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

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for  
TSG RAN WG4  
meeting: 94-e**

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## 1 Opening of the E-meeting

## 2 Approval of the agenda

**R4-2000000 Agenda for RAN4#94-e**

*Type: agenda For: Approval  
 Source: RAN4 Chairman*

**Discussion:**

.

**Decision:** The document was **revised to R4-2002162**.

**R4-2002162 Agenda for RAN4#94-e**

*Type: agenda For: Approval  
 Source: Futurewei*

(Replaces R4-2000000)

**Discussion:**

.

**Decision: Approved.**

## 3 Letters / reports from other groups / meetings

**R4-2000001 E-meeting arrangements and guidelines**

*Type: other For: Approval  
 Source: RAN4 Chairman*

**Discussion:**

.

**Decision: Approved.**

**R4-2000002 RAN4#93 Meeting Report**

*Type: report For: Approval  
 Source: ETSI MCC*

**Discussion:**

.

**Decision: Approved.**

**R4-2002764 Reply LS on CSI-RS measurement outside DRX active time**

*Type: LS in For: Information  
 Original outgoing LS: R1-1913462, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002765 LS on agreements related to NR Positionin**

*Type: LS in For: Decision  
 Original outgoing LS: R1-1913522, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002766 LS on XDD-FRX Differentiation**

*Type: LS in For: Information  
 Original outgoing LS: R1-1913579, to -, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002767 LS on NR Rel-16 TEI**

*Type: LS in For: Information  
 Original outgoing LS: R1-1913580, to RAN4, cc -  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002768 Reply LS to RAN1&4 on UE capabilities on DAPS HO**

*Type: LS in For: Information  
 Original outgoing LS: R1-1913581, to RAN2, cc RAN4  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002769 Reply LS on Tx switching between two uplink carriers**

*Type: LS in For: Information  
 Original outgoing LS: R1-1913585, to RAN4, cc RAN2  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002770 Reply LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO**

*Type: LS in For: Information  
 Original outgoing LS: R1-1913686, to RAN2, cc RAN3, RAN4  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002771 Reply LS on sidelink synchronization under multiple synchronization sources with different timing**

*Type: LS in For: Information  
 Original outgoing LS: R1-1913696, to RAN1, cc RAN2, RAN4  
 Source: RAN1*

**Discussion:**

.

**Decision: Noted.**

**R4-2002772 LS on Conditional PSCell addition/change**

*Type: LS in For: Information  
 Original outgoing LS: R2-1916330, to RAN3, cc RAN4, RAN  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002773 LS on CLI measurements UE capabilities**

*Type: LS in For: Information  
 Original outgoing LS: R2-1916348, to RAN1, cc RAN4  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002774 LS on RRM Measurement Relaxation for UE Power Saving in NR**

*Type: LS in For: Information  
 Original outgoing LS: R2-1916375, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002775 Reply LS on UL-SL prioritization**

*Type: LS in For: Information  
 Original outgoing LS: R2-1916468, to RAN1, RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002776 LS on MDT Measurements**

*Type: LS in For: Information  
 Original outgoing LS: R2-1916588, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002777 LS on measurement reporting criteria for EN-DC**

*Type: LS in For: Decision  
 Original outgoing LS: R2-1916595, to RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002778 LS on secondary DRX group**

*Type: LS in For: Decision  
 Original outgoing LS: R2-1916597, to RAN1, RAN4, cc -  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002779 LS on inter-RAT HO from SA to EN-DC**

*Type: LS in For: Information  
 Original outgoing LS: R2-1916600, to RAN3, RAN4, cc SA2, CT1  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002780 LS on RAN2 progress on SCell uplink behaviour of the UE in dormancy**

*Type: LS in For: Information  
 Original outgoing LS: R2-1916601, to RAN1, cc RAN4  
 Source: RAN2*

**Discussion:**

.

**Decision: Noted.**

**R4-2002781 LS Response to “Liaison Statement on CCSA progress on NR FR1 OTA”**

*Type: LS in For: Information  
 Original outgoing LS: -, to -, cc RAN4  
 Source: CTI OTA CA Task Force*

**Discussion:**

.

**Decision: Noted.**

**R4-2002782 Reply LS on 5G-NR FR2 Transmitter & Receiver Testability Issues**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN, cc RAN4, RAN5  
 Source: MSG TFES*

**Discussion:**

.

**Decision: Noted.**

## 6 Rel15 New radio access technology [NR\_newRAT]

**R4-2000557 38.307 CR power class REL-15**

*Type: CR For: Agreement  
 38.307 v15.4.0 CR-0017 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002910.**

**R4-2002910 38.307 CR power class REL-15**

*Type: CR For: Agreement  
 38.307 v15.4.0 CR-0017 Cat: B (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000524 38.307 CR power class**

*Type: CR For: Agreement  
 38.307 v16.1.0 CR-0016 Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

### 6.1 Requirements for NE-DC (option 4) and NGEN-DC Maintenance [NR\_newRAT-Core]

**R4-2002675 Email discussion summary for RAN4#94e\_#1\_NR\_NewRAT\_DC**

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

**Discussion:**

.

**Decision: Revised to R4-2002874.**

**R4-2002874 Email discussion summary for RAN4#94e\_#1\_NR\_NewRAT\_DC**

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

**Discussion:**

.

**Decision: Noted.**

#### 6.1.1 RF requirements (38.101-3) [NR-newRAT-Core]

**R4-2001227 CR on correction of 38.101-3 NEDC Ppowerclass (Rel-15)**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0198 Cat: F (Rel-15)  
  
 Source: OPPO*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001228 CR on correction of 38.101-3 NEDC Ppowerclass (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0199 Cat: A (Rel-16)  
  
 Source: OPPO*

**Discussion:**

.

**Decision: Agreed.**

### 6.2 NR-NR Dual Connectivity Maintenance [NR\_newRAT-Core]

#### 6.2.1 UE RF requirements for DC combinations for FR1+FR2 (38.101-3) [NR\_newRAT-Core]

### 6.3 System Parameters Maintenance [NR\_newRAT-Core]

**R4-2002676 Email discussion summary for RAN4#94e\_** **#2\_NR\_NewRAT\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2002875.**

**R4-2002875 Email discussion summary for RAN4#94e\_** **#2\_NR\_NewRAT\_SysParameters**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002717 WF on adding 30KHz SCS for n40 SSB**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

#### 6.3.1 Channel bandwidth Maintenance [NR\_newRAT-Core]

#### 6.3.2 Channel Arrangement Maintenance [NR\_newRAT-Core]

**R4-2000193 Add 30KHz SCS for n40 SSB**

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

**Abstract:**

In this paper we would like to raise that issue for n40 SSB SCS configuration and provide a number of candidate solutions for discussion. According to our survey, it seems that the deployment and implementation of device for n40 are in the very initial st

**Discussion:**

.

**Decision: Noted.**

**R4-2000194 TS38.101-1 CR: adding 30KHz SSB SCS for n40**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0192 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Add 30KHz SSB SCS for n40

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000195 TS38.101-1 CR: adding 30KHz SSB SCS for n40 (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0193 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Cat A CR. Add 30KHz SSB SCS for n40.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000196 TS38.101-1 CR: adding 30KHz SSB SCS for n40 (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0194 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Cat A CR. Add 30KHz SSB SCS for n40.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000489 CR to TS 38.101-3: Correct the intra-band ENDC channel spacing**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0176 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002718.**

**R4-2002718 CR to TS 38.101-3: Correct the intra-band ENDC channel spacing**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0176 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000490 CR to TS 38.101-3: Correct the intra-band ENDC channel spacing**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0177 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001783 CR for 38.101-1 channel space for CA\_Rel15**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0270 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001784 CR for 38.101-1 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0271 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001785 CR for 38.101-2 channel space for CA\_Rel15**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0129 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001786 CR for 38.101-2 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0130 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

#### 6.3.3 Other system parameters maintenance [NR\_newRAT-Core]

**R4-2002144 FR2 ACLR Measurement Bandwidth Definition**

*Type: other For: Discussion  
 38.101-2 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

.

**Decision: Noted.**

### 6.4 SUL and LTE-NR co-existence maintenance [NR\_newRAT-Core]

**R4-2002677 Email discussion summary for RAN4#94e\_#3\_NR\_NewRAT\_SUL\_LNC**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001697 CR to 38.101-3 R15 to remove FDM ULSUP combinations**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0210 Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

There is no specified MPR, AMPR or MSD requirement for FDM SUl operation, ULSUP FDM combinations are thus incomplete and must be removed from the specification. There is no operator behind thos combinations.

**Discussion:**

.

**Decision: Agreed.**

**R4-2001716 CR to 38.101-3 R16 to remove FDM ULSUP combinations**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0211 Cat: F (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Mirror R16 CR to remove FDM mode of ULSUPcombinations that do not have proper MPR/AMPR and REFSENS specification

**Discussion:**

.

**Decision: Agreed.**

### 6.5 UE RF requirements maintenance [NR\_newRAT]

**R4-2002678 Email discussion summary for RAN4#94e\_#4\_NR\_NewRAT\_UE\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2002876.**

**R4-2002876 Email discussion summary for RAN4#94e\_#4\_NR\_NewRAT\_UE\_RF**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002726 WF on Tx EVM for UL MIMO**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Noted.**

Testability issue with OoBB for FR1 EN-DC UE

**R4-2002727 WF on Testability issue with OoBB for FR1 EN-DC UE**

*Type: other For: Approval  
 Source: Anritsu*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002728 WF on NR UE receiver ACS test requirements**

*Type: other For: Approval  
 Source: MediaTek*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002729 WF on WRC-19 resolutions**

*Type: other For: Approval  
 Source: NTT DOCOMO*

**Discussion:**

.

**Decision: Noted.**

**R4-2002733 WF on Max duty cycle clarifications**

*Type: other For: Approval  
 Source: Apple*

**Discussion:**

OPPO and Apple understanding is that the maxUplinkdutycycle-FR2 is defined under the “UE maximum transmission power”, however, it can also be applied to lower power levels in Rel-15 to facilitate UE meet MPE regulation requirements. RAN4 could inform RAN2 this information together with the change of maxUplinkdutycycle-FR2 definition.

