC.*

**Decision: Agreed.**

**R4-2109801 CR on correction of UL timing adjustment conducted performance requirement for TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0214 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Agreed.**

**R4-2109802 CR on correction of UL timing adjustment conducted performance requirement for TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0215 rev Cat: A (Rel-17)  
  
 Source: Samsung*

**Decision: Agreed.**

**R4-2110582 CR for 38.104: HST PUSCH demodulation requirements and spec maintenance**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0328 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Final clean-up and [] removal for HST PUSCH.

**Decision: Agreed.**

**R4-2110583 CR for 38.104: HST PUSCH demodulation requirements and spec maintenance**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0329 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Final clean-up and [] removal for HST PUSCH.

**Decision: Agreed.**

**R4-2110584 CR for 38.141-1: HST demodulation specification maintenance**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0228 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Table C.3-1: Has TT for 8.4.2, which no longer exists. Table A.4-2B: Contains A3 FRCs; should be A4.

**Decision: Revised to R4-2108559 (from R4-2110584).**

**R4-2108559 CR for 38.141-1: HST demodulation specification maintenance**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0228 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Table C.3-1: Has TT for 8.4.2, which no longer exists. Table A.4-2B: Contains A3 FRCs; should be A4.

**Decision: Agreed.**

**R4-2110585 CR for 38.141-1: HST demodulation specification maintenance**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0229 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Table C.3-1: Has TT for 8.4.2, which no longer exists. Table A.4-2B: Contains A3 FRCs; should be A4.

**Decision: Agreed.**

**R4-2110586 CR for 38.141-2: HST demodulation specification maintenance**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0335 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

8.4.1.5.2: Implementation issue. HST does not have Type 2-O requirements; the heading is in wrong place. Table C.3-1: Has TT for 8.4.2, which no longer exists. Table A.4-2B: Contains A3 FRCs; should be A4

**Decision: Revised to R4-2108560 (from R4-2110586).**

**R4-2108560 CR for 38.141-2: HST demodulation specification maintenance**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0335 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

8.4.1.5.2: Implementation issue. HST does not have Type 2-O requirements; the heading is in wrong place. Table C.3-1: Has TT for 8.4.2, which no longer exists. Table A.4-2B: Contains A3 FRCs; should be A4

**Decision: Agreed.**

**R4-2110587 CR for 38.141-2: HST demodulation specification maintenance**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0336 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

8.4.1.5.2: Implementation issue. HST does not have Type 2-O requirements; the heading is in wrong place. Table C.3-1: Has TT for 8.4.2, which no longer exists. Table A.4-2B: Contains A3 FRCs; should be A4

**Decision: Agreed.**

##### 5.1.7.5 NR MIMO OTA test methods (38.827)

**R4-2109672 CR to TR38.827:FR2 measurement data processing update**

*Type: CR For: Agreement  
 38.827 v16.2.0 CR-0014 rev Cat: F (Rel-16)  
  
 Source: vivo*

**Decision: Agreed.**

**R4-2109673 CR to TR38.827:Clarification of number of slots**

*Type: CR For: Agreement  
 38.827 v16.2.0 CR-0015 rev Cat: F (Rel-16)  
  
 Source: vivo*

**Decision: Agreed.**

**R4-2109674 CR to TR38.827:Calibration procedure and Test procedure correction**

*Type: CR For: Agreement  
 38.827 v16.2.0 CR-0016 rev Cat: F (Rel-16)  
  
 Source: vivo*

**Decision: Agreed.**

### 5.2 LTE maintenance

#### 5.2.2 Other WIs

##### 5.2.2.1 BS RF requirements

##### 5.2.2.4 Demodulation and CSI requirements

###### 5.2.2.4.1 UE demodulation requirements

###### 5.2.2.4.2 CSI requirements

###### 5.2.2.4.3 BS demodulation requirements

## 6 Rel-16 non-spectrum related work items for NR

### 6.1 NR-based access to unlicensed spectrum

#### 6.1.3 BS RF requirement maintenance

**R4-2108429 Email discussion summary for [99-e][304] NR\_unlic\_BS\_Conformance**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108675 (from R4-2108429).**

**R4-2108675 Email discussion summary for [99-e][304] NR\_unlic\_BS\_Conformance**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Session Chair: The RF conformance part completed, remaining issues can be further discussed in maintenance phase.**

**R4-2108511 WF on NR-U non-contiguous transmission testing**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2109381 CR to TS 38.104: Corrections on frequency offset symbols for spectrum emission mask for non-transmitted channels**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0306 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correct and define the frequency offset symbols used in the tables for spectrum emission mask for non-transmitted channels.

**Decision: Agreed.**

**R4-2109382 CR to TS 38.104: Corrections on frequency offset symbols for spectrum emission mask for non-transmitted channels**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0307 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correct and define the frequency offset symbols used in the tables for spectrum emission mask for non-transmitted channels.

**Decision: Agreed.**

#### 6.1.4 BS conformance testing

**R4-2110746 CR to CR TS 37.145-1: Introduction of NR-U**

*Type: CR For: Agreement  
 37.145-1 v17.1.0 CR-0263 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110756 CR to CR TS 37.145-1: Introduction of NR-U**

*Type: CR For: Agreement  
 37.145-1 v16.6.0 CR-0264 rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

##### 6.1.4.1 General

**R4-2110134 Discussion on test configurations for wideband NR-U operation**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110619 Discussion on NR-U BS wideband operation**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2110620 CR to TS 38.141-1: introduction of NR-U BS**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0230 rev Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2108512 (from R4-2110620).**

**R4-2108512 CR to TS 38.141-1: introduction of NR-U BS**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0230 rev Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2110621 CR to TS 38.141-1: introduction of NR-U BS**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0231 rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2110622 CR to TS 36.141: introduction of NR-U BS**

*Type: CR For: Agreement  
 36.141 v16.9.0 CR-1309 rev Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2110623 CR to TS 36.141: introduction of NR-U BS**

*Type: CR For: Agreement  
 36.141 v17.1.0 CR-1310 rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2111216 CR to 37.141: Introduction of NR-U co-existence requirements (Rel-16)**

*Type: CR For: Agreement  
 37.141 v16.9.0 CR-0988 rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2111217 CR to 37.141: Introduction of NR-U co-existence requirements (Rel-17)**

*Type: CR For: Agreement  
 37.141 v17.1.0 CR-0989 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108711 (from R4-2111217).**

**R4-2108711 CR to 37.141: Introduction of NR-U co-existence requirements (Rel-17)**

*Type: CR For: Agreement  
 37.141 v17.1.0 CR-0989 rev Cat: B->A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

##### 6.1.4.2 Transmitter characteristics

**R4-2110133 CR to TS 37.107 with NR-U introduction for performance part**

*Type: CR For: Agreement  
 37.107 v16.2.0 CR-0010 rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2110135 CR to TS 38.141-1 – Test configurations for NR-U BS conformance tests**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0221 rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Not pursued.**

**R4-2110136 CR to TS 38.141-2 – Test configurations for NR-U BS conformance tests**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0329 rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Not pursued.**

**R4-2110918 TS 37.145-2: Introduction of NR-U co-existence requirements**

*Type: CR For: Agreement  
 37.145-2 v16.7.0 CR-0306 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Introduction of rx and tx spurious emission limits for co-existence and co-location with NR-U in bands n46 and n96

**Decision: Revised to R4-2108742 (from R4-2110918).**

**R4-2108742 TS 37.145-2: Introduction of NR-U co-existence requirements**

*Type: CR For: Agreement  
 37.145-2 v16.7.0 CR-0306 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Introduction of rx and tx spurious emission limits for co-existence and co-location with NR-U in bands n46 and n96

**Decision: Agreed.**

**R4-2110919 TS 38.141-2: Introduction of NR-U co-existence requirements**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0344 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Introduction of tx spurious emission limits for co-existence and co-location with NR-U in bands n46 and n96

**Decision: Revised to R4-2108743 (from R4-2110919).**

**R4-2108743 TS 38.141-2: Introduction of NR-U co-existence requirements**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0344 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Introduction of tx spurious emission limits for co-existence and co-location with NR-U in bands n46 and n96

**Decision: Agreed.**

**R4-2110920 TS 37.145-2: Introduction of NR-U co-existence requirements**

*Type: CR For: Agreement  
 37.145-2 v17.1.0 CR-0307 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Introduction of rx and tx spurious emission limits for co-existence and co-location with NR-U in bands n46 and n96

**Decision: Agreed.**

**R4-2110921 TS 38.141-2: Introduction of NR-U co-existence requirements**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0345 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Introduction of tx spurious emission limits for co-existence and co-location with NR-U in bands n46 and n96

**Decision: Agreed.**

##### 6.1.4.3 Receiver characteristics

#### 6.1.7 Demodulation and CSI requirements (38.101-4/38.104)

##### 6.1.7.1 General

**R4-2108446 Email discussion summary for [99-e][321] NR\_unlic\_Demod\_UE**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108676 (from R4-2108446).**

**R4-2108676 Email discussion summary for [99-e][321] NR\_unlic\_Demod\_UE**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108447 Email discussion summary for [99-e][322] NR\_unlic\_Demod\_BS**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108677 Email discussion summary for [99-e][322] NR\_unlic\_Demod\_BS**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Session Chair: NR-U BS/UE demod part can be considered as completed, remaing open issues can be addressed in maintenance phase. Requirements with [ ], further upate and alignement effort not precluded in maintenance phase.**

**R4-2108515 Way forward on NR-U BS demodulation requirements**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108513 Big CR for the Introduction of NR-U UE Demodulation Requirements (PDSCH and CQI)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-? rev Cat:B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

**Discussion:**

**Session Chair Note: Contact with MCC to get CR number**

**Decision: Agreed.**

**R4-2108514 Big CR for the Introduction of NR-U UE Demodulation Requirements (PDSCH and CQI)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-? rev Cat:A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

**Discussion:**

**Session Chair Note: Contact with MCC to get CR number**

**Decision: Agreed.**

**R4-2109351 Summary of simulation results for NR-U UE Demod**

*Type: discussion For: Information  
 Source: Apple*

**Decision: Noted.**

**R4-2109588 Discussion on NR-U general issue in NR-U UE and CSI demodulation**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

remaining general issues in NR-U UE and CSI demodulation

**Decision: Noted.**

**R4-2110719 draftCR for Downlink Transmission Model for NR-U UE Performance tests**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2108713 (from R4-2110719).**

**R4-2108713 draftCR for Downlink Transmission Model for NR-U UE Performance tests**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

**R4-2110766 Discussion on NR-U UE PDSCH and CQI Requirements**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 6.1.7.2 UE demodulation requirements

**R4-2109352 Discussion on UE demodulation requirements in NR-U**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109353 Simulation results for PDSCH demodulation requirements in NR-U**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109589 Simulation results for NR-U PDSCH demodulation requirement**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

simulation results for NR-U PDSCH

**Decision: Noted.**

**R4-2109590 Draft CR for introduction of NR-U PDSCH demodulation requirement in Scenario A in TS38.101-4 (catB)**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

draft CR for Introduction of the NR-U PDSCH requirement in Scenario A

**Decision: Revised to R4-2108714 (from R4-2109590).**

**R4-2108714 Draft CR for introduction of NR-U PDSCH demodulation requirement in Scenario A in TS38.101-4 (catB)**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

draft CR for Introduction of the NR-U PDSCH requirement in Scenario A

**Decision: Endorsed.**

**R4-2110499 Simulation results on NR-U PDSCH requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110500 Discussion on NR-U PDSCH requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110501 Draft CR: Introduction of fixed reference channel of NR-U PDSCH in TS 38.101-4**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108715 (from R4-2110501).**

**R4-2108715 Draft CR: Introduction of fixed reference channel of NR-U PDSCH in TS 38.101-4**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2110767 Updated Simulation Results for NR-U PDSCH UE Demodulation Tests**

*Type: discussion For: Information  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2110937 Simulation Results for NR-U PDSCH requirements**

*Type: discussion For: (not specified)  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2110938 CR for TS38.101-4, PDSCH requirements for standalone NR-U**

*Type: draftCR For: (not specified)  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: MediaTek inc.*

**Decision: Revised to R4-2108716 (from R4-2110938).**

**R4-2108716 CR for TS38.101-4, PDSCH requirements for standalone NR-U**

*Type: draftCR For: (not specified)  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: MediaTek inc.*

**Decision: Endorsed.**

**R4-2110947 Discussion on NR-U UE demodulation and CSI requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2110948 NR-U PDSCH simulation results**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

##### 6.1.7.3 CSI requirements

**R4-2109354 On CQI reporting requirements in NR-U**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109355 Draft CR to 38.101-4 on CQI reporting requirements in Scenario A for NR-U**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Apple*

**Decision: Revised to R4-2108717 (from R4-2109355).**

**R4-2108717 Draft CR to 38.101-4 on CQI reporting requirements in Scenario A for NR-U**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Apple*

**Decision: Endorsed.**

**R4-2109591 Discussion on NR-U CQI report requirement**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

remaining issues in NR-U CSI demodulation

**Decision: Noted.**

**R4-2109592 Simulation results for NR-U CQI report requirement**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

simulation results for NR-U CQI report

**Decision: Noted.**

**R4-2110502 Discussion and simulation results for NR-U CSI performance requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110503 Draft CR: Introduction of NR-U CQI requirements in TS 38.101-4**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108718 (from R4-2110503).**

**R4-2108718 Draft CR: Introduction of NR-U CQI requirements in TS 38.101-4**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108076 (from R4-2108718).**

**R4-2108076 Draft CR: Introduction of NR-U CQI requirements in TS 38.101-4**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108092 (from R4-2108076).**

**R4-2108092 Draft CR: Introduction of NR-U CQI requirements in TS 38.101-4**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2110718 Simulation Setup and Results for NR-U CQI Performance Tests**

*Type: discussion For: Information  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 6.1.7.4 BS demodulation requirements

**R4-2110504 Big CR for NR-U BS demodulation requirements in TS 38.104 (Rel-16)**

*Type: CR For: Agreement  
 38.104 v16.7.0 CR-0324 rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110505 Big CR for NR-U BS demodulation requirements in TS 38.104 (Rel-17)**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0325 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

###### 6.1.7.4.1 General

**R4-2109283 Big CR for NR-U BS radiated conformance testing in TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v16.7.0 CR-0319 rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2109284 Big CR for NR-U BS radiated conformance testing in TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0320 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2109598 Big CR for NR-U BS conducted conformance testing in TS38.141-1 (catB)**

*Type: CR For: Agreement  
 38.141-1 v16.7.0 CR-0208 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR for NR-U BS conducted conformance testing in TS38.141-1

**Decision: Agreed.**

**R4-2109599 Big CR for NR-U BS conducted conformance testing in TS38.141-1 (catA)**

*Type: CR For: Agreement  
 38.141-1 v17.1.0 CR-0209 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR for NR-U BS conducted conformance testing in TS38.141-1

**Decision: Agreed.**

**R4-2110506 Simulation results for NR-U PUSCH performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110507 Summary of simulation results for NR-U BS performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2108466 draft CR for TS 38.141-1 introduction of NR-U CG-UCI multiplexing on interlaced PUSCH**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108081 (from R4-2108466).**

**R4-2108081 draft CR for TS 38.141-1 introduction of NR-U CG-UCI multiplexing on interlaced PUSCH**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2108467 draft CR for TS38141-2 introduction of NR-U PUCCH PF0 PF1 demodulation requirements**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

###### 6.1.7.4.2 PUSCH requirements

**R4-2109285 Performance requirements for CG-UCI multiplexed on PUSCH with interlaced allocation**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108712 (from R4-2109285).**

**R4-2108712 Performance requirements for CG-UCI multiplexed on PUSCH with interlaced allocation**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108089 (from R4-2108712).**

**R4-2108089 Performance requirements for CG-UCI multiplexed on PUSCH with interlaced allocation**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2109286 NR-U PUSCH discussion and simulation results**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2109593 Simulation results for NR-U PUSCH demodulation requirement**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

simulation results for NR-U PUSCH demodulation

**Decision: Noted.**

**R4-2109795 Simulation results of PUSCH for Rel-16 NR-U**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110508 Discussions on remaining issues for NR-U CG-UCI requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110509 Simulatiton results for CG-UCI multiplexing on interlaced PUSCH requriements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110510 Draft CR: Introduction of conducted and radiated performance requrements for PUSCH with interlace in TS 38.104**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108516 (from R4-2110510).**

**R4-2108516 Draft CR: Introduction of conducted and radiated performance requrements for PUSCH with interlace in TS 38.104**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2110511 Draft CR: Introduction of conducted conformance testing for PUSCH with interlace in TS 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108517 (from R4-2110511).**

**R4-2108517 Draft CR: Introduction of conducted conformance testing for PUSCH with interlace in TS 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2110512 Draft CR: Introduction of radiated conformance testing for PUSCH with interlace in TS 38.141-2**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108518 (from R4-2110512).**

**R4-2108518 Draft CR: Introduction of radiated conformance testing for PUSCH with interlace in TS 38.141-2**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2110513 Draft CR: Introduction of CG-UCI multiplexing on interlaced PUSCH in TS.38.104.**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108519 (from R4-2110513).**

**R4-2108519 Draft CR: Introduction of CG-UCI multiplexing on interlaced PUSCH in TS.38.104.**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108075 (from R4-2108519).**

**R4-2108075 Draft CR: Introduction of CG-UCI multiplexing on interlaced PUSCH in TS.38.104.**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

###### 6.1.7.4.3 PUCCH requirements

**R4-2109287 NR-U PUCCH discussion and simulation results**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2109594 Simulation results for NR-U PUCCH demodulation requirement**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

simulation results for NR-U PUCCH demodulation

**Decision: Noted.**

**R4-2109596 Draft CR for NR-U PUCCH demodulation requirement in TS38.104 (catB)**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

draft CR for interlaced PUCCH format 0/1 in TS38.104

**Decision: Revised to R4-2108520 (from R4-2109596).**

**R4-2108520 Draft CR for NR-U PUCCH demodulation requirement in TS38.104 (catB)**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

draft CR for interlaced PUCCH format 0/1 in TS38.104

**Decision: Endorsed.**

**R4-2109597 Draft CR for NR-U PUCCH demodulation requirement in TS38.141-1 (catB)**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

draft CR for interlaced PUCCH format 0/1 in TS38.141-1

**Decision: Revised to R4-2108521 (from R4-2109597).**

**R4-2108521 Draft CR for NR-U PUCCH demodulation requirement in TS38.141-1 (catB)**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

draft CR for interlaced PUCCH format 0/1 in TS38.141-1

**Decision: Endorsed.**

**R4-2109796 Simulation results of PUCCH for Rel-16 NR-U**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2109798 draft CR on PUCCH format2 and format3 performance requirement for TS 38.104**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision: Revised to R4-2108522 (from R4-2109798).**

**R4-2108522 draft CR on PUCCH format2 and format3 performance requirement for TS 38.104**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision: Endorsed.**

**R4-2109799 draft CR on PUCCH format2 and format3 performance requirement for TS 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision: Revised to R4-2108523 (from R4-2109799).**

**R4-2108523 draft CR on PUCCH format2 and format3 performance requirement for TS 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision: Endorsed.**

**R4-2109800 draft CR on PUCCH format2 and format3 performance requirement for TS 38.141-2**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision: Revised to R4-2108668 (from R4-2109800).**

**R4-2108668 draft CR on PUCCH format2 and format3 performance requirement for TS 38.141-2**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Samsung*

**Decision: Endorsed.**

**R4-2110514 Simulation results for NR-U PUCCH performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

###### 6.1.7.4.4 PRACH requirements

**R4-2109288 DraftCR NR-U BS demod PRACH performance requirements 38.104**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of BS demod PRACH requirements with LRA=1151 and LRA=571

**Decision: Revised to R4-2108524 (from R4-2109288).**

**RR4-2108524 DraftCR NR-U BS demod PRACH performance requirements 38.104**

*Type: draftCR For: Endorsement  
 38.104 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of BS demod PRACH requirements with LRA=1151 and LRA=571

**Decision: Endorsed.**

**R4-2109289 DraftCR NR-U BS demod PRACH conducted performance requirements 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of BS demod PRACH requirements with LRA=1151 and LRA=571.

**Decision: Revised to R4-2108525 (from R4-2109289).**

**R4-2108525 DraftCR NR-U BS demod PRACH conducted performance requirements 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of BS demod PRACH requirements with LRA=1151 and LRA=571.

**Decision: Endorsed.**

**R4-2109290 DraftCR NR-U BS demod PRACH radiated performance requirements 38.141-2**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of BS demod PRACH requirements with LRA=1151 and LRA=571.

**Decision: Revised to R4-2108526 (from R4-2109290).**

**R4-2108526 DraftCR NR-U BS demod PRACH radiated performance requirements 38.141-2**

*Type: draftCR For: Endorsement  
 38.141-2 v16.7.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of BS demod PRACH requirements with LRA=1151 and LRA=571.

**Decision: Endorsed.**

**R4-2109595 Simulation results for NR-U PRACH demodulation requirement**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

simulation results for NR-U PRACH demodulation

**Decision: Noted.**

**R4-2109797 Simulation results of PRACH for Rel-16 NR-U**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110515 Simulation results for NR-U PRACH performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

### 6.2 5G V2X with NR sidelink

#### 6.2.4 Demodulation requirements (38.101-4)

**R4-2109727 Big CR: Introduction of Rel-16 NR V2X demodulation performance requirements**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0210 rev Cat: B (Rel-16)  
  
 Source: LG Electronics Inc.*

**Decision: Agreed.**

**R4-2109728 Big CR: Introduction of Rel-16 NR V2X demodulation performance requirements**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0211 rev Cat: A (Rel-17)  
  
 Source: LG Electronics Inc.*

**Decision: Agreed.**

##### 6.2.4.1 General

**R4-2108448 Email discussion summary for [99-e][323] V2X\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (LGE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108678 (from R4-2108448).**

**R4-2108678 Email discussion summary for [99-e][323] V2X\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (LGE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Session Chair Note: The performance of this WI completed.**

**R4-2108449 Email discussion summary for [99-e][324] V2X\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108679 (from R4-2108449).**

**R4-2108679 Email discussion summary for [99-e][324] V2X\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108680 (from R4-2108679).**

**R4-2108680 Email discussion summary for [99-e][324] V2X\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

##### 6.2.4.2 Single link test

**R4-2109569 On NR V2X Single Link Demod Requirement**

*Type: discussion For: Discussion  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

**R4-2109718 Summary of simulation results for V2X demodulation requirements**

*Type: discussion For: Information  
 Source: LG Electronics Inc.*

**Decision: Noted.**

###### 6.2.4.2.1 PSSCH demodulation test

**R4-2109046 Simulation results of NR V2X multiple link demodulation test**

*Type: other For: Discussion  
 Source: CATT, GOHIGH*

**Decision: Noted.**

**R4-2109192 Simulation results for NR V2X single link PSSCH requirements**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109720 Draft CR for PSSCH demodulation requirements for NR V2X**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: (Rel-16)  
  
 Source: LG Electronics Inc.*

**Decision: Revised to R4-2108530 (from R4-2109720).**

**R4-2108530 Draft CR for PSSCH demodulation requirements for NR V2X**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: (Rel-16)  
  
 Source: LG Electronics Inc.*

**Decision: Endorsed.**

**R4-2110211 Simulation results for NR V2X PSSCH test case**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2110516 Simulation results for PSSCH performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

###### 6.2.4.2.2 PSCCH demodulation test

**R4-2109193 Draft CR on NR V2X single link PSCCH requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108531 (from R4-2109193).**

**R4-2108531 Draft CR on NR V2X single link PSCCH requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Endorsed.**

**R4-2110203 Simulation results for NR V2X PSCCH test case**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2110517 Simulation results for PSCCH performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

###### 6.2.4.2.3 PSBCH demodulation test

**R4-2109048 CR for 38.101-4, Remove square bracket for PSBCH SNR value**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0183 rev Cat: B (Rel-16)  
  
 Source: CATT, GOHIGH*

**Decision: Not pursued.**

**R4-2109049 CR for 38.101-4, Introduce PSBCH performance requirements**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0184 rev Cat: B (Rel-16)  
  
 Source: CATT, GOHIGH*

**Decision: Not pursued.**

**R4-2108527 Draft CR for 38.101-4, Introduce PSBCH performance requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: CATT, GOHIGH*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2109194 Simulation results for NR V2X single link PSBCH requirements**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2110204 Simulation results for NR V2X PSBCH test case**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2110518 Simulation results for PSBCH performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

###### 6.2.4.2.4 PSFCH demodulation test

**R4-2110519 Simulation results for PSFCH performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2108529 Draft CR on NR V2X PSFCH demodulation requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: MediaTek*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

##### 6.2.4.3 Multiple link test

**R4-2109197 Summary of NR V2X multiple link simulation results**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109567 On NR V2X Multiple Link Demod Requirement**

*Type: discussion For: Discussion  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

**R4-2108534 Draft CR for 38.101-4: Introduction of PSFCH decoding capability test for NR V2X**  *Type: draftCR For: Endorsement  
38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
Source: Huawei, HiSilicon*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2108535 Draft CR for 38.101-4: Introduction of PSCCH decoding capability test for NR V2X.**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108079 (from R4-2108535).**

**R4-2108079 Draft CR for 38.101-4: Introduction of PSCCH decoding capability test for NR V2X.**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

###### 6.2.4.3.1 Power imbalance requirement

**R4-2109047 Simulation results of NR V2X single link demodulation test**

*Type: other For: Discussion  
 Source: CATT, GOHIGH*

**Decision: Noted.**

**R4-2110520 Simulation results for NR V2X power imbalance test**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110521 Draft CR: Introduction on NR V2X power imbalance test**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108532 (from R4-2110521).**

**R4-2108532 Draft CR: Introduction on NR V2X power imbalance test**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

###### 6.2.4.3.2 HARQ soft buffer combing test

**R4-2109195 Simulation results for NR V2X multiple link HARQ soft buffer combing requirements**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109566 Draft CR: Demod HARQ buffer soft combining test cases for NR V2X**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Qualcomm, Inc.*

**Decision: Revised to R4-2108533 (from R4-2109566).**

**R4-2108533 Draft CR: Demod HARQ buffer soft combining test cases for NR V2X**

*Type: draftCR For: Endorsement  
 38.101-4 v16.4.0 CR- rev Cat: B (Rel-16)  
  
 Source: Qualcomm, Inc.*

**Decision: Endorsed.**

**R4-2110522 Simulation results for NR V2X soft buffer combing test**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

###### 6.2.4.3.3 PSFCH decoding capability test

**R4-2109196 Discussion on NR V2X multiple link PSFCH decoding capability test requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109719 Discussion on test method for PSFCH decoding capability test**