**Decision: Approved.**

**R4-2002735 R15 CR to 38.101-2: TRS and SSB configurations in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR- Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Revised to R4-2002873.**

**R4-2002873 R15 CR to 38.101-2: TRS and SSB configurations in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR- Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Revised to R4-2002918.**

**R4-2002918 R15 CR to 38.101-2: TRS and SSB configurations in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0135 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Agreed.**

**R4-2002736 R16 CR to 38.101-2: TRS and SSB configurations in FR2**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR- Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Agreed.**

**R4-2002737 WF on Signalling supported NS values**

*Type: other For: Approval  
 Source: NTT DOCOMO*

**Discussion:**

.

**Decision: Noted.**

**R4-2002738 WF on UL MIMO PC2**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000220 Necessity of signaling supported NS values**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Abstract:**

RAN4#93 discussed a necessity of signaling to convey all the supported NS values by UEs if a new NS is added to an existing “legacy” band. This contribution clarifies expected issues without the signaling and provide solutions. In short, very similar issu

**Discussion:**

.

**Decision: Noted.**

**R4-2000221 Broadening a definition of “modifiedMPR-Behaviour” for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0197 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

This CR is to broaden a definition of “modifiedMPR-Behaviour” in RAN4 specifications in a way that a new bit is defined when MPR or A-MPR for the existing NS is modified or a new NS is added to an existing band.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000222 Broadening a definition of “modifiedMPR-Behaviour” for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0198 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A category A CR of R4-2000221.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000223 Broadening a definition of “modifiedMPR-Behaviour” for 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0092 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

This CR is to broaden a definition of “modifiedMPR-Behaviour” in RAN4 specifications in a way that a new bit is defined when MPR or A-MPR for the existing NS is modified or a new NS is added to an existing band.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000224 Broadening a definition of “modifiedMPR-Behaviour” for 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0093 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A Cat A CR of R4-2000223.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000225 Broadening a definition of “modifiedMPR-Behaviour” for 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0161 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

This CR is to broaden a definition of “modifiedMPR-Behaviour” in RAN4 specifications in a way that a new bit is defined when MPR or A-MPR for the existing NS is modified or a new NS is added to an existing band.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000226 Broadening a definition of “modifiedMPR-Behaviour” for 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0162 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A Cat A CR of R4-2000225.

**Discussion:**

.

**Decision: Withdrawn.**

#### 6.5.1 Draft CR for editorial errors only [NR\_newRAT-Core]

##### 6.5.1.1 Draft CR for 38.101-1 for editorial errors only [NR\_newRAT-Core]

**R4-2000119 CR to 38.101-1 UL MIMO MPR reference table**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0188 Cat: F (Rel-15)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000120 CR to 38.101-1 UL MIMO MPR reference table**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0189 Cat: A (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000594 CR for TS38.101-1, Remove notes for UE channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v15.8.0 CR-0228 Cat: F (Rel-15)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2002719.**

**R4-2002719 CR for TS38.101-1, Remove notes for UE channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v15.8.0 CR-0228 Cat: F (Rel-15)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000595 CR for TS38.101-1, Remove notes for UE channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0229 Cat: A (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000596 CR for TS38.101-1, Correction of IE RF-Parameters name of maxUplinkDutyCycle**

*Type: CR For: Agreement  
 38.101-1 v15.8.0 CR-0230 Cat: F (Rel-15)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000597 CR for TS38.101-1, Correction of IE RF-Parameters name of maxUplinkDutyCycle**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0231 Cat: A (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000598 CR for TS38.101-3, Correction of IE RF-Parameters name of maxUplinkDutyCycle**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0182 Cat: F (Rel-16)  
  
 Source: CATT*

**Discussion:**

CMCC: For the IE RF-Parameters name of maxUplinkDutyCycle in TS38.101-3, Capability name of maxUplinkDutyCycle-PC2-FR1 is not aligned with TS38.331/306. RAN2 is deciding how to define the name, we need to wait for RAN2 conclusion. We suggest to postpone this CR(R4-2000598), otherwise RAN4 need to change it again as RAN2 has its conclusion.

**Decision: Agreed.**

**R4-2000743 CR for TS 38.101-1: Editorial addition of CBW definition in Abbreviations section**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0237 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000744 CR for TS 38.101-1: Editorial addition of CBW definition in Abbreviations section**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0238 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002146 Removal of unnecessary definition of offsetmax,IMD3 from Table 6.2.3.2-1**

*Type: draftCR For: Endorsement  
 38.101-1 v15.8.2  
 Source: Motorola Mobility España SA*

**Abstract:**

The symbol offsetmax,IMD3 is not referenced outside of Table 6.2.3.2-1 and is not needed. The symbol can be replaced by its value and the row removed.

**Discussion:**

.

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

**R4-2002148 Removal of unnecessary definition of offsetmax,IMD3 from Table 6.2.3.2-1**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0277 Cat: D (Rel-15)  
  
 Source: Motorola Mobility España SA*

**Abstract:**

The symbol offsetmax,IMD3 is not referenced outside of Table 6.2.3.2-1 and is not needed. The symbol can be replaced by its value and the row removed.

**Discussion:**

.

**Decision: Agreed.**

**R4-2002909 Removal of unnecessary definition of offsetmax,IMD3 from Table 6.2.3.2-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR- Cat: A (Rel-16)  
  
 Source: Motorola Mobility España SA*

**Abstract:**

The symbol offsetmax,IMD3 is not referenced outside of Table 6.2.3.2-1 and is not needed. The symbol can be replaced by its value and the row removed.

**Discussion:**

.

**Decision: Agreed.**

##### 6.5.1.2 Draft CR for 38.101-2 for editorial errors only [NR\_newRAT-Core]

**R4-2000397 CR to 38.101-2 (Rel-15) MPR for CA**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0098 Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002720.**

**R4-2002720 CR to 38.101-2 (Rel-15) MPR for CA**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0098 Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002917.**

**R4-2002917 CR to 38.101-2 (Rel-15) MPR for CA**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0098 Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000398 CR to 38.101-2 (Rel-16) MPR for CA**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0099 Cat: A (Rel-16)  
  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000695 CR to 38.101-2: Align Rx CA requirements structure with TS38.101-1**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0109 Cat: D (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Change subsection organization in sections 7.xA to mirror that in TS38.101-1 for future compatibility

**Discussion:**

.

**Decision: Agreed.**

**R4-2000696 CR to 38.101-2: Align Rx CA requirements structure with TS38.101-1**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0110 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Change subsection organization in sections 7.xA to mirror that in TS38.101-1 for future compatibility

**Discussion:**

.

**Decision: Agreed.**

**R4-2000745 CR for TS 38.101-2: Editorial addition of CBW and CABW definitions in Abbreviations section**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0113 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Revised to R4-2002721.**

**R4-2002721 CR for TS 38.101-2: Editorial addition of CBW and CABW definitions in Abbreviations section**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0113 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000746 CR for TS 38.101-2: Editorial addition of CBW and CABW definitions in Abbreviations section**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0114 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000912 CR to TS 38.101-2 Correction on FRC table for FR2 DL 64QAM(R15)**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0117 Cat: F (Rel-15)  
  
 Source: China Telecom*

**Abstract:**

This CR is to change the numberof TDD Slot in mod(i, 10) from 10 to 5

**Discussion:**

.

**Decision: Agreed.**

**R4-2000913 CR to TS 38.101-2 Correction on FRC table for FR2 DL 64QAM(R16)**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0118 Cat: A (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

This CR is to change the numberof TDD Slot in mod(i, 10) from 10 to 5

**Discussion:**

.

**Decision: Agreed.**

##### 6.5.1.3 Draft CR for 38.101-3 for editorial errors only [NR\_newRAT-Core]

**R4-2000453 CR to TS 38.101-3: editorial corrections on Rx requirements for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0173 Cat: D (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

In section 6.2B.4, PCMAX\_L,f,c,NR and PCMAX\_L\_E-TURA,c are defined for NR carrier and LTE carrier respectively, rather than PCMAX\_L,f,c and PCMAX\_L. Thus, PCMAX\_L,f,c and PCMAX\_L in the notes of RX requirements tables are not correct.

**Discussion:**

.

**Decision: Revised to R4-2002722.**

**R4-2002722 CR to TS 38.101-3: editorial corrections on Rx requirements for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0173 Cat: D (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

In section 6.2B.4, PCMAX\_L,f,c,NR and PCMAX\_L\_E-TURA,c are defined for NR carrier and LTE carrier respectively, rather than PCMAX\_L,f,c and PCMAX\_L. Thus, PCMAX\_L,f,c and PCMAX\_L in the notes of RX requirements tables are not correct.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000454 CR to TS 38.101-3: editorial corrections on Rx requirements for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0174 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Abstract:**

In section 6.2B.4, PCMAX\_L,f,c,NR and PCMAX\_L\_E-TURA,c are defined for NR carrier and LTE carrier respectively, rather than PCMAX\_L,f,c and PCMAX\_L. Thus, PCMAX\_L,f,c and PCMAX\_L in the notes of RX requirements tables are not correct.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000892 CR to TS 38.101-3: editorial correction for output power dynamics for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0192 Cat: F (Rel-15)  
  
 Source: CHTTL*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000893 CR to TS 38.101-3: editorial correction for output power dynamics for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0193 Cat: A (Rel-16)  
  
 Source: CHTTL*

**Discussion:**

.

**Decision: Agreed.**

**R4-2002098 EN-DC configuration table corrections**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0216 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002723.**

**R4-2002723 EN-DC configuration table corrections**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0216 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

**R4-2002099 EN-DC configuration table corrections**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0217 Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

#### 6.5.2 DC combination including NR carrier and/or NR CA combination maintenance [NR\_newRAT-Core]

##### 6.5.2.1 Maintenance for bands and band combinations for 38.101-1 [NR\_newRAT-Core]

**R4-2000413 CR for 38.101-1: n41 and n25 corrections**

*Type: CR For: Agreement  
 38.101-1 v15.8.1 CR-0209 Cat: F (Rel-15)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000414 Mirror CR for 38.101-1: n41 and n25 corrections**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0210 Cat: A (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000525 Correction of NR CA bandwidth classe B and F**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0225 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001069 CR for 38.101-1: removing the fallback group for NR CA configuration (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0243 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001070 CR for 38.101-1: removing the fallback group for NR CA configuration (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0244 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001308 Introduction of the Annex modifiedMPR-Behaviour into the NR SA specification**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0253 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) into the specification of standalone operation.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001309 Introduction of the Annex modifiedMPR-Behaviour into the NR SA specification**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0254 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) into the specification of standalone operation. Unlike in the Rel-15 version, the bits shall be set to 'one' in Rel-16.