*Type: discussion For: (not specified)  
 Source: LG Electronics Inc.*

**Decision: Noted.**

**R4-2110523 Discussion on NR V2X PSFCH decoding capability test**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

###### 6.2.4.3.4 PSCCH/PSSCH decoding capability

**R4-2110524 Discussion on NR V2X PSCCH decoding capability test**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

### 6.3 Integrated Access and Backhaul for NR

#### 6.3.1 RF requirements maintenance

**R4-2108430 Email discussion summary for [99-e][305] NR\_IAB\_RF\_Maintenance**

*Type: other For: Information  
 Source: Moderator (CATT)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108681 (from R4-2108430).**

**R4-2108681 Email discussion summary for [99-e][305] NR\_IAB\_RF\_Maintenance**

*Type: other For: Information  
 Source: Moderator (CATT)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2110000 Big CR for update on TR38.809**

*Type: CR For: Agreement  
 38.809 v16.2.0 CR-0003 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Agreed.**

**R4-2108097 Big CR for update Core part of TS 38.174**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-? rev Cat: F (Rel-16)  
  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Agreed.**

##### 6.3.1.1 Transmitter requirements

**R4-2109016 Draft CR for TS 38.174: IAB-MT EVM measurement**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108536 (from R4-2109016).**

**R4-2108536 Draft CR for TS 38.174: IAB-MT EVM measurement**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Endorsed.**

**R4-2110137 CR to TS 38.174 – corrections to general and transmitter part**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-0012 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108537 (from R4-2110137).**

**R4-2108537 CR to TS 38.174 – corrections to general and transmitter part**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-0012 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2111183 CR on the further clear up the IAB specification**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

in this CR, further clear up 38.174 is proposed

**Decision: Not pursued.**

**R4-2108539 CR on the further clear up the IAB specification**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

in this CR, further clear up 38.174 is proposed

**Decision: Withdrawn.**

##### 6.3.1.2 Receiver requirements

**R4-2110138 CR to TS 38.174 – corrections to receiver part**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-0013 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Not pursued.**

**R4-2108538 CR to TS 38.174 – corrections to receiver part**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-0013 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Withdrawn.**

#### 6.3.2 RF conformance testing

##### 6.3.2.1 General and work plan

**R4-2108431 Email discussion summary for [99-e][306] NR\_IAB\_Conformance\_Part1**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108682 (from R4-2108431).**

**R4-2108682 Email discussion summary for [99-e][306] NR\_IAB\_Conformance\_Part1**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Session Chair Note: The RF conformance can be considered as completed; remaining issues can be futher discussed in maintenance phase.**

**R4-2108563 WF on single RB High PSD**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

Nokia: Nokia has expressed technical concerns on potential coexistence impacts using only test model with full RBs allocation at band edge for IAB transmitter unwanted emission test, but accepted this WF as the majority view to complete the WI as scheduled.

**R4-2108095 Big TP to TS 38.176-1 on RF part**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108096 Big TP to TS 38.176-2 on RF part**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108564 IAB-MT MU spreadsheet**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108565 TP to TS 38.176-1 on test efficiency clause 4.13**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**Session Chair Note：Need to be aligned with the OTA version (R4-2108566) and which can be addressed next meeting.**

**R4-2108566 TP to TS 38.176-2 on test efficiency clause 4.13**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**Session Chair Note: Table 4.13-3, OTA out of band blocking row, test requirement applicability should be blank which can be corrected next meeting**

**R4-2108432 Email discussion summary for [99-e][307] NR\_IAB\_Conformance\_Part2**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108683 (from R4-2108432).**

**R4-2108683 Email discussion summary for [99-e][307] NR\_IAB\_Conformance\_Part2**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

##### 6.3.2.2 Common test issues for conducted and radiated conformance testing

###### 6.3.2.2.1 Test configurations

**R4-2109017 TP for TS 38.176-1: Test configurations and applicability of requirements**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108569 (from R4-2109017).**

**R4-2108569 TP for TS 38.176-1: Test configurations and applicability of requirements**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2109018 TP for TS 38.176-2: Test configurations and applicability of requirements**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108570 (from R4-2109018).**

**R4-2108570 TP for TS 38.176-2: Test configurations and applicability of requirements**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2110140 Discussion on IAB test configurations with TPs to 38.176-1 and 38.176-2**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2111398 Discussion on Test models and Test configurations**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discussion on the test models and test configurations

**Decision: Noted.**

###### 6.3.2.2.2 Test models

**R4-2110139 TDD pattern for IAB test models**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2111174 IAB Common test issue on test model-Conducted**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our investigation on how the IAB-MT conducted test model should be defined.

**Decision: Revised to R4-2108567 (from R4-2111174).**

**R4-2108567 TP to TS 38.176-1: IAB Common test issue on test model-Conducted**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our investigation on how the IAB-MT conducted test model should be defined.

**Decision: Approved.**

**R4-2111205 IAB Common test issue on test model-OTA**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our investigation on how the IAB-MT OTA test model should be defined.

**Decision: Revised to R4-2108568 (from R4-2111205).**

**R4-2108568 TP to TS 38.176-2: IAB Common test issue on test model-OTA**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our investigation on how the IAB-MT OTA test model should be defined.

**Decision: Approved.**

###### 6.3.2.2.3 Others

**R4-2109020 TP for TS 38.176-1: Annex B and C**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108571 (from R4-2109020).**

**R4-2108571 TP for TS 38.176-1: Annex B and C**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2109022 TP for TS 38.176-2: Annex B and C**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108572 (from R4-2109022).**

**R4-2108572 TP for TS 38.176-2: Annex B and C**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Approved.**

**Session Chair Note: Table c.1-1 MU value for row 6.4.2 should be: ±0.7 dB, BW ≤ 40MHz, ±1.0 dB, 40MHz < f ≤ 100MHz; Table c.2-2 IAB-MT TT value for rows, 7.5.1, 7.5.2, 7.6, 7.7 should be 0dB. Such erros can be corrected in big TP for email approval.**

**R4-2109831 IAB RF conformance test efficiency improvement**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110420 IAB-MT conformance Test about EVM annex text**

*Type: discussion For: Agreement  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2110578 IAB-MT conformance Test setup MU**

*Type: discussion For: Agreement  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2110847 TP to TS 38.176-1 – Clause 3**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Text proposal for Clause 3 of IAB conducted conformance spec

**Decision: Withdrawn.**

**R4-2110926 TP to TS 38.176-1 – Clause 3**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Text proposal for Clause 3 of IAB conducted conformance spec

**Decision: Not pursued.**

**R4-2111179 On IAB test case reduction for IAB Conducted conformance test**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on conducted test reduction..

**Decision: Not pursued.**

**R4-2111180 On IAB test case reduction for IAB OTA conformance test.**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on OTA test reduction..

**Decision: Not pursued.**

**R4-2111400 TP to TS 38.176-1 -Clause 4.1**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to clause 4.1 on test uncertainties

**Decision: Revised to R4-2108573 (from R4-2111400).**

**R4-2108573 TP to TS 38.176-1 -Clause 4.1**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to clause 4.1 on test uncertainties

**Decision: Approved.**

**R4-2111401 TP to TS 38.176-2 -Clause 4.1**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to clause 4.1 on test uncertainties

**Decision: Revised to R4-2108574 (from R4-2111401).**

**R4-2108574 TP to TS 38.176-2 -Clause 4.1**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to clause 4.1 on test uncertainties

**Decision: Agreed.**

**R4-2111407 Discussion on MU values**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discussion on MU values and MU value spreadsheet

**Decision: Noted.**

##### 6.3.2.3 Conducted conformance testing

**R4-2111397 TS 38.176-1 -Updated TS 37.176-1**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

Update TS 38.176-1 with approved TP's from last meeting

**Decision: Approved.**

**R4-2111399 TP to TS 38.176-1 -Clean up**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

Editor clean up of TS 38.176-1, including references, and defined terms updates.

**Decision: Approved.**

###### 6.3.2.3.1 Transmitter characteristics

**R4-2109019 TP for TS 38.176-1: Transmitted signal quality**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108710 (from R4-2109019).**

**R4-2108710 TP for TS 38.176-1: Transmitted signal quality**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2111175 On IAB-MT dynamic range and power control test for conduct test**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present out views on the power control conducted test and relation to the Tx dynamic range test.

**Decision: Noted.**

**R4-2111402 Discussion on IAB-MT TX dynamic range testing**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discussion on testing of IAB-MT Tx dynamic range

**Decision: Noted.**

**R4-2111403 TP to TS 38.176-1 - OTA Tx dynamic range, clause 6.3**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Tx dynamic range clause

**Decision: Revised to R4-2108575 (from R4-2111403).**

**R4-2108575 TP to TS 38.176-1 - OTA Tx dynamic range, clause 6.3**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Tx dynamic range clause

**Decision: Revised to R4-2108087 (from R4-2108575).**

**R4-2108087 TP to TS 38.176-1 - OTA Tx dynamic range, clause 6.3**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Tx dynamic range clause

**Decision: Approved.**

###### 6.3.2.3.2 Receiver characteristics

**R4-2111177 TP for IBB, OBB and RX spurious of conducted receiver test**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we propose the minor updates on TP for IBB, OBB and RX spurious for conducted receiver conformance test.

**Decision: Approved.**

**R4-2111405 TP to TS 38.176-1 - Sensitivity, clause 7.2**

*Type: pCR For: Approval  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Rx sensitivity clause

**Decision: Approved.**

###### 6.3.2.3.3 Other test issues

**R4-2109832 TP to TS 38.176-1 Clause 4.6 Declarations for IAB conducted test specification**

*Type: pCR For: Endorsement  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108576 (from R4-2109832).**

**R4-2108576 TP to TS 38.176-1 Clause 4.6 Declarations for IAB conducted test specification**

*Type: pCR For: Endorsement  
 38.176-1 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2110609 TP to TS 38.176-1: Annex G and H: In-channel TX test**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2108577 (from R4-2110609).**

**R4-2108577 TP to TS 38.176-1: Annex G and H: In-channel TX test**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2111181 IAB-MT specific declaration FR1**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our proposal for IAB-MT specific declaration.

**Decision: Not pursued.**

##### 6.3.2.4 Radiated conformance testing

**R4-2110944 TS 38.176-2 v.0.1.0 - update after RAN4#98bis meeting**

*Type: draft TS For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2110945 TP to 38.176-2 Editor update - editorials**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108578 (from R4-2110945).**

**R4-2108578 TP to 38.176-2 Editor update - editorials**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

###### 6.3.2.4.1 Transmitter characteristics

**R4-2109021 TP for TS 38.176-2: OTA transmitted signal quality**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2108579 (from R4-2109021).**

**R4-2108579 TP for TS 38.176-2: OTA transmitted signal quality**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2110142 TP to TS 38.176-2: clauses 6.1, 6.2, 6.3 and 6.7**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108580 (from R4-2110142).**

**R4-2108580 TP to TS 38.176-2: clauses 6.1, 6.2, 6.3 and 6.7**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2111176 On IAB-MT dynamic range and power control test for OTA test**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present out views on the power control OTA test and relation to the Tx dynamic range test.

**Decision: Not pursued.**

**R4-2111404 TP to TS 38.176-2 - OTA Tx dynamic range, clause 6.4**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Tx dynamic range clause

**Decision: Revised to R4-2108582 (from R4-2111404).**

**R4-2108582 TP to TS 38.176-2 - OTA Tx dynamic range, clause 6.4**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Tx dynamic range clause

**Decision: Revised to R4-2108088 (from R4-2108582).**

**R4-2108088 TP to TS 38.176-2 - OTA Tx dynamic range, clause 6.4**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Tx dynamic range clause

**Decision: Approved.**

###### 6.3.2.4.2 Receiver characteristics

**R4-2110608 TP to TS 38.176-2: RX ICS requirements**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2111178 TP on IBB, OBB and RX spurious for OTA receiver characteristic test**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we propose the the minor updates onTP for IBB, OBB and RX spurious for OTA receiver conformance test.

**Decision: Approved.**

**R4-2111406 TP to TS 38.176-2 - OTA Sensitivity, clause 7.2, 7.3**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei*

**Abstract:**

TP to update Rx OTA sensitivity clause

**Decision: Approved.**

###### 6.3.2.4.3 Other test issues

**R4-2109833 TP to TS 38.176-2 Clause 4.6 Declarations for IAB radiated test specification**

*Type: pCR For: Endorsement  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108583 (from R4-2109833).**

**R4-2108583 TP to TS 38.176-2 Clause 4.6 Declarations for IAB radiated test specification**

*Type: pCR For: Endorsement  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2109999 TP to TS38.176-2 on Annex I and Annex K**

*Type: draftCR For: Endorsement  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Samsung*

**Decision: Revised to R4-2108584 (from R4-2109999).**

**R4-2108584 TP to TS38.176-2 on Annex I and Annex K**

*Type: draftCR For: Endorsement  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Samsung*

**Decision: Approved.**

**R4-2110610 TP to TS 38.176-2: Annex L and M: In-channel TX test**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2108585 (from R4-2110610).**

**R4-2108585 TP to TS 38.176-2: Annex L and M: In-channel TX test**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2110811 TP to TS 38.176-2 – Clause 3**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

**R4-2110818 TP to TS 38.176-2 – Clause 3**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2108586 (from R4-2110818).**

**R4-2108586 TP to TS 38.176-2 – Clause 3**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Approved.**

**R4-2111182 IAB-MT specific declaration FR2**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our proposal for IAB-MT specific declaration.

**Decision: Revised to R4-2108587 (from R4-2111182).**

**R4-2108587 IAB-MT specific declaration FR2**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

In this paper, we present our proposal for IAB-MT specific declaration.