**Discussion:**

.

**Decision: Withdrawn.**

##### 6.5.2.2 Maintenance for combinations for 38.101-2 [NR\_newRAT-Core]

**R4-2000521 CR FR2 CA tables REL15**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0105 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002922.**

**R4-2002922 CR FR2 CA tables REL15**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0105 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000523 CR FR2 CA tables REL16**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0106 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000559 CR to TS 38.101-2 on corrections to intra-band contiguous CA for FR2 bands (Rel-15)**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0107 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-2 on corrections to intra-band contiguous CA for FR2 bands (Rel-15)

**Discussion:**

.

**Decision: Agreed.**

**R4-2000562 CR to TS 38.101-2 on corrections to intra-band contiguous CA for FR2 bands (Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0108 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-2 on corrections to intra-band contiguous CA for FR2 bands (Rel-16)

**Discussion:**

.

**Decision: Agreed.**

**R4-2001310 Removal of contradicting fall-back specification for intra-band non-contigous CA/DC**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0119 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to remove a contradicting fallback specification for inter-band non-contigous CA/DC within FR2

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001311 Removal of contradicting fall-back specification for intra-band non-contigous CA/DC**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0120 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to remove a contradicting fallback specification for inter-band non-contigous CA/DC within FR2

**Discussion:**

.

**Decision: Withdrawn.**

##### 6.5.2.3 Maintenance for combinations for 38.101-3 [NR\_newRAT-Core]

**R4-2000410 CR for 38.101-3: Correction of MOP tolerance for B41/n41 EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0163 Cat: F (Rel-15)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000411 Mirror CR for 38.101-3: Correction of MOP tolerance for B41/n41 EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0164 Cat: A (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000854 CR to introduce new BCS of intra-band continuous EN-DC for TS 38.101-3(Rel-15)**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0188 Cat: B (Rel-15)  
  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000857 Cat. A CR to introduce new BCS of intra-band continuous EN-DC for TS 38.101-3(Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0189 Cat: A (Rel-16)  
  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001312 Removal of contradicting fall-back specification for intra-band non-contigous CA/DC**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0201 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to remove a contradicting fallback specification for inter-band non-contigous CA/DC including FR2

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001313 Removal of contradicting fall-back specification for intra-band non-contigous CA/DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0202 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to remove a contradicting fallback specification for inter-band non-contigous CA/DC including FR2

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001314 Removal of the Annex modifiedMPR-Behaviour from the NSA specification**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0203 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to remove the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) from the specification of non-standalone operation.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001315 Removal of the Annex modifiedMPR-Behaviour from the NSA specification**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0204 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to remove the Annex on modifiedMPRbehaviour (band specific and indicated in the UE-NR-Capability) from the specification of non-standalone operation.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002118 CR for [agreed] asynchronous operation for NR CA n78-n79**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0274 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO INC.*

**Abstract:**

Re-submission of already agreed CR R4-1915529 in RAN4#93

**Discussion:**

.

**Decision: Agreed.**

**R4-2002119 CR for [agreed] asynchronous operation for NR CA n78-n79**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0275 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Abstract:**

Re-submission of already agreed CR R4-1915530 in RAN4#93

**Discussion:**

.

**Decision: Agreed.**

**R4-2001518 Rel-15 CR to 38.101-3 for editorial corrections**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0209 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Rel-15 CR to 38.101-3 for editorial corrections

**Discussion:**

.

**Decision: Revised to R4-2002724**

**R4-2002724 Rel-15 CR to 38.101-3 for editorial corrections**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0209 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Rel-15 CR to 38.101-3 for editorial corrections

**Discussion:**

Session chair: Besides other revisions, need to correct coversheet error.

.

**Decision: Agreed.**

#### 6.5.3 [FR1] Tx and Rx common [NR\_newRAT-Core]

**R4-2000491 CR to TS 38.101-1: Replace CBW with symbols defined in the specification.**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0220 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000492 CR to TS 38.101-1: Replace CBW with symbols defined in the specification.**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0221 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001767 CR for inter-band CA Tx requirement\_Rel-15**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0264 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001768 CR for inter-band CA Tx requirement\_Rel-16**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0265 Cat: A (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

**R4-2001769 CR for inter-band ENDC Tx requirement\_Rel-15**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0212 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001770 CR for inter-band ENDC Tx requirement\_Rel-16**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0213 Cat: A (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Return to.**

#### 6.5.4 [FR1] Transmitter characteristics [NR\_newRAT-Core]

##### 6.5.4.1 EN-DC power class and UL MIMO clarifications [NR\_newRAT-Core]

**R4-2000063 Clarification of Power Class related features**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Abstract:**

This contributin dicusses a necessity of indication of supported power class per feature.

**Discussion:**

.

**Decision: Noted.**

**R4-2000117 CR to 38.101-1 clarification of MIMO power class in R15**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0187 Cat: F (Rel-15)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000118 draft LS on clarification of EN-DC power class in R15**

*Type: LS out For: Approval  
 to RAN5  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2001229 Further on UL MIMO PC2 fallback**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2001316 Correction of transmitter characteristics for UL-MIMO: powerclass 2 and fallback**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0255 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the maximum output power requirements for UL-MIMO and the fallback requirement for all UL-MIMO transmitter characteristics

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001317 Correction of transmitter characteristics for UL-MIMO: powerclass 2 and fallback**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0256 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the maximum output power requirements for UL-MIMO and the fallback requirement for all UL-MIMO transmitter characteristics

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002037 On UL MIMO requirements**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002038 On EN-DC power class**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002050 draft LS on serving cell number for EN-DC power class**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002141 Draft LS on EN-DC power class**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 6.5.4.2 UE additional maximum output power reduction (A-MPR) [NR\_newRAT-Core]

**R4-2000326 CR to TS 38.101-1 on corrections to network signalling value (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0202 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-1 on corrections to network signalling value (Rel-15)

**Discussion:**

.

**Decision: Agreed.**

**R4-2000327 CR to TS 38.101-1 on corrections to network signalling value (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0203 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-1 on corrections to network signalling value (Rel-16)

**Discussion:**

.

**Decision: Agreed.**

**R4-2000400 CR for 38.101- n39 NS flag change due to conflict**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0207 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Change NS\_flag

**Discussion:**

.

**Decision: Agreed.**

**R4-2000401 CR for 38.101- n39 NS flag change due to conflict**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0208 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Mirror CR

**Discussion:**

.

**Decision: Not pursued.**

##### 6.5.4.3 Configured transmitted power [NR\_newRAT-Core]

**R4-2000227 Avoidance of redundant power reduction for HPUE**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A contribution of R4-1915370 in RAN4#93 pointed out that there is a case where the current specification allows more than or equal to 3 dB power reduction such as MPR and PC3 fallback to be applicable simultaneously. This allows the UE to use unnecessary

**Discussion:**

.

**Decision: Revised to R4-2002725.**

**R4-2002725 Avoidance of redundant power reduction for HPUE**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A contribution of R4-1915370 in RAN4#93 pointed out that there is a case where the current specification allows more than or equal to 3 dB power reduction such as MPR and PC3 fallback to be applicable simultaneously. This allows the UE to use unnecessary

**Discussion:**

.

**Decision: Noted.**

**R4-2000228 Avoidance of redundant power reduction for HPUE for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0199 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A CR based on a companion discussion paper of R4-2000227.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000229 Avoidance of redundant power reduction for HPUE for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0200 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A Cat A CR of R4-2000228.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000455 Consideration on high power UE fall back enhancement**

*Type: other For: Approval  
 Source: Xiaomi*

**Discussion:**

.

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

**R4-2002158 CR for power class fallback enhancement**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0278 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

##### 6.5.4.4 Tx DC location [NR\_newRAT-Core]

##### 6.5.4.5 Other Tx requirements [NR\_newRAT-Core]

**R4-2000204 FR1 TX EVM test condition correction for ULMIMO**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We use simulation to show MIMO receivers can deal with crosstalk more gracefully than noise. We propose RAN4 test should take that characterisitc into consideration

**Discussion:**

.

**Decision: Noted.**

**R4-2000205 CR to 38.101-1: Revision to ULMIMO EVM spec**

*Type: CR For: Agreement  
 38.101-1 v15.8.0 CR-0195 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

RAN4 EVM requierment in V15.8 treats layer crosstalk as uncorrelated noise. RAN4 requiement ends up placing unnecessary burden on UE design.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000206 CR to 38.101-1: Revision to ULMIMO EVM spec**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0196 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

RAN4 EVM requierment in V15.8 treats layer crosstalk as uncorrelated noise. RAN4 requiement ends up placing unnecessary burden on UE design.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000354 Correction on UL MIMO Emission requirements and alignment with RAN1 terminology**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0205 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000355 Correction on UL MIMO Emission requirements and alignment with RAN1 terminology**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0206 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000356 Correction on UL MIMO Emission requirements and alignment with RAN1 terminology**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000795 On the condition of antenna configuration for UL-MIMO in FR1**

*Type: other For: Approval  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000959 On correction of UE co-ex tables for Japan**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: SoftBank Corp., NTT docomo INC., KDDI Corporation*

**Abstract:**

This paper is to explain corrections to be made for Japan related UE co-ex requirements and collect group's views on some aspects.

**Discussion:**

.

**Decision: Noted.**

#### 6.5.5 [FR1] Receiver characteristics [NR\_newRAT-Core]

##### 6.5.5.1 Out of band blocking exceptions [NR\_newRAT-Core]

##### 6.5.5.2 Other Rx requirements [NR\_newRAT-Core]

**R4-2000439 Testability issue with OoBB for FR1 EN-DC UE**

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

**Abstract:**

In this contribution we point out a testability issue with the out-of-band blocking (OoBB) requirement for FR1 EN-DC UE.

Associated CR : R4-2000440/0441

**Discussion:**

.

**Decision: Noted.**

**R4-2000440 CR to out-of-band blocking for DC in FR1**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0169 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation*

**Abstract:**

Change uplink carrier output power whose downlink is being tested to reduce the too much power imbalance between E-UTRA and NR.

Associated discussion paper : R4-2000439

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000441 CR to out-of-band blocking for DC in FR1**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0170 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

Change uplink carrier output power whose downlink is being tested to reduce the too much power imbalance between E-UTRA and NR.

Associated discussion paper : R4-2000439

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000449 CR to TS 38.101-1: corrections on ACS for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v15.8.2 CR-0217 Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

For ACS case 2, the transmitter shall be set to 24 dB below PCMAX\_L,f,c rather than 4 dB.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000450 CR to TS 38.101-1: corrections on ACS for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0218 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Abstract:**

For ACS case 2, the transmitter shall be set to 24 dB below PCMAX\_L,f,c rather than 4 dB.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000451 CR to TS 38.101-3: corrections on ACS for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.8.0 CR-0171 Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Abstract:**

For ACS case 2, the transmitter shall be set to 24 dB below PCMAX\_L,f,c rather than 4 dB.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000452 CR to TS 38.101-3: corrections on ACS for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0172 Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Abstract:**

For ACS case 2, the transmitter shall be set to 24 dB below PCMAX\_L,f,c rather than 4 dB.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000747 NR UE receiver ACS test requirements**

*Type: other For: Approval  
 38.101-1 v..  
 Source: MediaTek Inc.*

**Abstract:**

In this contribution, we raise the concern in current NR ACS test requirements and propose to modify the ACS DL reference measurement channel test configuration.

**Discussion:**

.

**Decision: Noted.**

**R4-2000748 LS on NR UE receiver ACS test requirements**

*Type: LS out For: Approval  
 to RAN WG5  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 6.5.6 [FR2] Common to Tx and Rx [NR\_newRAT-Core]

**R4-2000198 CR to 38.101-2 to correct Link and Meas Angles**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0085 Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2002734.**

**R4-2002734 CR to 38.101-2 to correct Link and Meas Angles**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0085 Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000200 On LS from RAN5 on multi-band relaxations**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

In this contribution we analyse RAN5’s problem description and evaluate RAN5’s suggested solutions to streamline the MBR framework

**Discussion:**

.

**Decision: Noted.**

**R4-2000201 Reply to LS R5-199424 on FR2 Multiband Relaxations**

*Type: LS out For: Approval  
 to RAN5  
 Source: Qualcomm Incorporated*

**Abstract:**

Reply LS to R5-199424

**Discussion:**

.

**Decision: Noted.**

**R4-2000202 CR to 38.101-2: Revision to Multiband Relaxations**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0086 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Revised MBR proposal to address RAN5 concern via LS (R5-199424) that MBR from v15.8 is not feasible to implement.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000203 CR to 38.101-2: Revision to Multiband Relaxations**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0087 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Revised MBR proposal because RAN5 has informed via LS (R5-199424) that MBR from v15.8 is not feasible to implement.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000526 Discussion on RAN5 LS on Multiband relaxation for FR2**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001780 clarification on beam lock function for Tx RF requirement measurement**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 6.5.6.1 Regulatory Tx/Rx spurious emission limits handling [NR\_newRAT-Core]

**R4-2000091 On 3GPP band n258 and WRC-19 EESS unwanted emission limits**

*Type: other For: Discussion  
 Source: T-Mobile USA, AT&T*

**Abstract:**

The proponents believe that RAN4 should revise current band n258 specifications to implement WRC-19 agreed phase-1 EESS limits only for now, and leave phase-2 limits for a future revision, when applicable.

**Discussion:**

.

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

**R4-2000212 CR to 38.101-2: A-MPR Corrections**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0088 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Removal of -8dBm/200 MHz general requirement duplicated in error from general requirements

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000213 CR to 38.101-2: A-MPR Corrections**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0089 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Removal of -8dBm/200 MHz general requirement duplicated in error from general requirements

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000214 Impact of EN 301 908-25 on FR2**

*Type: other For: Discussion  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

The ETSI harmonized standard EN 301 908-25 includes both, n257 and n258 as allowed deployment scenariso in the EU. Because of 3GPP limitation of NS\_201/MS\_202 to n258, UEs that attach as n257 devices in EU networks will not know to protect the lower EES

**Discussion:**

.

**Decision: Noted.**

**R4-2000215 dCR to 38.101-2: NS extension to n257**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0090 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

visualize necessary changes to NS\_201 and NS\_202 framework to make 3GPP standard consistent with projected EU harmonized standard

**Discussion:**

.

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

**R4-2000216 Impact of WRC19 resolutions on FR2**

*Type: other For: Discussion  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

WRC19 resolutions analyzed, 3GPP standards impact projected

**Discussion:**

.

**Decision: Noted.**

**R4-2000217 dCR to 38.101-2: Visualizing A-MPR from WRC19 Resolutions**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0091 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Example implementation of AMPRs in 3GPP to stay compliant with emissions recommendations in WRC19.

**Discussion:**

.

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

**R4-2000218 dCR to 38.101-2: NS extension to n257**

*Type: draftCR For: Endorsement  
 38.101-2 v15.8.0  
 Source: Qualcomm Incorporated*

**Abstract:**

visualize necessary changes to NS\_201 and NS\_202 framework to make 3GPP standard consistent with projected EU harmonized standard

**Discussion:**

.

**Decision: Noted.**

**R4-2000219 dCR to 38.101-2: Visualizing A-MPR from WRC19 Resolutions**

*Type: draftCR For: Endorsement  
 38.101-2 v15.8.0  
 Source: Qualcomm Incorporated*

**Abstract:**

Example implementation of AMPRs in 3GPP to stay compliant with emissions recommendations in WRC19.

**Discussion:**

.

**Decision: Noted.**

**R4-2000409 On 3GPP band n258 and WRC-19 EESS unwanted emission limits**

*Type: other For: Discussion  
 Source: T-Mobile USA, AT&T, U.S. Cellular*

**Abstract:**

The proponents believe that RAN4 should revise current band n258 specifications to implement WRC-19 agreed phase-1 EESS limits only for now, and leave phase-2 limits for a future revision, when applicable.

**Discussion:**

.

**Decision: Noted.**

**R4-2001775 On FR2 EESS protection emission requirement**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

#### 6.5.7 [FR2] Transmitter characteristics [NR\_newRAT-Core]

##### 6.5.7.1 Power control [NR\_newRAT-Core]

**R4-2000107 Pcmax correction for CA**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0084 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

P\_CMAX correction on FR2 CA to align with RAN1 power control assumptions

**Discussion:**

.

**Decision: Revised to R4-2002730.**

**R4-2002730 Pcmax correction for CA**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0084 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

P\_CMAX correction on FR2 CA to align with RAN1 power control assumptions

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000109 Background for Pcmax correction for CA**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

Explanation what RAN1 spec means and why the language in RAN4 specs for CA is not right. How power control works and why re-calculation is not possible

**Discussion:**

.

**Decision: Noted.**

**R4-2000402 Pcmax correction for CA**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0100 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001387 Correction on transmission gap for FR2 relative power tolerance**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0121 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR

**Discussion:**

.

**Decision: Not pursued.**

**R4-2002731 Correction on transmission gap for FR2 relative power tolerance**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0121 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

CR

**Discussion:**

Session chair: Revised to correct WI code error in coversheet.

**Decision: Withdrawn.**

**R4-2001388 Correction on transmission gap for FR2 relative power tolerance**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0122 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001765 CR for FR2 CA Pcmax\_Rel-15**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0127 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001766 CR for FR2 CA Pcmax\_Rel-16**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0128 Cat: A (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

##### 6.5.7.2 Beam correspondence [NR\_newRAT-Core]

**R4-2001763 CR for 38.101-2 side condition for BC\_Rel15**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0125 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2002732 CR for 38.101-2 side condition for BC\_Rel15**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0125 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Session chair: Revised to correct version error in coversheet.

**Decision: Withdrawn.**

**R4-2001764 CR for 38.101-2 side condition for BC\_Rel16**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0126 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

##### 6.5.7.3 Other Tx requirements [NR\_newRAT-Core]

**R4-2000003 Correction of the FR2 RMC slot patterns for MOP test cases**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0079 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000004 Correction of the FR2 RMC slot patterns for MOP test cases**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0080 Cat: A (Rel-16)  
  
 Source: Apple inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000005 Clarification for the definition of the UL duty cycle**

*Type: other For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000010 Correction of FR2 64QAM UL RMC**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0081 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000011 Correction of FR2 64QAM UL RMC**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0082 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000084 [draft] LS on clarification for the definition of the UL duty cycle**

*Type: LS out For: Approval  
 to RAN2  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000230 EESS protection from n257**

*Type: other For: Approval  
 38.101-2 v..  
 Source: NTT DOCOMO, INC.*

**Abstract:**

ITU WRC-19 concluded that in order to protect the EESS (passive) in the frequency band 23.6-24 GHz the unwanted emissions of IMT mobile stations operating in the frequency band 24.25-27.5 GHz (Active service band) shall meet -29 dB(W/MHz) until 1st Sep 20

**Discussion:**

.

**Decision: Noted.**

**R4-2000231 Correction of EESS protection from n257**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0094 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A CR based on discussion paper of R4-2000230.

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000232 Correction of EESS protection from n257**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0095 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

A Cat A CR of R4-2000231.

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000507 CR to 38.101-2 (Rel-15) Configured transmitted power for CA**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0103 Cat: F (Rel-15)  
  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000508 CR to 38.101-2 (Rel-16) Configured transmitted power for CA**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0104 Cat: A (Rel-16)  
  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Withdrawn.**

#### 6.5.8 [FR2] Receiver characteristics [NR\_newRAT-Core]

**R4-2000436 Condition of IBB blocker location in FR2**

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

**Abstract:**

In this contribution we revisit a motivation of placing an interferer for in-band blocking (IBB) test repeatedly through a whole range in the corresponding FR2 band.

Associated CR: R4-2000437/0438

**Discussion:**

.

**Decision: Noted.**

**R4-2000437 Correction to in-band interferer offset definition in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0101 Cat: F (Rel-15)  
  
 Source: Anritsu Corporation*

**Abstract:**

For simplification of test procedure and to reduce a redundancy in FR2 requirement, change the interferer offset definition for IBB.

Associated discussion paper : R4-2000436

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000438 Correction to in-band interferer offset definition in FR2**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0102 Cat: A (Rel-16)  
  
 Source: Anritsu Corporation*

**Abstract:**

For simplification of test procedure and to reduce a redundancy in FR2 requirement, change the interferer offset definition for IBB.