**Decision: Approved.**

#### 6.3.5 EMC performance requirements

**R4-2109651 CR to TS 38.175: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 38.175 v16.1.0 CR-0014 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2108476 (from R4-2109651).**

**R4-2108476 CR to TS 38.175: Radiated emission, ancillary equipment**

*Type: CR For: Agreement  
 38.175 v16.1.0 CR-0014 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2110042 Discussion on the definition of Exclusion Bands and Spatial Exclusion for IAB EMC nodes**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on the definition of Exclusion Bands and Spatial Exclusion for IAB EMC nodes

**Decision: Noted.**

**R4-2110043 CR on exclusion bands and spatial exclusion for IAB EMC Radiated Immunity testing**

*Type: CR For: Agreement  
 38.175 v16.1.0 CR-0015 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR on exclusion bands and spatial exclusion for IAB EMC Radiated Immunity testing

**Decision: Revised to R4-2108477 (from R4-2110043).**

**R4-2108477 CR on exclusion bands and spatial exclusion for IAB EMC Radiated Immunity testing**

*Type: CR For: Agreement  
 38.175 v16.1.0 CR-0015 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR on exclusion bands and spatial exclusion for IAB EMC Radiated Immunity testing

**Decision: Agreed.**

**R4-2111466 Draft CR to TS 38.175: IAB EMC test configurations and performance requirements (updated)**

*Type: draftCR For: Endorsement  
 38.175 v16.1.0 CR- rev Cat: B (Rel-16)  
  
 Source: Huawei*

**Abstract:**

Last meeting the IAB EMC test configurations and performance requirements were discussed, based on R4-2106511. During the second round, all the comments shared were not addressed.

For sake of progress, we re-submit (part of the) CR version which was comm

**Decision: Withdrawn.**

**R4-2108478 CR to TS 38.175: IAB EMC test configurations and performance requirements (updated)**

*Type: CR For: Agreement  
 38.175 v16.1.0 CR-XXX rev Cat: B (Rel-16)  
  
 Source: Huawei*

**Abstract:**

Last meeting the IAB EMC test configurations and performance requirements were discussed, based on R4-2106511. During the second round, all the comments shared were not addressed.

For sake of progress, we re-submit (part of the) CR version which was comm

Session Chair Note: Contact with MCC to get CR number

**Decision: Agreed.**

#### 6.3.6 Demodulation and CSI requirements

**R4-2109208 draftCR to 38.174: IAB-MT and IAB-DU performance requirements**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108606 (from R4-2109208).**

**R4-2108606 draftCR to 38.174: IAB-MT and IAB-DU performance requirements**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Endorsed.**

**R4-2109209 TP to TS 38.176-1: FRC and PRACH test preambles**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108607 (from R4-2109209).**

**R4-2108607 TP to TS 38.176-1: FRC and PRACH test preambles**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Approved.**

**R4-2109210 TP to TS 38.176-2: Demodulation manufacturer declarations**

*Type: pCR For: Approval  
 38.176-2 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2108605 (from R4-2109210).**

**R4-2108605 TP to TS 38.176-2: Demodulation manufacturer declarations**

*Type: pCR For: Approval  
 38.176-2 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Approved.**

**R4-2109211 Big TP to TS 38.176-1: IAB demodulation performance requirements**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Intel Corporation*

**Decision: Approved.**

##### 6.3.6.1 General

**R4-2108450 Email discussion summary for NR\_IAB\_Demod**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108684 (from R4-2108450).**

**R4-2108684 Email discussion summary for NR\_IAB\_Demod**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Session Chair: IAB demod can be considered as completed, remaining issues can be discussed in maintenance phase.**

**R4-2108588 Way forward on IAB-MT applicability rules drafting in conformance specification**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108589 WF on Rel-16 NR IAB demodulation requirements**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2110537 pCR on IAB conducted conformance testing (Manufacturer declarations) to TS 38.176-1**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108590 (from R4-2110537).**

**R4-2108590 pCR on IAB conducted conformance testing (Manufacturer declarations) to TS 38.176-1**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2110538 pCR on IAB radiated conformance testing (FRCs and PRACH test preambles) to TS 38.176-2**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108591 (from R4-2110538).**

**R4-2108591 pCR on IAB radiated conformance testing (FRCs and PRACH test preambles) to TS 38.176-2**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2110722 pCR to 38.176-1: Introduction of annexes on test tolerance, test setup and propagation conditions for performance requirements**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing annexes according to work split

**Decision: Revised to R4-2108592 (from R4-2110722).**

**R4-2108592 pCR to 38.176-1: Introduction of annexes on test tolerance, test setup and propagation conditions for performance requirements**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing annexes according to work split

**Decision: Approved.**

**R4-2110723 Draft CR to 38.174: FRCs and PRACH preambles**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing FRCs according to work split

**Decision: Revised to R4-2108593 (from R4-2110723).**

**R4-2108593 Draft CR to 38.174: FRCs and PRACH preambles**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing FRCs according to work split

**Decision: Endorsed.**

**R4-2110725 General issues for IAB specifications**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Proposals for remaining general issues

**Decision: Noted.**

**R4-2111348 draftTP to TS 38.176-2 IAB-DU performance requirements and parts of DU and MT appendix**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108594 (from R4-2111348).**

**R4-2108594 draftTP to TS 38.176-2 IAB-DU performance requirements and parts of DU and MT appendix**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2111396 bigTP draft to TS 38.176-2 Demodulation performance**

*Type: pCR For: Approval  
 38.176-2 v0.1.0 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

##### 6.3.6.2 IAB-DU performance requirements

**R4-2110717 Draft CR to 38.174: Introduction of IAB-DU performance requirements**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing DU requirements according to work split

**Decision: Revised to R4-2108595 (from R4-2110717).**

**R4-2108595 Draft CR to 38.174: Introduction of IAB-DU performance requirements**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR- rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing DU requirements according to work split

**Decision: Endorsed.**

**R4-2111350 draftTP to TS 38.176-1 IAB-DU performance requirements**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108596 (from R4-2111350).**

**R4-2108596 draftTP to TS 38.176-1 IAB-DU performance requirements**

*Type: pCR For: Approval  
 38.176-1 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

##### 6.3.6.3 IAB-MT performance requirements

**R4-2109207 Views on IAB-MT demodulation performance requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2110539 Big CR on IAB-MT demodulation in TS 38.174**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-0016 rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108604 (from R4-2110539).**

**R4-2108604 Big CR on IAB-MT demodulation in TS 38.174**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-0016 rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110540 Discussion on NR IAB-MT demodulation performance requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110541 Updated simulation results on NR IAB-MT demodulation performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110542 Updated simulation assumptions for NR IAB-MT demodulation requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110543 Summary of simulation results for NR IAB-MT demodulation requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110544 pCR on IAB-MT conducted conformance testing (CSI reporting and Interworking) to TS 38.176-1**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108597 (from R4-2110544).**

**R4-2108597 pCR on IAB-MT conducted conformance testing (CSI reporting and Interworking) to TS 38.176-1**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2110545 CR on IAB-MT conducted performance requirements (General and Demodulation) in TS 38.174**

*Type: CR For: Agreement  
 38.174 v16.2.0 CR-0017 rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**R4-2108598 draftCR on IAB-MT conducted performance requirements (General and Demodulation) in TS 38.174**

*Type: draftCR For: Endorsement  
 38.174 v16.2.0 CR-X rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2110546 pCR on IAB-MT radiated conformance testing (General and Demodulation) to TS 38.176-2**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108599 (from R4-2110546).**

**R4-2108599 pCR on IAB-MT radiated conformance testing (General and Demodulation) to TS 38.176-2**

*Type: pCR For: Approval  
 38.176-2 v0.0.1 CR- rev Cat: (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2110721 pCR to 38.176-2: Introduction of CSI-RS performance tests and requirements**

*Type: pCR For: Approval  
 38.176-2 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing CSI test requirements according to work split

**Decision: Revised to R4-2108600 (from R4-2110721).**

**R4-2108600 pCR to 38.176-2: Introduction of CSI-RS performance tests and requirements**

*Type: pCR For: Approval  
 38.176-2 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing CSI test requirements according to work split

**Decision: Approved.**

**R4-2110724 pCR to 38.176-1: IAB-MT performance tests**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing MT demodulation requirements according to work split

**Decision: Revised to R4-2108601 (from R4-2110724).**

**R4-2108601 pCR to 38.176-1: IAB-MT performance tests**

*Type: pCR For: Approval  
 38.176-1 v0.0.0 CR- rev Cat: (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introducing MT demodulation requirements according to work split

**Decision: Approved.**

**R4-2110726 IAB-MT related proposals**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Proposals for remaining IAB-MT issues

**Decision: Noted.**

**R4-2111025 On IAB-MT demodulation requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The paper discusses a few open issues left regarding the IAB-MT demodulation performance and CSI reporting requirements, such as down scoping and changing of propagation conditions, test tolerances, PMI and RI reporting, and CR editorial questions.

**Decision: Noted.**

**R4-2111027 On IAB-MT demodulation requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The paper discusses a few open issues left regarding the IAB-MT demodulation performance and CSI reporting requirements, such as down scoping and changing of propagation conditions, test tolerances, PMI and RI reporting, and CR editorial questions.

**Decision: Noted.**

**R4-2111237 TS 38.174 draftCR CSI reporting radiated performance requirements**

*Type: draftCR For: Approval  
 38.174 v16.2.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2108602 (from R4-2111237).**

**R4-2108602 TS 38.174 draftCR CSI reporting radiated performance requirements**

*Type: draftCR For: Approval  
 38.174 v16.2.0 CR- rev Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

### 6.7 R16 TEI

## 7 Rel-17 maintenance for both NR and LTE

### 7.1 Introduction of FR2 FWA UE with maximum TRP of 23dBm for n257 and n258

#### 7.1.4 Others

**R4-2110639 Removal of [] from Noc power level for n257/n258 PC5**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0244 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR removes [ ] from Noc power level for n257/n258 PC5.

**Decision: Agreed.**

## 8 Rel-17 spectrum related Work Items for NR

### 8.2 Introduction of NR 47 GHz band

#### 8.2.2 BS RF requirements (38.104)

**R4-2108433 Email discussion summary for [99-e][308] NR\_47GHz\_Band\_BSRF\_NWM**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108685 (from R4-2108433).**

**R4-2108685 Email discussion summary for [99-e][308] NR\_47GHz\_Band\_BSRF\_NWM**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108608 WF on Rx MU for n262**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2110089 CR to TS 38.104: Introduction of band n262**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0318 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces band n262 in BS core specifications

**Decision: Revised to R4-2108741 (from R4-2110089).**

**R4-2108741 CR to TS 38.104: Introduction of band n262**

*Type: CR For: Agreement  
 38.104 v17.1.0 CR-0318 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces band n262 in BS core specifications

**Decision: Agreed.**

#### 8.2.3 BS conformance (38.141)

**R4-2110088 47GHz band - Measurement uncertainties for BS requirements**

*Type: other For: Approval  
 Source: Ericsson, Nokia, T-Mobile USA, DISH Network*

**Abstract:**

This contribution discusses the measurement uncertainties for BS requirements at 47GHz

**Decision: Noted.**

**R4-2110480 47 GHz band MU and TT for NR BS RF requirement**

*Type: discussion For: Agreement  
 Source: Keysight Technologies UK Ltd, Rohde & Schwarz*

**Decision: Noted.**

**R4-2111218 TP to TR 38.847: BS conformance aspects**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Not pursued.**

**R4-2111463 Consideration of TR 37.941 and correction of the MU contributors for the FR2 TE**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

In this contribution we provide brief discussion on general aspects related to the BS RF conformance requirements and related OTA testing for n262, in relation to the OTA BS testing TR 37.941.

**Decision: Noted.**

**R4-2111465 Draft CR to 38.141-2: Introduction of n262 (updated)**

*Type: draftCR For: Endorsement  
 38.141-2 v17.1.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei*

**Abstract:**

Last meeting Draft CR to the TS 38.141-2 specification was Endorsed in R4-2107039 implementing number of n262 agreements into TS 38.141-2. As per Rapporteur's task, content of the Draft CR was reviewed and number of further improvements were identified.

**Decision: Noted.**

#### 8.2.5 Demodulation and CSI requirements

##### 8.2.5.1 UE demodulation (38.101-4)

**R4-2108451 Email discussion summary for [99-e][326] NR\_R17\_SpectrumWI\_Demod**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108687 (from R4-2108451).**

**R4-2108687 Email discussion summary for [99-e][326] NR\_R17\_SpectrumWI\_Demod**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108610 Way forward on UE demodulation on NR 47GHz band**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108755 (from R4-2108610).**

**R4-2108755 Way forward on UE demodulation on NR 47GHz band**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2109218 Applicability of UE demodulation requirements to 47GHz band**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2110551 Discussion on NR UE demodulation for 47GHz band**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110645 Applicability of FR2 UE demodulation requirements for NR 47GHz band**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the applicability of the existing FR2 UE demodulation requirements to NR 47GHz band (n262).

**Decision: Noted.**

**R4-2110646 draft CR: TS 38.101-4: n262 demodulation requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.0.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR introduces Noc for power level and test applicability for n262.

**Decision: Postponed.**

**R4-2110765 Extension of PDSCH Demodulation Requirements to 47 GHz band**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 8.2.5.2 BS demodulation (38.104)

**R4-2110592 CR for 38.141-2: Add AWGN Offset note to FR2 demod noise level**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0339 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Added note in FR2 OTA test procedure sections that was agreed in [R4-2106091].