Associated discussion paper : R4-2000436

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000697 CR to 38.101-2: Removal of Rx requirement for UE in UL MIMO**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0111 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

UL MIMO makes no special demands of the receiver. So the refsens requirement for the UE when it is configured for UL MIMO is obsolete

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000698 CR to 38.101-2: Removal of Rx requirement for UE in UL MIMO**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0112 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

UL MIMO makes no special demands of the receiver. So a special refsens requirement for the UE when it is configured for UL MIMO is obsolete

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000749 CR for TS 38.101-2: Clarifications on transmitter power for recevier requirements**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0115 Cat: F (Rel-15)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000752 CR for TS 38.101-2: Clarifications on transmitter power for recevier requirements**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0116 Cat: A (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Withdrawn.**

### 6.6 UE EMC [NR\_newRAT-Core]

### 6.7 BS RF [NR\_newRAT-Core]

#### 6.7.1 General and ad-hoc meeting minutes [NR\_newRAT-Core]

#### 6.7.2 Transmitter characteristics maintenance [NR\_newRAT-Core]

#### 6.7.3 Receiver characteristics maintenance [NR\_newRAT-Core]

### 6.8 BS conformance testing [NR\_newRAT-Perf]

#### 6.8.1 General and ad-hoc meeting minutes [NR\_newRAT-Perf]

#### 6.8.2 BS specifications clean-ups (including conformance testing and core) [NR\_newRAT-Perf/Core]

##### 6.8.2.1 eAAS specifications [NR\_newRAT-Perf/Core]

##### 6.8.2.2 MSR specifications [NR\_newRAT-Perf/Core]

##### 6.8.2.3 NR conformance testing specifications [NR\_newRAT-Perf]

#### 6.8.3 Common for 38.141-1 and 38.141-2 [NR\_newRAT-Perf]

##### 6.8.3.1 Test configurations [NR\_newRAT-Perf]

##### 6.8.3.2 Test cases [NR\_newRAT-Perf]

##### 6.8.3.3 Test models [NR\_newRAT-Perf]

#### 6.8.4 Conducted conformance testing (38.141-1) [NR\_newRAT-Perf]

##### 6.8.4.1 MU and TT analysis [NR\_newRAT-Perf]

##### 6.8.4.2 BS Demodulation conformance testing (38.141-1) [NR\_newRAT-Perf]

###### 6.8.4.2.1 Test system related MU and TT [NR\_newRAT-Perf]

#### 6.8.5 Radiated conformance testing (38.141-2) [NR\_newRAT-Perf]

##### 6.8.5.1 Common to FR1 and FR2 radiated conformance testing [NR\_newRAT-Perf]

##### 6.8.5.2 FR1 radiated conformance testing [NR\_newRAT-Perf]

###### 6.8.5.2.1 NR specific MU and TT analysis [NR\_newRAT-Perf]

##### 6.8.5.3 FR2 radiated conformance testing [NR\_newRAT-Perf]

###### 6.8.5.3.1 NR specific MU and TT analysis [NR\_newRAT-Perf]

##### 6.8.5.4 BS Demodulation conformance testing (38.141-2) [NR\_newRAT-Perf]

### 6.9 BS EMC [NR\_newRAT-Core]

#### 6.9.1 Editor input for BS EMC spec (38.113) [NR\_newRAT-Core]

#### 6.9.2 Core requirements [NR\_newRAT-Core]

##### 6.9.2.1 Emission requirements [NR\_newRAT-Core]

##### 6.9.2.2 Immunity requirements [NR\_newRAT-Core]

#### 6.9.3 Performance requirements [NR\_newRAT-Perf]

### 6.10 RRM core maintenance (38.133/36.133) [NR\_newRAT-Core]

#### 6.10.1 General [NR\_newRAT-Core]

#### 6.10.2 Editorial CRs [NR\_newRAT-Core]

#### 6.10.3 UE measurement capability (38.133/36.133) [NR\_newRAT-Core]

#### 6.10.4 RRM measurement and measurement gap (38.133/36.133) [NR\_newRAT-Core]

#### 6.10.5 Idle state and inactive state mobility for SA and NSA (38.133/36.133) [NR\_newRAT-Core]

#### 6.10.6 Connected state mobility (38.133/36.133) [NR\_newRAT-Core]

#### 6.10.7 Timing (38.133/36.133) [NR\_newRAT-Core]

##### 6.10.7.1 One shot timing adjustment requirements [NR\_newRAT-Core]

##### 6.10.7.2 MTTD and MRTD requirements [NR\_newRAT-Core]

##### 6.10.7.3 Other timing requirements [NR\_newRAT-Core]

#### 6.10.8 Signaling characteristics (38.133/36.133) [NR\_newRAT-Core]

##### 6.10.8.1 RLM [NR\_newRAT-Core]

##### 6.10.8.2 SCell activation delay requirements [NR\_newRAT-Core]

##### 6.10.8.3 PSCell addition/release requirements (36.133) [NR\_newRAT-Core]

##### 6.10.8.4 TCI state switching requirements [NR\_newRAT-Core]

##### 6.10.8.5 BWP switching requirements [NR\_newRAT-Core]

##### 6.10.8.6 Other requirements [NR\_newRAT-Core]

#### 6.10.9 Beam management based on SSB and/or CSI-RS (38.133) [NR\_newRAT-Core]

#### 6.10.10 Requirements for NE-DC (option 4) and NGEN-DC [NR\_newRAT-Core]

#### 6.10.11 Requirements for NR-NR Dual Connectivity [NR\_newRAT-Core]

#### 6.10.12 Other requirements [NR\_newRAT-Core]

### 6.11 RRM perf maintenance (38.133/36.133) [NR\_newRAT-Perf]

#### 6.11.1 General [NR\_newRAT-Perf]

#### 6.11.2 Editorial CRs [NR\_newRAT-Perf]

#### 6.11.3 RRM test cases [NR\_newRAT-Perf]

##### 6.11.3.1 RRC\_IDLE state mobility test cases [NR\_newRAT-Perf]

###### 6.11.3.1.1 SA idle/inactive cell reselection [NR\_newRAT-Perf]

##### 6.11.3.2 RRC\_CONNECTED state mobility test cases [NR\_newRAT-Perf]

###### 6.11.3.2.1 NR-NR Handovers [NR\_newRAT-Perf]

###### 6.11.3.2.2 NR handovers to other RATs [NR\_newRAT-Perf]

###### 6.11.3.2.3 RRC Re-establishment [NR\_newRAT-Perf]

###### 6.11.3.2.4 Random access [NR\_newRAT-Perf]

###### 6.11.3.2.5 RRC Release with redirection to NR/E-UTRAN [NR\_newRAT-Perf]

##### 6.11.3.3 Timing test cases [NR\_newRAT-Perf]

###### 6.11.3.3.1 EN-DC timing accuracy and adjustment [NR\_newRAT-Perf]

###### 6.11.3.3.2 SA timing accuracy and adjustment [NR\_newRAT-Perf]

###### 6.11.3.3.3 EN-DC TA accuracy [NR\_newRAT-Perf]

###### 6.11.3.3.4 SA TA accuracy [NR\_newRAT-Perf]

##### 6.11.3.4 RLM test cases [NR\_newRAT-Perf]

###### 6.11.3.4.1 EN-DC SSB RLM for PSCell IS and OOS [NR\_newRAT-Perf]

###### 6.11.3.4.2 SA SSB RLM for PCell IS and OOS [NR\_newRAT-Perf]

###### 6.11.3.4.3 EN-DC CSI RLM for PSCell [NR\_newRAT-Perf]

###### 6.11.3.4.4 SA CSI RLM for PCell [NR\_newRAT-Perf]

###### 6.11.3.4.5 SSB RLM scheduling restriction &impact on mobility [NR\_newRAT-Perf]

##### 6.11.3.5 Interruption test cases [NR\_newRAT-Perf]

###### 6.11.3.5.1 EN-DC interruption due to DRX transition [NR\_newRAT-Perf]

###### 6.11.3.5.2 EN-DC interruption due to deactivated SCell operations [NR\_newRAT-Perf]

###### 6.11.3.5.3 SA interruptions at SCell addition/release/(de-)activation [NR\_newRAT-Perf]

###### 6.11.3.5.4 SA interruptions due to measurement on deactivated SCell [NR\_newRAT-Perf]

##### 6.11.3.6 SCell activation and de-activation test cases [NR\_newRAT-Perf]

###### 6.11.3.6.1 EN-DC SCell activation/deactivation delay [NR\_newRAT-Perf]

###### 6.11.3.6.2 SA SCell activation/deactivation [NR\_newRAT-Perf]

##### 6.11.3.7 UE UL carrier RRC reconfiguration delay test cases [NR\_newRAT-Perf]

##### 6.11.3.8 Beam failure detection and link recovery procedure test cases [NR\_newRAT-Perf]

###### 6.11.3.8.1 EN-DC beam failure detection and recovery [NR\_newRAT-Perf]

###### 6.11.3.8.2 SA beam failure detection and recovery [NR\_newRAT-Perf]

###### 6.11.3.8.3 EN-DC/SA scheduling restriction for BFD [NR\_newRAT-Perf]

##### 6.11.3.9 Active BWP switching test cases [NR\_newRAT-Perf]

##### 6.11.3.10 Measurement procedure test cases [NR\_newRAT-Perf]

###### 6.11.3.10.1 EN-DC cell search and L1 measurement period [NR\_newRAT-Perf]

###### 6.11.3.10.2 SA cell search and L1 measurement period [NR\_newRAT-Perf]

###### 6.11.3.10.3 Inter-frequency measurement with LTE PCell [NR\_newRAT-Perf]

###### 6.11.3.10.4 EN-DC NR inter-frequency measurement [NR\_newRAT-Perf]

###### 6.11.3.10.5 SA NR inter-frequency measurement [NR\_newRAT-Perf]

###### 6.11.3.10.6 EN-DC SFTD measurement delay [NR\_newRAT-Perf]

###### 6.11.3.10.7 Inter-RAT E-UTRA measurement (with NR PCell) [NR\_newRAT-Perf]

###### 6.11.3.10.8 EN-DC L1-RSRP measurement delay [NR\_newRAT-Perf]

###### 6.11.3.10.9 SA L1-RSRP measurement delay [NR\_newRAT-Perf]

##### 6.11.3.11 Measurement performance test cases [NR\_newRAT-Perf]

###### 6.11.3.11.1 Intra-frequency RSRP accuracy for FR1 and FR2 [NR\_newRAT-Perf]

###### 6.11.3.11.2 Inter-frequency RSRP accuracy for FR1 and FR2 [NR\_newRAT-Perf]

###### 6.11.3.11.3 Intra-frequency RSRQ accuracy for FR1 and FR2 [NR\_newRAT-Perf]

###### 6.11.3.11.4 Inter-frequency RSRQ accuracy for FR1 and FR2 [NR\_newRAT-Perf]

###### 6.11.3.11.5 SA/EN-DC SS-SINR measurement accuracies [NR\_newRAT-Perf]

###### 6.11.3.11.6 Beam management: L1-RSRP reporting [NR\_newRAT-Perf]

###### 6.11.3.11.7 EN-DC SFTD measurement accuracy [NR\_newRAT-Perf]

###### 6.11.3.11.8 SA NR inter-RAT E-UTRAN RSRP accuracy [NR\_newRAT-Perf]

###### 6.11.3.11.9 SA NR inter-RAT E-UTRAN RSRQ accuracy [NR\_newRAT-Perf]

###### 6.11.3.11.10 SA NR inter-RAT E-UTRAN SINR accuracy [NR\_newRAT-Perf]

##### 6.11.3.12 NR PSCell addition and release in EN-DC [NR\_newRAT-Perf]

##### 6.11.3.13 TCI switching delay [NR\_newRAT-Perf]

##### 6.11.3.14 E-UTRAN standalone test for NR [NR\_newRAT-Perf]

###### 6.11.3.14.1 E-UTRAN cell reselection to NR target cell [NR\_newRAT-Perf]

###### 6.11.3.14.2 E-UTRAN inter-RAT NR cell search and measurement delay [NR\_newRAT-Perf]

###### 6.11.3.14.3 E-UTRAN inter-RAT handover [NR\_newRAT-Perf]

###### 6.11.3.14.4 E-UTRAN inter-RAT NR measurement accuracy [NR\_newRAT-Perf]

### 6.12 Demodulation and CSI maintenance [NR\_newRAT-Perf]

#### 6.12.1 UE demodulation and CSI (38.101-4) [NR\_newRAT-Perf]

#### 6.12.2 BS demodulation (38.104) [NR\_newRAT-Perf]

### 6.13 Maintenance of the Positioning specs (36.171, 37.171 and 38.171) [NR\_newRAT-Perf or TEI]

## 7 Rel-16 Work Items for LTE

### 7.1 LTE intra-band Carrier Aggregation for x CC DL/y CC UL including contiguous and non-contiguous spectrum (x>=y) [LTE\_CA\_R16\_intra]

**R4-2002679 Email discussion summary for RAN4#94e\_#5\_LTE\_Baskets**

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

**Discussion:**

.

**Decision: Noted.**

#### 7.1.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_intra-Core/Perf]

**R4-2001498 Revised WID Basket WI for LTE Intra-band CA Rel-16**

*Type: WID revised For: Agreement  
 Source: Ericsson*

**Abstract:**

Revised WID Basket WI for LTE Intra-band CA Rel-16

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001505 TP for TR 36.716-01-01 for updated scope from RAN #86**

*Type: pCR For: Approval  
 36.716-01-01 v0.8.0  
 Source: Ericsson*

**Abstract:**

TP for TR 36.716-01-01 for updated scope from RAN #86

**Discussion:**

.

**Decision: Approved.**

**R4-2001509 CR introduction of Rel-16 LTE Intra-band combinations in 36.101**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5600 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction of Rel-16 LTE Intra-band combinations in 36.101

**Discussion:**

.

**Decision: Withdrawn.**

#### 7.1.2 UE RF [LTE\_CA\_R16\_intra-Core]

**R4-2000192 TP for Rel-16 Intra-band CA for x CC DL/ y CC UL including contiguous and non-contiguous spectrum (x>=y): Bandwidth combination set, REFSENS and insertion loss parameters for CA\_48B, CA\_48A-48B, CA\_48B-48B, CA\_48B-48C, CA\_48B-48D, CA\_48B-48E with 1UL and**

*Type: TS or TR cover For: Approval  
 36.716-01-01 v0.6.0  
 Source: Charter Communications*

**Discussion:**

.

**Decision: Revised to R4-2002568.**

**R4-2002568 TP for Rel-16 Intra-band CA for x CC DL/ y CC UL including contiguous and non-contiguous spectrum (x>=y): Bandwidth combination set, REFSENS and insertion loss parameters for CA\_48B, CA\_48A-48B, CA\_48B-48B, CA\_48B-48C, CA\_48B-48D, CA\_48B-48E with 1UL and**

*Type: TS or TR cover For: Approval  
 36.716-01-01 v0.6.0  
 Source: Charter Communications*

**Discussion:**

.

**Decision: Approved.**

### 7.2 LTE inter-band Carrier Aggregation for 2 bands DL with 1 band UL [LTE\_CA\_R16\_2BDL\_1BUL]

#### 7.2.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_2BDL\_1BUL-Core/Perf]

**R4-2001375 Revised WID: Rel16 LTE inter-band CA for 2 bands DL with 1 band UL**

*Type: WID revised For: Agreement  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001376 Introduction of Rel-16 LTE inter-band CA for 2 bands DL with 1 band UL combinations in TS36101**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5599 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Agreed.**

#### 7.2.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_2BDL\_1BUL-Core]

#### 7.2.3 UE RF without specific issues [LTE\_CA\_R16\_2BDL\_1BUL-Core]

**R4-2000175 TP to TR 36.716-02-01: CA\_2-26**

*Type: pCR For: Approval  
 36.716-02-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002564.**

**R4-2002564 TP to TR 36.716-02-01: CA\_2-26**

*Type: pCR For: Approval  
 36.716-02-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000176 TP to TR 36.716-02-01: CA\_26-66**

*Type: pCR For: Approval  
 36.716-02-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002565.**

**R4-2002565 TP to TR 36.716-02-01: CA\_26-66**

*Type: pCR For: Approval  
 36.716-02-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2001377 Draft CR for 2DL/1UL CA\_2-48**

*Type: draftCR For: Endorsement  
 36.101 v16.4.0  
 Source: Qualcomm Incorporated, Verizon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001378 Draft CR for 2DL/1UL CA\_2-66**

*Type: draftCR For: Endorsement  
 36.101 v16.4.0  
 Source: Qualcomm Incorporated, Verizon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001379 Draft CR for 2DL/1UL CA\_4-5**

*Type: draftCR For: Endorsement  
 36.101 v16.4.0  
 Source: Qualcomm Incorporated, Verizon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001380 Draft CR for 2DL/1UL CA\_5-66**

*Type: draftCR For: Endorsement  
 36.101 v16.4.0  
 Source: Qualcomm Incorporated, Verizon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001381 Draft CR for 2DL/1UL CA\_13-46**

*Type: draftCR For: Endorsement  
 36.101 v16.4.0  
 Source: Qualcomm Incorporated, Verizon*

**Discussion:**

.

**Decision: Endorsed.**

### 7.3 LTE inter-band Carrier Aggregation for 3 bands DL with 1 band UL [LTE\_CA\_R16\_3BDL\_1BUL]

#### 7.3.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_3BDL\_1BUL-Core/Perf]

**R4-2001782 Revised WID for LTE inter-band CA for 3 bands DL with 1 bands UL**

*Type: WID revised For: Agreement  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001778 Introduction of completed R16 3DL band combinations to TS 36.101**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5601 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

#### 7.3.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_3BDL\_1BUL-Core]

**R4-2002006 draft CR 36.101 to add missing fallback CA\_1A-1A-3A-3A-7A**

*Type: draftCR For: Endorsement  
 36.101 v16.4.0  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 36.101 to add missing fallback CA\_1A-1A-3A-3A-7A

**Discussion:**

.

**Decision: Endorsed.**

#### 7.3.3 UE RF without specific issues [LTE\_CA\_R16\_3BDL\_1BUL-Core]

**R4-2000177 TP to TR 36.716-03-01: CA\_2-7-26**

*Type: pCR For: Approval  
 36.716-03-01 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002566.**

**R4-2002566 TP to TR 36.716-03-01: CA\_2-7-26**

*Type: pCR For: Approval  
 36.716-03-01 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000178 TP to TR 36.716-03-01: CA\_2-26-66**

*Type: pCR For: Approval  
 36.716-03-01 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002567.**

**R4-2002567 TP to TR 36.716-03-01: CA\_2-26-66**

*Type: pCR For: Approval  
 36.716-03-01 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000179 TP to TR 36.716-03-01: CA\_7-26-66**

*Type: pCR For: Approval  
 36.716-03-01 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002633.**

**R4-2002633 TP to TR 36.716-03-01: CA\_7-26-66**

*Type: pCR For: Approval  
 36.716-03-01 v0.4.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000486 TP for TR 36.716-03-01: CA\_1-20-38**

*Type: pCR For: Approval  
 36.716-03-01 v0.5.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002569.**

**R4-2002569 TP for TR 36.716-03-01: CA\_1-20-38**

*Type: pCR For: Approval  
 36.716-03-01 v0.5.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

### 7.4 LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL [LTE\_CA\_R16\_xBDL\_1BUL]

#### 7.4.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_xBDL\_1BUL-Core]

**R4-2000174 Introduction of LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL to TS36.101**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5591 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This is a big CR for the basket work item on LTE CA 4DL/1UL and 5DL/1UL.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000329 Revised WI: Rel'16 LTE inter-band CA for x bands DL (x=4, 5) with 1 band UL**

*Type: WID revised For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000330 TR 36.716-04-01 v0.8.0**

*Type: draft TR For: Approval  
 36.716-04-01 v0.8.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000331 Updated scope of TR: Rel'16 LTE inter-band CA for x bands DL (x=4, 5) with 1 band UL**

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

**Discussion:**

.