**Decision: Revised to R4-2108611 (from R4-2110592).**

**R4-2108611 CR for 38.141-2: Add AWGN Offset note to FR2 demod noise level**

*Type: CR For: Agreement  
 38.141-2 v17.1.0 CR-0339 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Added note in FR2 OTA test procedure sections that was agreed in [R4-2106091].

**Decision: Not pursued.**

### 8.5 Introduction of 900 MHz spectrum to 5G NR applicable for Rail Mobile Radio

#### 8.5.1 General

**R4-2111220 On 900MHz RMR RAN4 requirements impact due to ECC Decision (20)02**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

Session Chair Note: Proposal 1 &3 handled in this session.

**Decision: Noted.**

#### 8.5.3 BS RF requirements

**R4-2108442 Email discussion summary for [99-e][317] RAIL\_900\_1900MHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108686 (from R4-2108442).**

**R4-2108686 Email discussion summary for [99-e][317] RAIL\_900\_1900MHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108609 WF on BS RF requirements for the RMR 900 and RMR 1900 WI**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2111052 Discussion on the BS RF requirements for the RMR 900 WI**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

In this contribution provide further analysis on BS RF related aspects of the RMR 900 topic.

**Decision: Noted.**

**R4-2111053 Draft CR to TS38.104: capturing agreements on the BS aspects for RMR bands**

*Type: draftCR For: Endorsement  
 38.104 v17.1.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei*

**Abstract:**

As there is no dedicated TR for the RMR900/1900, it is proposed to capture agreeable proposals into a Draft CR to TS 38.104, for both RMR900 and RMR1900 related requirements.

**Decision: Not pursued.**

### 8.6 Introduction of 1900 MHz spectrum to 5G NR applicable for Rail Mobile Radio

#### 8.6.1 General

**R4-2111221 On 1900MHz RMR RAN4 requirements impact due to ECC Decision (20)02**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

Session Chair Note: Proposal 1 &3 handled in this session.

**Decision: Noted.**

#### 8.6.3 BS RF requirements

**R4-2111056 Discussion on the BS RF requirements for the RMR 1900 WI**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

In this contribution provide further analysis on BS RF related aspects of the RMR 1900 topic.

**Decision: Noted.**

### 8.28 Introduction of channel bandwidths 35MHz and 45MHz for NR

#### 8.28.5 UE demodulation and CSI requirements

**R4-2109219 PDSCH CA simulation results for 35 and 45 MHz CBWs**

*Type: other For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2110547 Discussion and simulation results on NR UE demodulation for 35MHz and 45MHz bandwidth**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110548 Summary of simulation results for 35MHz and 45MHz channel bandwidth for FR1 FDD**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110549 CR on UE demodulation and CSI repopting for 35MHz and 45MHz channel bandwidth for FR1 FDD (Rel-16)**

*Type: CR For: Agreement  
 38.101-4 v16.4.0 CR-0222 rev Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**R4-2110550 CR on UE demodulation and CSI repopting for 35MHz and 45MHz channel bandwidth for FR1 FDD (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0223 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2108612 (from R4-2110550).**

**R4-2108612 CR on UE demodulation and CSI repopting for 35MHz and 45MHz channel bandwidth for FR1 FDD (Rel-17)**

*Type: CR For: Agreement  
 38.101-4 v17.0.0 CR-0223 rev Cat: A->B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2110644 PDSCH simulation results for CBW 35MHz/45MHz**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution provides the simulation results of PDSCH for 35MHz/45MHz in FR1

**Decision: Noted.**

**R4-2111167 Simulation results for 35MHz and 45MHz PDSCH FDD CA Tests**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

## 9 Rel-17 non-spectrum related work items for NR

### 9.1 Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) requirements for NR UEs

#### 9.1.1 General

**R4-2108460 Email discussion summary for [99-e][334] NR\_MIMO\_OTA**

*Type: other For: Information  
 Source: Moderator (CAICT)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108688 (from R4-2108460).**

**R4-2108688 Email discussion summary for [99-e][334] NR\_MIMO\_OTA**

*Type: other For: Information  
 Source: Moderator (CAICT)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108613 WF on MIMO OTA**

*Type: other For: Approval  
 Source: vivo, CAICT*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108085 (from R4-2108613).**

**R4-2108085 WF on MIMO OTA**

*Type: other For: Approval  
 Source: vivo, CAICT*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2109659 3GPP TS 38.151 v0.4.0**

*Type: draft TS For: Approval  
 38.151 v0.4.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Revised to R4-2108094 (from R4-2109659).**

**R4-2108094 3GPP TS 38.151 v0.4.0**

*Type: draft TS For: Approval  
 38.151 v0.4.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Approved.**

**R4-2111001 On Blocking Issue for FR2 MIMO OTA**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2108618 On Blocking Issue for FR2 MIMO OTA**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Withdrawn.**

#### 9.1.2 Performance requirements

##### 9.1.2.1 Performance Requirements for FR1

**R4-2109661 TP to TS38.151 v0.3.0 on FR1 TRMS**

*Type: pCR For: Approval  
 38.151 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo,CAICT*

**Decision: Revised to R4-2108614 (from R4-2109661).**

**R4-2108614 TP to TS38.151 v0.3.0 on FR1 TRMS**

*Type: pCR For: Approval  
 38.151 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo,CAICT*

**Decision: Approved.**

**R4-2110177 Framework on FR1 MIMO OTA requirements development**

*Type: discussion For: Approval  
 Source: CAICT,vivo*

**Decision: Revised to R4-2108617 (from R4-2110177).**

**R4-2108617 Framework on FR1 MIMO OTA requirements development**

*Type: discussion For: Approval  
 Source: CAICT,vivo*

**Decision: Approved.**

##### 9.1.2.2 Performance Requirements for FR2

**R4-2109580 View on FR2 MIMO OTA simulation**

*Type: discussion For: Approval  
 Source: MediaTek Beijing Inc.*

**Decision: Noted.**

**R4-2109663 Discussion on FR2 blocking issue**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2110796 FR2 MIMO OTA performance requirements**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2111388 Simulation assumptions for NR FR2 MIMO OTA**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2111391 TP to 38.151 on MIMO Average Spherical Coverage**

*Type: pCR For: Agreement  
 38.151 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

#### 9.1.3 Testing methodologies

##### 9.1.3.1 Testing parameters for Performance

**R4-2109538 Discussion on FR1 downlink power configuration**

*Type: discussion For: Approval  
 Source: Samsung*

**Decision: Noted.**

**R4-2109660 TP to TS38.151 v0.3.0 on CDL-C UMi channel model**

*Type: pCR For: Approval  
 38.151 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo,CAICT*

**Decision: Approved.**

**R4-2110167 Discussion on downlink power configuration**

*Type: discussion For: Approval  
 Source: CAICT*

**Decision: Noted.**

**R4-2110837 Channel model for FR1 4x4 MIMO OTA requirement**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2111389 Discussion on FR2 MIMO OTA test remaining issue**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2111457 On DL Pmax for FR1 band frequency above 3GHz**

*Type: other For: Approval  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2111458 TP to TS 38.151 on DL Pmax and additional restriction for FR1 band frequency above 3GHz**

*Type: pCR For: Approval  
 38.151 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Not pursued.**

##### 9.1.3.2 Optimization of test methodologies

**R4-2109664 Discussion on Power Validation frequencies**

*Type: discussion For: Approval*

*Source: vivo*

**Decision: Noted.**

**R4-2110843 Quantify the FR2 blocking issue**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2111002 On NR FR2 MIMO OTA Testing Ambiguities**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

##### 9.1.3.3 Channel model validation

**R4-2109133 NR FR2 MIMO OTA Reference PAS based on different preconditions**

*Type: discussion For: Approval  
 Source: CMCC, OPPO*

**Decision: Noted.**

**R4-2108753 Spatial Correlation Reference Targets for FR1 CDL-C UMa**

*Type: other For: Approval  
 Source:* CAICT, CMCC, Spirent

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2109134 Reference Channel Emulation Curves for FR1**

*Type: discussion For: Approval  
 Source: CMCC, Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**R4-2109135 Reference Channel Emulation Curves for FR1**

*Type: discussion For: Approval  
 Source: CMCC, Huawei, HiSilicon*

**Decision:** The document was **withdrawn**.

**R4-2109662 TP to TS38.151 v0.3.0 on Power validation**

*Type: pCR For: Approval  
 38.151 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo,CAICT*

**Decision: Revised to R4-2108615 (from R4-2109662).**

**R4-2108615 TP to TS38.151 v0.3.0 on Power validation**

*Type: pCR For: Approval  
 38.151 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo,CAICT*

**Decision: Approved.**

**R4-2109748 Reference Channel Emulation Curves for FR1**

*Type: discussion For: Approval  
 Source: CMCC, Huawei, HiSilicon, CAICT*

**Decision: Revised to R4-2108616 (from R4-2109748).**

**R4-2108616 Reference Channel Emulation Curves for FR1**

*Type: discussion For: Approval  
 Source: CMCC, Huawei, HiSilicon, CAICT*

**Decision: Noted.**

**R4-2110841 gNB beams usage for spatial correlation validation**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2111003 Reference Channel Emulation Curves and a New Beam Selection for CDL-C UMa**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Revised to R4-2108619 (from R4-2111003).**

**R4-2108619 Reference Channel Emulation Curves and a New Beam Selection for CDL-C UMa**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2111273 Channel Model Targets**

*Type: other For: Approval  
 Source: Spirent Communications*

**Abstract:**

This contribution contains targets for the following:

FR1: Spatial Correlation

Temporal Correlation

PDP (low band, high band)

FR2: Temporal Correlation

PDP

**Decision: Noted.**

### 9.2 Introduction of UE TRP (Total Radiated Power) and TRS (Total Radiated Sensitivity) requirements and test methodologies for FR1 (NR SA and EN-DC)

#### 9.2.1 General and work plan

**R4-2108461 Email discussion summary for [99-e][335] FR1\_TRP\_TRS**

*Type: other For: Information  
 Source: Moderator (vivo)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108689 (from R4-2108461).**

**R4-2108689 Email discussion summary for [99-e][335] FR1\_TRP\_TRS**

*Type: other For: Information  
 Source: Moderator (vivo)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108620 WF on FR1 TRP TRS**

*Type: other For: Approval  
 Source: vivo*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108621 LS on Head and Hand Phantoms for 5G FR1 OTA testing**

*Type: LS out For: Approval  
 to: CTIA  
 Source: vivo*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108622 LS to RAN5 on MU work of FR1 TRP TRS WI**

*Type: LS out For: Approval  
 to: RAN5  
 Source:* vivo, ROHDE & SCHWARZ

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108623 Reply LS on 5G FR1 OTA Testing Method**

*Type: LS out For: Approval* To: GSMA; Cc: 3GPP RAN5, 3GPP RAN Plenary *Source:* vivo

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2110029 on TRP TRS work plan**

*Type: discussion For: (not specified)  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2110792 Workplan of TRP TRS WI**

*Type: Work Plan For: Approval  
 Source: vivo,OPPO,CMCC*

**Decision: Revised to R4-2108624 (from R4-2110792).**

**R4-2108624 Workplan of TRP TRS WI**

*Type: Work Plan For: Approval  
 Source: vivo,OPPO,CMCC*

**Decision: Approved.**

**R4-2110793 General views on TRP TRS WI**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2110803 TR Skeleton for FR1 TRP TRS OTA test methods**

*Type: other For: Approval  
 Source: vivo*

**Decision: Revised to R4-2108625 (from R4-2110803).**

**R4-2108625 TR Skeleton for FR1 TRP TRS OTA test methods**

*Type: other For: Approval  
 Source: vivo*

**Decision: Approved.**

**R4-2110804 Discussion and Reply LS to GSMA on 5G FR1 OTA Testing Method**

*Type: LS out For: Approval  
 to GSMA, cc RAN5, RAN Plenary  
 Source: vivo*

**Decision: Noted.**

**R4-2111459 On workplan for R17 NR FR1 UE TRP and TRS WI**

*Type: other For: Approval  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

#### 9.2.2 SA test methodology

**R4-2110166 Views on TRP/TRS for NR FR1 stand-alone**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2110794 Discussion on SA test method**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

#### 9.2.3 EN-DC test methodology

**R4-2110179 views on FR1 TRP&TRS EN-DC test methodology**

*Type: discussion For: Approval  
 Source: CAICT*

**Decision: Noted.**

**R4-2110802 Discussion on EN-DC test method**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2110842 Power setting for EN-DC test**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

### 9.5 NR repeater

#### 9.5.1 General

**R4-2108434 Email discussion summary for [99-e][309] NR\_Repeater\_General**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108690 (from R4-2108434).**

**R4-2108690 Email discussion summary for [99-e][309] NR\_Repeater\_General**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108626 WF on Repeater System Parameters**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108627 WF on Repeater Classes and Types**

*Type: other For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108082 (from R4-2108627).**

**R4-2108082 WF on Repeater Classes and Types**

*Type: other For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108628 WF on Repeater Requirements for TDD**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108083 (from R4-2108628).**

**R4-2108083 WF on Repeater Requirements for TDD**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108435 Email discussion summary for [99-e][310] NR\_Repeater\_RF**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108691 (from R4-2108435).**

**R4-2108691 Email discussion summary for [99-e][310] NR\_Repeater\_RF**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108629 WF on emission related conducted requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108630 WF on other RF conducted requirements and power related requirements**

*Type: other For: Approval  
 Source: A*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108631 WF on emission related radiated requirements**