**Decision: Approved.**

#### 7.4.2 UE RF with 4 LTE bands CA [LTE\_CA\_R16\_xBDL\_1BUL-Core]

**R4-2000180 TP to TR 36.716-04-01: CA\_2-7-26-66**

*Type: pCR For: Approval  
 36.716-04-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002634.**

**R4-2002634 TP to TR 36.716-04-01: CA\_2-7-26-66**

*Type: pCR For: Approval  
 36.716-04-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000187 TP to TR 36.716-04-01: Correction of BCS for CA\_1A-3C-7A-28A**

*Type: pCR For: Approval  
 36.716-04-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000188 TP to TR 36.716-04-01: Correction of BCS for CA\_2A-7A-7A-29A-66A**

*Type: pCR For: Approval  
 36.716-04-01 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

#### 7.4.3 UE RF with 5 LTE bands CA [LTE\_CA\_R16\_xBDL\_1BUL-Core]

### 7.5 LTE inter-band Carrier Aggregation for 2 bands DL with 2 band UL [LTE\_CA\_R16\_2BDL\_2BUL]

#### 7.5.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_2BDL\_2BUL-Core]

**R4-2002027 Revised WID for LTE inter-band CA for 2 bands DL with 2 bands UL**

*Type: WID revised For: Agreement  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

#### 7.5.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R16\_2BDL\_2BUL-Core]

#### 7.5.3 UE RF without specific issues [LTE\_CA\_R16\_2BDL\_2BUL-Core]

### 7.6 LTE inter-band Carrier Aggregation for x bands DL (x= 3, 4, 5) with 2 band UL [LTE\_CA\_R16\_xBDL\_2BUL]

#### 7.6.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R16\_xBDL\_2BUL-Core]

**R4-2001040 TR 36.716-03-02 v0.9.0 update: LTE-A x bands DL (x=3,4,5) with 2 bands UL inter-band CA in Rel-16**

*Type: draft TR For: Approval  
 36.716-03-02 v0.9.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001041 Revised WID on LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-16**

*Type: WID revised For: Agreement  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001169 Introduction of LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL into TS36.101**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5597 Cat: B (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Agreed.**

#### 7.6.2 UE RF with MSD [LTE\_CA\_R16\_xBDL\_2BUL-Core]

**R4-2001237 TP on summary of self-interference analysis for new x bands (x=3,4,5) DL with 2 bands UL**

*Type: pCR For: Approval  
 36.716-03-02 v0.9.0  
 Source: LG Electronics Finland*

**Discussion:**

.

**Decision: Approved.**

**R4-2001238 MSD results for new LTE-A CA band combinations in rel-16**

*Type: pCR For: Approval  
 36.716-03-02 v0.9.0  
 Source: LG Electronics Finland*

**Discussion:**

.

**Decision: Approved.**

#### 7.6.3 UE RF without MSD [LTE\_CA\_R16\_xBDL\_2BUL-Core]

### 7.7 RRM for LTE CA basket WI-s [LTE\_CA\_R16\_xxxx]

#### 7.7.1 RRM Core (36.133) [LTE\_CA\_R16\_xxxx-Core]

#### 7.7.2 RRM Perf (36.133) [LTE\_CA\_R16\_xxxx-Perf]

### 7.8 Additional LTE bands for UE category M1 and/or NB1 in Rel-16 [LTE\_bands\_R16\_M1\_NB1]

#### 7.8.1 RF [LTE\_bands\_R16\_M1\_NB1-Core]

#### 7.8.2 Others [LTE\_bands\_R16\_M1\_NB1-Perf]

### 7.9 Additional LTE bands for UE category M2 and/or NB2 in in Rel-16 [LTE\_bands\_R16\_M2\_NB2]

#### 7.9.1 RF [LTE\_bands\_R16\_M2\_NB2-Core]

#### 7.9.2 Others [LTE\_bands\_R15\_M2\_NB2-Perf]

### 7.10 Additional MTC enhancements for LTE [LTE\_eMTC5]

#### 7.10.1 General [LTE\_eMTC5]

**R4-2002680 Email discussion summary for RAN4#94e\_#6\_LTE\_eMTC5**

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

**Discussion:**

.

**Decision: Revised to R4-2002877.**

**R4-2002877 Email discussion summary for RAN4#94e\_#6\_LTE\_eMTC5**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002741 WF on remaining issue on TR 37.823**

*Type: other For: Approval  
 Source: Ericsson*

**Discussion:**

.

**Decision: Approved.**

#### 7.10.2 Coexistence with NR [LTE\_eMTC5]

**R4-2001127 TP for TR 37.823: Specific aspects for TDD**

*Type: other For: Agreement  
 Source: Huawei Technologies R4-202165D UK*

**Abstract:**

This paper proposes TP on specific aspects for TDD to TR 37.823.

**Discussion:**

.

**Decision: Revised to R4-2002739.**

**R4-2002739 TP for TR 37.823: Specific aspects for TDD**

*Type: other For: Agreement  
 Source: Huawei Technologies R4-202165D UK*

**Abstract:**

This paper proposes TP on specific aspects for TDD to TR 37.823.

**Discussion:**

.

**Decision: Approved.**

**R4-2001862 TR 37.823 LTE-M coexisting with NR v 0.2.0**

*Type: draft TR For: Approval  
 37.823 v0.3.0  
 Source: Ericcson*

**Abstract:**

in this paper, the TR 37.823 is udpated

**Discussion:**

.

**Decision: Approved.**

**R4-2001863 TP for TR 37.823 : R16 RAN1 impact on co-existing**

*Type: pCR For: Approval  
 37.823 v0.3.0  
 Source: Ericsson*

**Abstract:**

TP is proposed for TR38.823 capture the R16 RAN1 impact

**Discussion:**

.

**Decision: Revised to R4-2002740.**

**R4-2002740 TP for TR 37.823 : R16 RAN1 impact on co-existing**

*Type: pCR For: Approval  
 37.823 v0.3.0  
 Source: Ericsson*

**Abstract:**

TP is proposed for TR38.823 capture the R16 RAN1 impact

**Discussion:**

.

**Decision: Approved.**

**R4-2001864 R16 RAN1 impact on co-existing**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

RAN1 impact is analysed in this paper

**Discussion:**

.

**Decision: Noted.**

#### 7.10.3 RRM core requirements (36.133) [LTE\_eMTC5-Core]

##### 7.10.3.1 DL quality report in MSG3 and connected mode [LTE\_eMTC5-Core]

##### 7.10.3.2 WUS [LTE\_eMTC5-Core]

##### 7.10.3.3 MPDCCH performance improvement [LTE\_eMTC5-Core]

##### 7.10.3.4 PUR [LTE\_eMTC5-Core]

##### 7.10.3.5 Mobility enhancement [LTE\_eMTC5-Core]

##### 7.10.3.6 Others [LTE\_eMTC5-Core]

#### 7.10.4 Demodulation and CSI requirements (36.101/36.104) [LTE\_eMTC5-Perf]

### 7.11 Additional enhancements for NB-IoT [NB\_IOTenh3]

#### 7.11.1 General [NB\_IOTenh3]

**R4-2002681 Email discussion summary for RAN4#94e\_#7\_LTE\_IOTenh3**

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

**Discussion:**

.

**Decision: Revised to R4-2002878.**

**R4-2002878 Email discussion summary for RAN4#94e\_#7\_LTE\_IOTenh3**

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

**Discussion:**

.

**Decision: Noted.**

#### 7.11.2 Co-existence with NR [NB\_IOTenh3]

**R4-2000670 TP to TR 37.824: Update of NR TDD UE specific dedicated configuration**

*Type: pCR For: Approval  
 37.824 v1.0.0  
 Source: Nokia, Nokia Shanghai Bell, ZTE*

**Abstract:**

This contribution provides a TP to update TR 37.824 to use the current NR TDD UE specific dedicated configuration for testing NB-IoT operation in NR in-band, to avoid defining two very similar NR TDD UE specific dedicated configurations in the test specif

**Discussion:**

.

**Decision: Approved.**

**R4-2000671 CR to TS 38.104: Corrections on NB-IoT operation in NR channel bandwidth**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0132 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correct the identified errors.

1) Correct the typo in clause 6.2.2.

2) Clarify the requirement only apply for NB-IoT operation in NR in-band and correct the typo in clause 6.3.4.

3) Remove the term ‘NR and NR with NB-IoT’ which is redundant and not used i

**Discussion:**

.

**Decision: Agreed.**

**R4-2000672 CR to TS 38.141-1: Introduction of NB-IoT operation in NR channel bandwidth**

*Type: CR For: Agreement  
 38.141-1 v16.2.0 CR-0093 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduce support of NB-IoT operation in NR channel bandwidth.

**Discussion:**

.

**Decision: Revised to R4-2002743.**

**R4-2002743 CR to TS 38.141-1: Introduction of NB-IoT operation in NR channel bandwidth**

*Type: CR For: Agreement  
 38.141-1 v16.2.0 CR-0093 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduce support of NB-IoT operation in NR channel bandwidth.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000683 TP to TR 37.824: Update of NR TDD UE specific dedicated configuration**

*Type: pCR For: Approval  
 37.824 v1.0.0  
 Source: Nokia, Nokia Shanghai Bell, ZTE*

**Abstract:**

This contribution provides a TP to update TR 37.824 to use the current NR TDD UE specific dedicated configuration for testing NB-IoT operation in NR in-band, to avoid defining two very similar NR TDD UE specific dedicated configurations in the test specif

**Discussion:**

.

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

**R4-2000684 CR to TS 38.104: Corrections on NB-IoT operation in NR channel bandwidth**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0135 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correct the identified errors.

1) Correct the typo in clause 6.2.2.

2) Clarify the requirement only apply for NB-IoT operation in NR in-band and correct the typo in clause 6.3.4.

3) Remove the term ‘NR and NR with NB-IoT’ which is redundant and not used i

**Discussion:**

.

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

**R4-2000685 CR to TS 38.141-1: Introduction of NB-IoT operation in NR channel bandwidth**

*Type: CR For: Agreement  
 38.141-1 v16.2.0 CR-0098 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduce support of NB-IoT operation in NR channel bandwidth.

**Discussion:**

.

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

**R4-2000699 Draft TR 37.824 v040 Coexistence between NB-IoT and NR**

*Type: draft TR For: Approval  
 37.824 v0.4.0  
 Source: Futurewei*

**Abstract:**

Draft TR 37.824 v0.4.0

**Discussion:**

.

**Decision: Approved.**

**R4-2000700 TP editorial corrections in TR 37.824**

*Type: other For: Approval  
 Source: Futurewei*

**Abstract:**

TP editorial corrections

**Discussion:**

.