*Type: other For: Approval  
Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108090 (from R4-2108631).**

**R4-2108090 WF on emission related radiated requirements**

*Type: other For: Approval  
Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108632 WF on other RF radiated requirements**

*Type: other For: Approval  
 Source: CATT*

**Abstract:**

**Discussion:**

**Decision: Approved.**

##### 9.5.1.1 System parameters

**R4-2109815 Multi-band operation of NR repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110733 Repeater system parameters**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on system parameters considerations

**Decision: Noted.**

##### 9.5.1.2 Repeater Class/Type

**R4-2109023 Discussion on repeater class and type**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109496 discussion on repeater classes**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109758 Discussion on Repeater classes and types**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2109816 Identifying classes and types for NR repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110732 Repeater classes**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposals about classes

**Decision: Noted.**

**R4-2111409 Repeater class, maximum power and type**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discussion on repeater class and maximum power parameters

**Decision: Noted.**

##### 9.5.1.3 TDD repeater synchronization assumption

**R4-2109024 Discussion on TDD switching timing accuracy requirement**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109497 discussion on TDD synchronization related requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109817 TDD repeater synchronization assumptions**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110734 Repeater TDD considerations**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposals on TDD issues

**Decision: Noted.**

##### 9.5.1.4 Others

**R4-2109481 Discussion on NR repeater core specification structure**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109482 Skeleton TS 38.106 NR Repeater radio transmission and reception v0.0.1**

*Type: draft TS For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Noted.**

**R4-2109818 Repeater timing**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2111410 Repeater pass band requirements**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discussion on repeater pass band requirements

**Decision: Noted.**

#### 9.5.2 Conductive RF core requirements

##### 9.5.2.1 Transmitted power related requirements

**R4-2109025 Discussion on NR repeater conducted output power**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109498 discussion on repeater power related conducted requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109819 Conducted power related requirements consideration for NR repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110735 Repeater conducted TX power requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposals on TX power

**Decision: Noted.**

##### 9.5.2.2 Emission requirements

**R4-2109499 discussion on repeater emission related conducted requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109713 Views on receiver spurious emission requirements for FR1 NR repeater**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

**R4-2109820 Repeater conducted unwanted emissions**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110736 Repeater conducted emissions requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposals about emissions requirements

**Decision: Noted.**

##### 9.5.2.3 Others

**R4-2109026 Discussion on NR repeater other requirements for FR1 conducted and FR2**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109500 discussion on other RF conducted requirements for NR repeater**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109821 Signal quality considerations for FR1 NR repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110737 Other repeater conducted requirements issues**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Other requirements (EVM, frequency error, IM etc.)

**Decision: Noted.**

**R4-2111411 Repeater Rx parameters**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discussion on repeater receiver sensitivity/NF requirements

**Decision: Noted.**

#### 9.5.3 Radiated RF core requirements

##### 9.5.3.1 Transmitted power related requirements

**R4-2109501 discussion on repeater power related radiated requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109822 Radiated power related requirements considration for NR repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110738 Repeater radiated TX power requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposals on TX power

**Decision: Noted.**

##### 9.5.3.2 Emission requirements

**R4-2109502 discussion on repeater emission related radiated requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109823 Repeater OTA unwanted emissions**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110739 Repeater radiated emissions requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposals about emissions requirements

**Decision: Noted.**

##### 9.5.3.3 Others

**R4-2109503 discussion on other RF radiated requirements for NR repeater**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109824 Signal quality considerations for FR2 NR repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110740 Other repeater radiated requirements issues**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Other requirements (EVM, frequency error, IM etc.)

**Decision: Noted.**

#### 9.5.4 EMC core requirements

**R4-2108479 WF on the NR repeater EMC requirements**

*Type: other For: Approval  
 Source: ZTE*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2109652 Further discussion on NR repeaters EMC**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2109916 Skeleton TS 38.114V0.0.1 “NR; Repeaters ElectroMagnetic Compatibility (EMC)”**

*Type: draft TS For: Approval  
 38.114 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2110044 Discussion on EMC requirements for NR Repeater**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion paper on EMC requirements for NR Repeater

**Decision: Noted.**

**R4-2111464 Analysis of the NR repeater implementation into the existing NR BS EMC specification TS 38.113**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Motivated by the aim to reduce future workload and maintenance effort on EMC specifications, in this contribution we investigate the possibility to incorporate the NR repeaters into the existing NR BS EMC specification TS 38.113.

**Decision: Noted.**

**R4-2111521 Discussion on NR repeater EMC**

*Type: other For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This document discusses the open issues associated with NR repeaters.

**Decision: Noted.**

### 9.6 Introduction of DL 1024QAM for NR FR1

#### 9.6.2 BS TX RF requirements

**R4-2108436 Email discussion summary for [99-e][311] NR\_DL1024QAM\_BSRF**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108692 (from R4-2108436).**

**R4-2108692 Email discussion summary for [99-e][311] NR\_DL1024QAM\_BSRF**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108633 WF on Link level simulation assumptions**

*Type: other For: Approval  
 Source: CATT*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108077 (from R4-2108633).**

**R4-2108077 WF on Link level simulation assumptions**

*Type: other For: Approval  
 Source: CATT*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108634 WF on BS requirements, class applicability and system simulatins**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

##### 9.6.2.1 Deployment and link level simulation

**R4-2109111 Link level simulation results for 1024QAM for NR FR1**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2110141 1024QAM simulation assumptions and preliminary results**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110481 1024 QAM Deployment Scenarios**

*Type: discussion For: Approval  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, Verizon, KDDI, SoftBank, NTT DOCOMO*

**Abstract:**

In this contribution, the views of the sourcing companies will be summarized on BS classes.

**Decision: Noted.**

**R4-2110606 Initial simulation results for NR 1024QAM**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2110663 Link simulation for support of 1024QAM**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

##### 9.6.2.2 EVM requirements

**R4-2109112 Discussion on BS TX RF requirements for 1024QAM for NR FR1**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2110482 Link Simulation Results for BS EVM**

*Type: discussion For: Approval  
 Source: Ericsson*

**Abstract:**

It was agreed and captured in WF on 1024 QAM BS RF [1] to further study necessary parameter considerations in relation to BS RF EVM requirement. In this contribution the focus will be upon parameters which were deemed as needing further discussions durin

**Decision: Noted.**

**R4-2110607 Discussion on BS requirements for NR 1024QAM**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2110664 BS RF requirements for support of 1024QAM**

*Type: other For: Approval  
 Source: Huawei, HiSilicon, CMCC*

**Decision: Noted.**

##### 9.6.2.3 Others

**R4-2109113 BS test requirements for 1024QAM for NR FR1**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

### 9.7 Enhancement for NR high speed train scenario in FR1

#### 9.7.3 UE demodulation requirements (38.101-4)

##### 9.7.3.1 General

**R4-2108452 Email discussion summary for [99-e][327] NR\_HST\_FR1\_Demod**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108693 (from R4-2108452).**

**R4-2108693 Email discussion summary for [99-e][327] NR\_HST\_FR1\_Demod**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108635 WF on NR HST demodulation**

*Type: other For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108636 Summary for FR1 HST demodulation results**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Noted.**

##### 9.7.3.2 PDSCH requirements for CA scenarios

**R4-2109212 Views on FR1 HST CA PDSCH performance requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109213 Simulation results for FR1 HST CA**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109356 Discussion on PDSCH CA Requirements in HST**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109357 Simulation results for HST CA scenarios**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109466 Views on FR1 HST PDSCH CA Tests**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2109513 Discussion on FR1 HST UE demodulation for CA scenario**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109519 Simulation results for HST-SFN joint transmission for CA scenario**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109765 Discussion on PDSCH requirements for CA in FR1 HST**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2110148 Views on HST CA tests for FR1**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

**R4-2110526 Discussion on PDSCH CA scenarios for NR UE HST FR1 performance requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110527 Simulation results on PDSCH CA scenarios for NR UE HST FR1 performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110640 Update of simulation results for CA PDSCH with HST**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This contributions updates our simulation results for PDSCH demodulation for HST CA.

**Decision: Noted.**

**R4-2110641 PDSCH demodulation requirements for CA with HST-SFN scenario**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues of the PDSCH demodulation requirements for CA with HST-SFN scenario.

**Decision: Noted.**

##### 9.7.3.3 Enhanced transmission schemes

**R4-2109214 Views on FR1 HST PDSCH performance requirements for multi-DCI based Tx scheme.**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2110528 Discussion on enhanced transmission schemes for NR UE HST FR1 performance requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110529 Simulation results on enhanced transmission schemes for NR UE HST FR1 performance requirements**

*Type: other For: Information  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110642 PDSCH demodulation requirements with enhanced transmission schemes in HST scenario**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the PDSCH demodulation requirements with enhanced transmission schemes in HST scenario.

**Decision: Noted.**

**R4-2110939 Discussion on multi-DCI transmission scheme for FR1 HST**

*Type: discussion For: (not specified)  
 Source: MediaTek inc.*

**Decision: Noted.**

### 9.8 NR support for high speed train scenario in FR2

#### 9.8.2 High speed train deployment scenario in FR2

**R4-2108453 Email discussion summary for [99-e][328] NR\_HST\_FR2\_Scenario**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108694 (from R4-2108453).**

**R4-2108694 Email discussion summary for [99-e][328] NR\_HST\_FR2\_Scenario**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108660 WF on FR2 HST Deployment Scenario Analysis**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108661 WF on Channel Modeling for FR2 HST**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2110533 Discussion on general issues for NR FR2 HST deployment scenario**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

Session chair Note: Move to this AI from AI 9.8.1.

**Decision: Noted.**

**R4-2109571 On NR FR2 HST Deployment Scenario Discussion**

*Type: discussion For: Discussion  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

##### 9.8.2.1 Deployment Scenario-A

**R4-2109755 Discussion on NR HST\_FR2 scenario-A**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2110234 Further Discussion on FR2 HST Deployment Scenario-A**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110534 Discussion on NR FR2 HST deployment Scenario-A**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110728 Further discussion on HST scenario A deployment**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discussion on scenario A

**Decision: Noted.**

**R4-2110952 Discussion on FR2 HST Scenario-A deployment aspects**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2111493 Discussions on HST FR2 Deployment Scenario A**

*Type: other For: Discussion  
 38.101 v CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution, we address the open issues outlined in the WF and provide our views.

**Decision: Noted.**

##### 9.8.2.2 Deployment Scenario-B

**R4-2110235 Further Discussion on FR2 HST Deployment Scenario-B**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110535 Discussion on NR FR2 HST deployment Scenario-B**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110729 Further discussion on HST scenario B deployment**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discussion on scenario B

**Decision: Noted.**

**R4-2110953 Discussion on FR2 HST Scenario-B deployment aspects**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2111496 Discussions on HST FR2 Deployment Scenario B**

*Type: other For: Discussion  
 38.133 v CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution, we address the open issues outlined in the WF and provide our views.

**Decision: Noted.**

##### 9.8.2.3 Channel modeling

**R4-2109215 Channel models for HST FR2 demodulation requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109756 Channel modeling for NR HST\_FR2**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2109808 View on FR2 HST channel model for demodulation requirement**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110536 Discussion on channel modeling for NR FR2 HST**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110727 Channel model for FR2 HST**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposal for channel model

**Decision: Noted.**

**R4-2111106 On HST FR2 Channel Modeling in UL direction**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In the paper, we are focusing on the discussion of channel models for demodulation performance requirements in the UL direction. We are addressing an FFS possibility to introduce Ds\_offset in the channel models.

**Decision: Noted.**

##### 9.8.2.4 Others

**R4-2109757 Other considerations for NR HST\_FR2**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2110731 Dual uni-directional operation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Elaborates dual uni-directional

**Decision: Noted.**

#### 9.8.5 Demodulation requirements

##### 9.8.5.1 General

**R4-2108454 Email discussion summary for [99-e][329] NR\_HST\_FR2\_Demod**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108695 (from R4-2108454).**

**R4-2108695 Email discussion summary for [99-e][329] NR\_HST\_FR2\_Demod**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108637 WF for FR2 HST Demodulation**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2109749 Discussion on Reference Signal for UL and DL**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2109805 View on demodulation requirement for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110532 Discussion on general issues for NR FR2 HST demodulation requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110720 Maximum UE velocity and RS configuration for FR2 HST UE Demod Performance Test**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2111108 On HST FR2 DM-RS Configuration in UL Direction**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this paper, we discuss the required DM-RS configuration in the UL direction for HST FR2.

**Decision: Noted.**

##### 9.8.5.2 UE demodulation requirements

**R4-2109216 View on DL demodulation requirements for HST FR2**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109750 Discussion on UE Demodulation Requirements for FR2 HST**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2109807 View on UE demodulation requirement for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110531 Discussion on UE demodulation requirements for FR2 HST**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110643 UE demodulation requirements for HST FR2**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the UE demodulation requirements for HST FR2.

**Decision: Noted.**

##### 9.8.5.3 BS demodulation requirements

**R4-2109217 View on UL demodulation requirements for HST FR2**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109806 View on BS demodulation requirement for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110530 Discussion on BS demodulation requirements for FR2 HST**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110730 BS demodulation requirements for HST FR2**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Proposals on BS demodulation

**Decision: Noted.**

**R4-2111067 On HST FR2 BS Demodulation Requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution, we further discuss open issues concerning the BS demodulation performance requirements, inc. the scope of UL requirements, and details of PUSCH, PRACH, and UL TA requirements.

**Decision: Noted.**

### 9.11 Further enhancement on NR demodulation performance

#### 9.11.1 General

**R4-2108455 Email discussion summary for [99-e][330] NR\_perf\_enh2\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108696 (from R4-2108455).**

**R4-2108696 Email discussion summary for [99-e][330] NR\_perf\_enh2\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108662 WF on CRS interference handling in scenarios with overlapping spectrum for LTE and NR**

*Type: other For: Approval  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108663 Template for simulation result collection for CRS interference handling**

*Type: other For: Information  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108456 Email discussion summary for [99-e][331] NR\_perf\_enh2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108697 (from R4-2108456).**

**R4-2108697 Email discussion summary for [99-e][331] NR\_perf\_enh2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108666 WF on MMSE-IRC receiver for intra-cell inter-user interference**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108665 WF on CQI reporting requirements for inter-cell interference MMSE-IRC**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108664 WF on general and PDSCH demodulation requirements for inter-cell interference MMSE-IRC**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108457 Email discussion summary for [99-e][332] NR\_perf\_enh2\_Demod\_Part3\_NWM**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108698 (from R4-2108457).**

**R4-2108698 Email discussion summary for [99-e][332] NR\_perf\_enh2\_Demod\_Part3\_NWM**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108667 WF on FR1 PUSCH 256QAM performance requirements**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

#### 9.11.2 UE demodulation and CSI requirements

##### 9.11.2.1 MMSE-IRC receiver for inter-cell interference

**R4-2109137 On UE MMSE-IRC receiver for inter-cell interference suppression**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2109198 Discussion on MMSE-IRC requirements for scenario with inter-cell interference**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109358 On PDSCH requirements in intercell interference scenarios**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109488 Discussion on demodulation enhancement for inter-cell interference suppressing**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109993 Remaining issues on MMSE-IRC receiver for inter-cell interference**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues of the MMSE-IRC receiver for inter-cell interference

**Decision: Noted.**

**R4-2110570 Discussion on inter-cell MMSE-IRC**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

##### 9.11.2.2 MMSE-IRC receiver for intra-cell inter-user interference

**R4-2108851 Views on PMI selection for intra-cell inter-user interference modeling**

*Type: discussion For: Approval  
 Source: Anritsu corporation*

**Abstract:**

We have shown our views on the choice of PMI selection and precoding matrix generation for intra-cell inter-user interference modeling.

**Decision: Noted.**

**R4-2109138 On UE MMSE-IRC receiver for intra-cell inter-user interference suppression**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2109199 Discussion on MMSE-IRC requirements for scenario with intra-cell inter-user interference**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109359 On PDSCH requirements in MU-MIMO scenarios**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109465 Views on Intra-cell Inter-user Interference Scenarios**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2109489 Discussion on NR demodulation enhancement for intra-cell inter-user interference suppressing**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109994 Remaining issues on MMSE-IRC receiver for intra-cell inter-user**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues of the MMSE-IRC receiver for intra-cell inter-user interference

**Decision: Noted.**

**R4-2110576 Discussion on open issues for MMSE-IRC receiver for intra-cell inter-user interference**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110940 Discussion on the MMSE-IRC receiver requirements for intra-cell inter-user interference**

*Type: discussion For: (not specified)  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2110998 Evaluation on intra-cell inter-user interference**

*Type: discussion For: Discussion  
 Source: ZTE Wistron Telecom AB*

**Decision: Noted.**

##### 9.11.2.3 Evaluation on CRS interference in scenarios with overlapping spectrum for LTE and NR

**R4-2109200 Discussion on CRS interference handling in scenarios with overlapping spectrum for LTE and NR**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109490 Discussion on LTE CRS-IM**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109585 CRS-IM for NR PDSCH in LTE/NR co-existence scenarios**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2109995 Discussion on CRS-IM with overlapping spectrum for LTE and NR**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues of the CRS-IM receiver for dynamic spectrum sharing

**Decision: Noted.**

**R4-2110571 Discussion on inter-cell CRS-IM**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110844 Views on CRS Interference Mitigation in NR**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2110941 Discussion on PDSCH requirements for CRS-IM**

*Type: discussion For: (not specified)  
 Source: MediaTek inc.*

**Decision: Noted.**

#### 9.11.3 BS demodulation requirements

##### 9.11.3.1 PUSCH demodulation requirements for FR1 256QAM

**R4-2109104 Simulation results for PUSCH 256QAM performance requirement**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109105 Discussion on PUSCH demodulation requirements for FR1 256QAM**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109136 Discussion on PUSCH FR1 256QAM demodulation requirements**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2109201 Discussion on PUSCH requirements for FR1 256QAM**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2109491 Discussion on BS demodulation enhancement for FR1 256QAM**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2109609 Discussion on PUSCH demodulation with 256QAM**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

Remaining issues in PUSCH 256QAM demodulation

**Decision: Noted.**

**R4-2109610 Simulation results for PUSCH demodulation with 256QAM**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

Simulation results for PUSCH 256QAM demodulation

**Decision: Noted.**

**R4-2109712 Views on FR1 PUSCH 256QAM**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

**R4-2109794 View on PUSCH demodulation requirement with FR1 256QAM**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2110569 Discussion on PUSCH demodulation requirements for FR1 256QAM**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110593 On PUSCH demodulation requirements for FR1 256QAM**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have provided our views on 256QAM deployment scenarios and requirement test configurations in FR1. In particular, we have discussed the MCS choice, DM-RS/PT-RS configuration, phase noise modelling, Tx EVM modelling, number of TX, R

**Decision: Noted.**

**R4-2110594 Simulation results for PUSCH demodulation requirements for FR1 256QAM**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have provided our simulation results for PUSCH demodulation requirements for FR1 256QAM.

**Decision: Noted.**

**R4-2110994 Demodulation performance requirements for NR PUSCH 256QAM**

*Type: discussion For: Discussion  
 Source: ZTE Wistron Telecom AB*

**Decision: Noted.**

### 9.12 Solutions for NR to support non-terrestrial networks (NTN)

#### 9.12.1 General and work plan

**R4-2108437 Email discussion summary for [99-e][312] NTN\_Solutions\_Part1**

*Type: other For: Information  
 Source: Moderator (Thales)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108699 (from R4-2108437).**

**R4-2108699 Email discussion summary for [99-e][312] NTN\_Solutions\_Part1**

*Type: other For: Information  
 Source: Moderator (Thales)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108643 Way Forward on NTN\_solutions\_Part1**

*Type: other For: Approval  
 Source: Thales*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108099 (from R4-2108643).**

**R4-2108099 Way Forward on NTN\_solutions\_Part1**

*Type: other For: Approval  
 Source: Thales*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2110813 Discussion of FR2 (Ka/Ku) Satellite bands for NR based satellite networks**

*Type: discussion For: Discussion  
 Source: Intelsat, Hughes, Inmarsat, ESA, Thales, Fraunhofer*

**Abstract:**

Discussion on FR2 (Ka/Ku) satellite bands for coexistence studies in NTN networks.

**Decision: Noted.**

##### 9.12.1.1 System parameters

**R4-2109053 Discussion on NTN System parameters for NTN**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2110413 Discussion on system parameters on NTN system**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110614 Discussion on system parameters for NTN**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2110688 On NTN System parameters**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2111423 Reference Deployment Scenario for NTN MSS S-Band**

*Type: discussion For: Discussion  
 Source: THALES*

**Abstract:**

The goal of this contribution is to clarify the satellite operation/deployment scenario for NTN MSS S-Band, to be used by RAN4 coexistence work.

**Decision: Noted.**

##### 9.12.1.2 NTN architecture

**R4-2109116 Open issues for NTN architecture**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2109504 NTN reference point**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2110120 Reference points and reference model for NTN**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing reference points and reference models for NTN

**Decision: Noted.**

**R4-2110194 Discussion on RF interfaces for NR to support non-terrestrial networks**

*Type: other For: Approval  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2110615 Discussion on NTN architecture**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2111460 On the Rx Parameters and Rx Testing Setup for NTN gNB**

*Type: discussion For: Discussion  
 Source: THALES*

**Abstract:**

The goal of this contribution is to further clarify the setup and/or the test feasibility of Rx requirements on NTN gNB side, for the service link.

**Decision: Noted.**

##### 9.12.1.3 Regulatory information

**R4-2109117 On NTN band definition**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2109327 Band plan and regulatory requirements related to L-band UL and S-band DL operation**

*Type: discussion For: Approval  
 Source: GLOBALSTAR Inc.*

**Decision: Noted.**

**R4-2110118 NTN - Regulatory and spectrum aspects**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Based on Radio Regulations analysis, this contribution is discussing NTN spectrum aspects and outcomes of last RAN#91-e meeting

**Decision: Noted.**

**R4-2110993 About Ka-band proposed for NR-NTN in Rel-17**

*Type: discussion For: Discussion  
 Source: Hughes/EchoStar, Inmarsat, Thales, Fraunhofer*

**Decision: Noted.**

##### 9.12.1.4 Others

#### 9.12.2 Coexistence aspects

**R4-2108438 Email discussion summary for [99-e][313] NTN\_Solutions\_Part2**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108700 (from R4-2108438).**

**R4-2108700 Email discussion summary for [99-e][313] NTN\_Solutions\_Part2**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108644 WF on [313] NTN\_Solutions\_Part2**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108093 (from R4-2108644).**

**R4-2108093 WF on [313] NTN\_Solutions\_Part2**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108645 Simulation assumptions for NTN co-existence**

*Type: other For: Approval  
 Source: Samsung, CATT*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108646 Simulation assumptions for HAPS co-existence**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108721 Template for NTN co-existence calibration results collection**

*Type: other For: Information  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Noted.**

##### 9.12.2.1 Coexistence scenarios and Simulation assumptions

**R4-2109118 Updated simulation assumptions for NTN co-existence**

*Type: discussion For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109544 Proposed simulation assumptions for NTN co-existence study**

*Type: discussion For: Approval  
 Source: Samsung*

**Decision: Noted.**

**R4-2109645 On simplification of TN UL --> NTN UL simulation**

*Type: discussion For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2110119 NTN Simulations assumptions**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution further discusses simulations assumptions, focusing on deployment models

**Decision: Noted.**

**R4-2110412 Further discussion on NTN simulation assumptions**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2110689 HAPS simulation assumptions for coexistence study**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110799 Simulation scenarios and assumptions for NTN co-existence**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2110800 HAPS coexistence simulation assumptions**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2111462 On the S-band NTN Scenarios and Parameters for Coexistence Study**

*Type: discussion For: Discussion  
 Source: THALES*

**Abstract:**

The goal of this contribution is to further clarify the coexistence scenarios to be considered by RAN4 studies, and their related simulation parameters.

**Decision: Noted.**

##### 9.12.2.2 Simulation results

**R4-2109119 Comparison of co-existence performance w/w.o. consideration on earthe curvature**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2110121 NTN - simulation results for alignment**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution provides out initial simulation results based on the agreed assumptions for alignment

**Decision: Noted.**

**R4-2110193 Preminary simulation result for coexistence study on NR to support non-terrestrial networks**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2110690 HAPS adjacent channel coexistence simulation results**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2108463 Preliminary simulation result for discussion and calibration**

*Type: other For: Discussion  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Session Chair Note: Late contribution**

**Decision: “Not Treated”**

#### 9.12.3 RF requirements

**R4-2108439 Email discussion summary for [99-e][314] NTN\_Solutions\_Part3**

*Type: other For: Information  
 Source: Moderator (CATT)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108701 (from R4-2108439).**

**R4-2108701 Email discussion summary for [99-e][314] NTN\_Solutions\_Part3**

*Type: other For: Information  
 Source: Moderator (CATT)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108101 (from R4-2108701).**

**R4-2108101 Email discussion summary for [99-e][314] NTN\_Solutions\_Part3**

*Type: other For: Information  
 Source: Moderator (CATT)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108647 WF on NTN RF Aspect**

*Type: other For: Approval  
 Source: CATT*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108100 (from R4-2108647).**

**R4-2108100 WF on NTN RF Aspect**

*Type: other For: Approval  
 Source: CATT*

**Abstract:**

**Discussion:**

**Decision: Approved.**

##### 9.12.3.1 Network side requirements

**R4-2109120 Discussion on NTN network side**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2110616 Discussion on RF requirements from satellite network perspective**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

##### 9.12.3.2 UE requirements

**R4-2109054 Discussion on UE RF requirements for NTN**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Revised to R4-2108465 (from R4-2109054).**

**R4-2108465 Discussion on UE RF requirements for NTN**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2109055 Response LS on NTN UL frequency synchronization requirements**

*Type: LS out For: Approval  
 to RAN1  
 Source: CATT*

**Decision: Revised to R4-2108648 (from R4-2109055).**

**R4-2108648 Response LS on NTN UL frequency synchronization requirements**

*Type: LS out For: Approval  
 to RAN1  
 Source: CATT*

**Decision: Approved.**

**R4-2110801 NTN and GNSS interfrence analysis**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2108464 (from R4-2110801).**

**R4-2108464 NTN and GNSS interfrence analysis**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2111474 NTN UL Frequency Accuracy Pre-Compensation Budget**

*Type: discussion For: Discussion  
 Source: THALES*

**Abstract:**

The goal of this contribution is to further clarify the NTN UL frequency synchronization requirements related to NTN UE Doppler pre-compensation, and the exact percentage of Doppler shift pre-compensation to be taken into account in the budget.

**Decision: Noted.**

### 9.15 Extending current NR operation to 71GHz

#### 9.15.5 BS RF requirements

**R4-2108440 Email discussion summary for [99-e][315] NR\_exto71GHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108702 (from R4-2108440).**

**R4-2108702 Email discussion summary for [99-e][315] NR\_exto71GHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108638 WF on BS TX RF requirements for 52.6 – 71 GHz**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108639 WF on BS RX RF requirements for 52.6 – 71 GHz**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

##### 9.15.5.1 TX requirements

**R4-2109114 Discussion on BS TX RF requirements for 52 6-71GHz**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109384 Proposals on BS transmitter requirements for extending current NR operation to 71 GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides further proposals on BS transmitter requirements for extending current NR operation to 71 GHz according to the approved WF and the findings in the corresponding study item as recorded in TR 38.808.

**Decision: Noted.**

**R4-2109870 On BS RF transmitter requirements for the frequency range 52 to 71 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we present an overview of BS transmitter requirements and some proposals to progress the work. To stimulate the discussion a draft specification text is provided as an attachment at the end of contribution.

**Decision: Noted.**

**R4-2110601 Discussion on BS Tx requirements for 60GHz**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

##### 9.15.5.2 RX requirements

**R4-2109115 Discussion on BS RX RF requirements for 52 6-71GHz**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2109385 Proposals on BS receiver requirements for extending current NR operation to 71 GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides further proposals on BS receiver requirements for extending current NR operation to 71 GHz according to the approved WF and the findings in the corresponding study item as recorded in TR 38.808.

**Decision: Noted.**

**R4-2109871 On BS RF receiver requirements for the frequency range 52 to 71 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we present an overview of BS receiver requirements and some proposals to progress the work. To stimulate the discussion draft specification text for TS 38.104, clause 10 [2] is provided as an attachment at the end of contribution.

**Decision: Noted.**

**R4-2110602 Discussion on BS Rx requirements for 60GHz**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

### 9.16 Enhancements to Integrated Access and Backhaul (IAB) for NR

#### 9.16.1 General and work plan

**R4-2108441 Email discussion summary for [99-e][316] NR\_eIAB**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108703 (from R4-2108441).**

**R4-2108703 Email discussion summary for [99-e][316] NR\_eIAB**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108640 WF on simultaneous operating and timing case#6/7 for enhanced IAB**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2110002 Updated workplan for Rel-17 IAB**

*Type: other For: Information  
 Source: Samsung,Qualcomm*

**Decision: Noted.**

**R4-2111185 IAB MT /DU case 6/7 timing**

*Type: discussion For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on generic RAN4 work relating to the objectives focusing the timing aspect.

**Decision: Noted.**

#### 9.16.2 RF requirements

**R4-2109754 Discussion on IAB timing related issues**

*Type: discussion For: Discussion  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2109834 IAB Rel.17 – RF requirements**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2110003 Discussion on simultaneous TX/RX for IAB node**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

**R4-2110004 Discussion on timing mode for IAB**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

**R4-2111184 RF impact analysis for Simultaneous operation of DU and MT**

*Type: discussion For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on the RF aspect for Simultaneous operation of DU and MT

**Decision: Noted.**

#### 9.16.4 Others

**R4-2110005 Discussion on Dual-connectivity scenario for IAB**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

## 10 Rel-17 Study Items for NR

### 10.1 Study on enhanced test methods for FR2 in NR

**R4-2111065 Analysis of NF based solutions**

*Type: discussion For: Approval  
 38.884 v CR- rev Cat: (Rel-17)  
  
 Source: ROHDE & SCHWARZ*

**Decision:** The document was **withdrawn**.

#### 10.1.1 General

**R4-2108459 Email discussion summary for FR2\_enhTestMethods**

*Type: other For: Information  
 Source: Moderator (Apple)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108704 (from R4-2108459).**

**R4-2108704 Email discussion summary for FR2\_enhTestMethods**

*Type: other For: Information  
 Source: Moderator (Apple)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108651 WF for FR2 UL MIMO EVM**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108084 (from R4-2108651).**

**R4-2108084 WF for FR2 UL MIMO EVM**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108098 Draft TR38.884 Study on enhanced test methods for FR2 NR UEs v0.4.0**

*Type: draftTR For: Approval  
 38.884 v0.4.0*

*Source:* Apple, vivo

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108652 TP to TR38.884 v0.3.0 on UL signal demodulation**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)*

*Source:* Qualcomm, Rohde & Schwarz

**Abstract:**

**Discussion:**

**Decision: Approved.**

**Session Chair Note:**

Include both methods into TR with TP approved in this meeting, and further update on the TR not precluded pending on the evaluation and analysis in future RAN4 meeting.

Add editor note into TP: RAN4 didn’t confirm the feasibility and the selection on these methods, further update/remove and refinement on these methods not precluded. This editor note will be included in TR update which will be for email approval.

**R4-2109666 TP to TR38.884 v0.3.0 on Environment conditions**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Revised to R4-2108658 (from R4-2109666).**

**R4-2108658 TP to TR38.884 v0.3.0 on Environment conditions**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Approved.**

**R4-2109668 TP to TR38.884 v0.3.0 on measurement uncertainty**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Revised to R4-2108659 (from R4-2109668).**

**R4-2108659 TP to TR38.884 v0.3.0 on measurement uncertainty**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Approved.**

#### 10.1.2 Test methodology for high DL power and low UL power test cases

**R4-2111005 On CFFNF and CFFDNF test methodologies for high DL power and low UL power test cases**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2111006 TP on high DL power and low UL power test cases**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Keysight Technologies UK Ltd, Rohde & Schwarz*

**Decision: Revised to R4-2108653 (from R4-2111006).**

**R4-2108653 TP on high DL power and low UL power test cases**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Keysight Technologies UK Ltd, Rohde & Schwarz*

**Decision: Approved.**

**R4-2111494 Analysis of NF based solutions**

*Type: discussion For: Approval  
 38.884 v CR- rev Cat: (Rel-17)  
  
 Source: ROHDE & SCHWARZ*

**Decision: Revised to R4-2108654 (from R4-2111494).**

**R4-2108654 Analysis of NF based solutions**

*Type: discussion For: Approval  
 38.884 v CR- rev Cat: (Rel-17)  
  
 Source: ROHDE & SCHWARZ*

**Decision: Noted.**

#### 10.1.3 Polarization basis mismatch

**R4-2108811 TP to TR38.884: Comparison of TSQ measurement methods for TE with dual pol Rx**

*Type: pCR For: Agreement  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Existing verification methods for Tx signal quality are derived from conducted domain testing and do not provide for coherent combining with dual pol Rx. In this contribution we propose the demodulation strategy for the enhanced TE architecture that woul

**Decision: Merged**

**R4-2108852 Comparison of transmit signal quality measurement blocks for FR2 MIMO**

*Type: discussion For: Approval  
 Source: Anritsu corporation*

**Abstract:**

In this contribution we show our analysis on the comparison of two measurement blocks for transmit signal quality for FR2 MIMO layers.

**Decision: Noted.**

**R4-2109013 Views TPMI to minimize the impact of polarization basis mismatch**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Decision: Noted.**

**R4-2109541 Discussion on TPMI configuration in EIRP measurement**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2109577 Further study on optimal TPMI and 2-port CSI-RS**

*Type: discussion For: Approval  
 Source: MediaTek Beijing Inc.*

**Decision: Noted.**

**R4-2109915 Discussion and TP on FR2 UL transmit signal quality measurements**

*Type: discussion For: Approval  
 Source: Rohde & Schwarz*

**Decision: Merged**

**R4-2110838 Consideration of the definition of the coherent UE for FR2**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2111382 on FR2 EVM measurement enhancement**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

#### 10.1.4 Enhanced test methods for inter-band (FR2+FR2) CA

**R4-2108858 TP to TR38.884 on Inter-band (FR2+FR2) CA MU**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Merged**

#### 10.1.5 Extreme temperature conditions

#### 10.1.6 Test time reduction

**R4-2109542 Discussion on prioritized methods for test time reduction**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2109665 TP to TR38.884 v0.3.0 on testing time reduction**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Revised to R4-2108655 (from R4-2109665).**

**R4-2108655 TP to TR38.884 v0.3.0 on testing time reduction**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Approved.**

**R4-2109667 Discussions on RSRP(B) based method**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Revised to R4-2108656 (from R4-2109667).**

**R4-2108656 Discussions on RSRP(B) based method**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2109716 Discussion on enhanced test method to reduce FR2 OTA test time**

*Type: discussion For: Discussion  
 Source: LG Electronics Inc.*

**Decision: Noted.**

**R4-2111004 On Test Time Reduction with Optional Antenna Configuration Declaration**

*Type: other For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

#### 10.1.7 Extension of frequency applicability of permitted methods in 38.810 for band n262

**R4-2111015 TP to TR38.884 on permitted test methods for demodulation and RRM in band n262**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Revised to R4-2108657 (from R4-2111015).**

**R4-2108657 TP to TR38.884 on permitted test methods for demodulation and RRM in band n262**

*Type: pCR For: Approval  
 38.884 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Approved.**

### 10.7 Study on 5G NR UE Application Layer Data Throughput Performance

**R4-2110525 Discussion on 5G NR UE Application Layer Data Throughput Performance**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

#### 10.7.1 General and work plan

**R4-2108458 Email discussion summary for [99-e][333] NR\_ATP**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108705 (from R4-2108458).**

**R4-2108705 Email discussion summary for [99-e][333] NR\_ATP**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108641 WF on 5G NR UE Application Layer Data Throughput Performance**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108102 (from R4-2108641).**

**R4-2108102 WF on 5G NR UE Application Layer Data Throughput Performance**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108642 Summary of simulation results for Application Layer Throughput**

*Type: other For: Information  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2111255 Draft CR on RAN4 study on Application Layer Throughput Requirements**

*Type: draftCR For: Endorsement  
 37.901-5 v16.3.0 CR- rev Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

#### 10.7.2 Test methodology

**R4-2109362 Initial simulation results for physical layer Throughput**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2109996 Remaining issues on Test methodology for application layer data throughput performance**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the remaining issues on Test methodology for application layer data throughput performance

**Decision: Noted.**

**R4-2110170 Simulation results for NR UE Application Layer Data Throughput Performance**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

#### 10.7.3 Test parameters

**R4-2109464 Simulation Results for Application Layer Throughput Tests**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2109997 Simulation results for application layer data throughput performance**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This contribution submits our simulation results for application layer data throughput performance

**Decision: Noted.**

## 11 Rel-17 Work Items for LTE

## 12 Rel-17 Study Items for LTE

## 13 Liaison and output to other groups

### 13.2 Others

**R4-2108462 Email discussion summary for [99-e][337] LS\_reply\_ITU-R**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108706 (from R4-2108462).**

**R4-2108706 Email discussion summary for [99-e][337] LS\_reply\_ITU-R**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2108649 Draft LS on feedback on LS from ITU-R WP 1C related to in-field unwanted emission testing**

*Type: LS out For: Approval  
 to RAN  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2108650 Draft LS to ITU-R and CEPT on extension of IMT array antenna model to support sub-array structures**

*Type: LS out For: Approval* To: ITU-R WP 5D and ECC PT1, Cc: RAN *Source: Ericsson, Nokia, Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2108080 (from R4-2108650).**

**R4-2108080 Draft LS to ITU-R and CEPT on extension of IMT array antenna model to support sub-array structures**

*Type: LS out For: Approval* To: ITU-R WP 5D and ECC PT1, Cc: RAN *Source: Ericsson, Nokia, Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Approved.**

In-field OTA testing

**R4-2110613 Discussion on in-field OTA testing**

*Type: other For: Approval  
 Source: ZTE Corporation*

Session Chair Note: Moved to this AI from 13.1

**Decision: Noted.**

**R4-2111019 Draft reply LS to TSG RAN on unwanted emission field testing**

*Type: LS out For: Approval  
 to RAN  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution analysis on the technical request is provided and a draft reply LS to TSG RAN is provided, aligned with the instruction from RAN.

**Decision: Noted.**

**R4-2109392 Draft reply LS to TSG RAN on unwanted emission field testing**

*Type: LS out For: Approval  
 to TSG RAN  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution analysis on the technical request is provided and a draft reply LS to TSG RAN is provided, aligned with the instruction from RAN

**Decision:** The document was **withdrawn**.

**R4-2110637 AAS TRP in-field test**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2109873 Draft LS on feedback on LS from ITU-R WP 1C related to in-field unwanted emission testing**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we continue the discussion on how to measure unwanted emissions in-field during normal network operation. At the end of this contribution a draft LS to ITU-R WP 1C is attached.

**Decision: Noted.**

OTA BS antenna array model

**R4-2107607 On the impact of sub-array antenna modelling in coexistence studies**

*Type: other For: Discussion  
 Source: Qualcomm CDMA Technologies*

**Decision: Noted.**

**R4-2108900 Comments on Antenna Model**

*Type: discussion For: Information  
 Source: Spark NZ Ltd*

**Abstract:**

During RAN4 98e bis meeting an antenna model that was based on sub arrays was discussed. It was to be sent as a LS to WP 5D but was decided to debate further. This contribution provides simulations of an antenna array using sub arrays and shows the occurr

**Decision: Noted.**

**R4-2109872 Draft LS to ITU-R and CEPT on extension of IMT array antenna model to support sub-array structures**

*Type: other For: Approval  
 Source: Ericsson, Nokia, Qualcomm*

**Abstract:**

A draft LS to ITU-R WP 5D and ECC PT1 is attached at the end on this contribution.

**Decision: Noted.**

**R4-2110648 AAS model extension**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

## 14 Revision of the Work Plan

## 15 Any other business

## 16 Close of the E-meeting