**Decision: Revised to R4-2002742.**

**R4-2002742 TP editorial corrections in TR 37.824**

*Type: other For: Approval  
 Source: Futurewei*

**Abstract:**

TP editorial corrections

**Discussion:**

.

**Decision: Revised to R4-2002915.**

**R4-2002915 TP editorial corrections in TR 37.824**

*Type: other For: Approval  
 Source: Futurewei*

**Abstract:**

TP editorial corrections

**Discussion:**

.

**Decision: Approved.**

**R4-2000816 Test Configuration for TS 38.141**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000817 Test Configuration for TS 37.141**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000875 TP to TR 37.824: modifications for section 5.3 NB-IoT operating in NR guard-band**

*Type: pCR For: Approval  
 37.824 v0.3.0  
 Source: CHTTL, T-mobile USA, Dish*

**Discussion:**

.

**Decision: Approved.**

**R4-2000970 Introduction of NB-IoT into TS37.141**

*Type: CR For: Agreement  
 37.141 v16.4.0 CR-0922 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002744.**

**R4-2002744 Introduction of NB-IoT into TS37.141**

*Type: CR For: Agreement  
 37.141 v16.4.0 CR-0922 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

#### 7.11.3 RRM core requirements (36.133) [NB\_IOTenh3-Core]

##### 7.11.3.1 Group WUS [NB\_IOTenh3-Core]

##### 7.11.3.2 PUR [NB\_IOTenh3-Core]

##### 7.11.3.3 Multi-carrier operations [NB\_IOTenh3-Core]

##### 7.11.3.4 Others [NB\_IOTenh3-Core]

#### 7.11.4 Demodulation and CSI requirements (36.101/36.104) [NB\_IOTenh3-Perf]

### 7.12 Even further Mobility enhancement in E-UTRAN [LTE\_feMob]

#### 7.12.1 RRM core requirements (36.133) [LTE\_feMob-Core]

##### 7.12.1.1 Conditional handover [LTE\_feMob-Core]

##### 7.12.1.2 Reduction of user data interruption [LTE\_feMob-Core]

##### 7.12.1.3 Others [LTE\_feMob-Core]

### 7.13 Further performance enhancement for LTE in high speed scenario [LTE\_high\_speed\_enh2]

#### 7.13.1 RRM core requirements maintenance (36.133) [LTE\_high\_speed\_enh2-Core]

#### 7.13.2 RRM performance requirements (36.133) [LTE\_high\_speed\_enh2-Perf]

#### 7.13.3 UE Demodulation and CSI requirements (36.101) [LTE\_high\_speed\_enh2-Perf]

##### 7.13.3.1 Extension of demodulation requirements to CA [LTE\_high\_speed\_enh2-Perf]

##### 7.13.3.2 HST-SFN PDSCH demodulation requirements [LTE\_high\_speed\_enh2-Perf]

##### 7.13.3.3 Single tap HST PDSCH demodulation requirements [LTE\_high\_speed\_enh2-Perf]

#### 7.13.4 BS Demodulation requirements (36.104) LTE\_high\_speed\_enh2-Perf]

##### 7.13.4.1 PUSCH demodulation requirements [LTE\_high\_speed\_enh2-Perf]

##### 7.13.4.2 PRACH requirements [LTE\_high\_speed\_enh2-Perf]

### 7.14 LTE-based 5G terrestrial broadcast [LTE\_terr\_bcast]

#### 7.14.1 RRM core requirements maintenance (36.133) [LTE\_terr\_bcast -Core]

##### 7.14.1.1 Interruption requirements [LTE\_terr\_bcast -Core]

##### 7.14.1.2 Phase synchronization accuracy [LTE\_terr\_bcast -Core]

##### 7.14.1.3 RSRP/RSRQ report mapping [LTE\_terr\_bcast -Core]

##### 7.14.1.4 Other requirements [LTE\_terr\_bcast -Core]

#### 7.14.2 RRM Perf requirements (36.133) [LTE\_terr\_bcast -Perf]

#### 7.14.3 Demodulation and CSI requirements (36.101) [LTE\_terr\_bcast -Perf]

### 7.15 Support for NavIC Navigation Satellite System for LTE [LCS\_NAVIC-Perf]

#### 7.15.1 UE perf. requirements (36.171) [LCS\_NAVIC-Perf]

### 7.16 DL MIMO efficiency enhancements for LTE [LTE\_DL\_MIMO\_EE]

**R4-2002682 Email discussion summary for RAN4#94e\_#8\_LTE\_DL\_MIMO\_EE**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002039 On new SRS requirements for LTE eMIMO**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002040 CR for TS 36.101-1 Introduction of new SRS requirements for LTE eMIMO**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5602 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002745.**

**R4-2002745 CR for TS 36.101-1 Introduction of new SRS requirements for LTE eMIMO**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5602 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

Session chair: Revised to correct the coversheet error .

**Decision: Agreed.**

#### 7.16.1 UE RF requirements (36.101) [LTE\_DL\_MIMO\_EE]

## 8 Rel-16 non-spectrum related work items for NR

### 8.1 NR-based access to unlicensed spectrum [NR\_unlic]

#### 8.1.1 System Parameters [NR\_unlic-Core]

**R4-2002683 Email discussion summary for RAN4#94e\_#9\_NR\_unlic\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2002879.**

**R4-2002879 Email discussion summary for RAN4#94e\_#9\_NR\_unlic\_SysParameters**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002746 WF on wideband operation**

*Type: other For: Approval  
 Source: ZTE*

**Discussion:**

.

**Decision: Revised to R4-2002919.**

**R4-2002919 WF on wideband operation**

*Type: other For: Approval  
 Source: ZTE*

**Discussion:**

.

**Decision: Approved.**

**R4-2002748 WF on new intra-band CA BW classes for NR-U**

*Type: other For: Approval  
 Source: Ericsson*

**Discussion:**

.

**Decision: Approved.**

**R4-2002749 draftCR to 38.104 on NR-U sync raster**

*Type: draftCR For: Endorsement  
 38.104 v16.2.0  
 Source: FUTUREWEI*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002750 draftCR to 38.101-1 on NR-U sync raster**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: FUTUREWEI*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002751 draftCR to 38.104 on NR-U SEM**

*Type: draftCR For: Endorsement  
 38.104 v16.2.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002752 draftCR to 38.101-1 on NR-U SEM**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Nokia*

**Discussion:**

.

**Decision: Withdrawn.**

##### 8.1.1.1 General [NR\_unlic-Core ]

**R4-2001318 Additional NR CA bandwidth classes and specification of CA carrier spacing for NR-U**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose additinal NR CA bandwidth classes for NR-U and the associated CA nominal carrier spacing

**Discussion:**

.

**Decision: Noted.**

**R4-2001958 draftCR to 38.104 on introduction of band n46**

*Type: draftCR For: Endorsement  
 38.104 v16.2.0  
 Source: Ericsson*

**Abstract:**

contribution on introduction of band n46 in 38.104 for NR-U operation

**Discussion:**

.

**Decision: Noted.**

**R4-2001959 draftCR to 38.101-1 on introduction of band n46**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Ericsson*

**Abstract:**

contribution on introduction of band n46 in 38.101-1 for NR-U operation

**Discussion:**

.

**Decision: Revised to R4-2002747.**

**R4-2002747 draftCR to 38.101-1 on introduction of band n46**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Ericsson*

**Abstract:**

contribution on introduction of band n46 in 38.101-1 for NR-U operation

**Discussion:**

.

**Decision: Withdrawn.**

##### 8.1.1.2 Wideband operations (UE and BS) [NR\_unlic-Core]

**R4-2000709 [NRU] Wideband Operation Back-off Measurements for UE**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

wideband operation mask including exceptions for image and carrier leakage is agreed, we did wideband operation measurements to verify the potential back-off needs due to the mask and combination of image and spectral regrowth that are presented here.

**Discussion:**

.

**Decision: Noted.**

**R4-2000818 Further consideration on guard band on wideband operation**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000819 Further consideration on unwanted emission mask for NR-U**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000981 Further discussion on intra-carrier guardband**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001306 NR-U - Capturing the Spectral Emission Mask**

*Type: other For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2001319 The NR-U channel raster and allowed intra-cell GB for wideband operation**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose that the agreed channel raster is unchanged (up to 200 kHz shift not needed for coexistence) and that coexistence scenarios can be managed by the intra-cell guard bands.

**Discussion:**

.

**Decision: Noted.**

**R4-2001320 Nominal intra-cell guard bands for wideband operation**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Ericsson*

**Abstract:**

Draft CR to introduce nominal intra-cell guard bands for wideband operation and specification of the requirements when these guard bands are not configured

**Discussion:**

.

**Decision: Noted.**

**R4-2001732 NR-U Guard band analysis**

*Type: other For: Approval  
 Source: Futurewei*

**Abstract:**

In RAN4#93, discussions about guard band for NR-U were captured. In particular, when a large bandwidth channel is divided into subchannels, how to define the subchannels in terms of RBs was proposed. This contribution analyzes the proposal and provides en

**Discussion:**

.

**Decision: Noted.**

##### 8.1.1.3 Channel raster [NR\_unlic-Core ]

##### 8.1.1.4 Spectrum utilizations [NR\_unlic-Core]

**R4-2000820 Draft CR to 38.104 on NR-U Spectrum Utilization**

*Type: draftCR For: Endorsement  
 38.104 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000967 NR-U Spectral Utilization and Wideband Operation**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

This paper discusses the open issues in the WF on guardbands from previous RAN4 meeting and also proposes some clarifications to the agreements in the WF

**Discussion:**

.

**Decision: Noted.**

##### 8.1.1.5 Sync raster [NR\_unlic-Core]

**R4-2001731 Sync raster design for NR-U**

*Type: other For: Approval  
 Source: Futurewei*

**Abstract:**

In RAN4#93, a draft CR listing the synchronization raster points for 38.104 was endorsed. It was expected that an accompanying CR for 38.101-1 would be provided for RAN4#94. One open issue was the type of “SS block pattern” to be listed in the table. This

**Discussion:**

.

**Decision: Noted.**

#### 8.1.2 UE RF requirements [NR\_unlic-Core]

**R4-2002684 Email discussion summary for RAN4#94e\_#10\_NR\_unlic\_UE\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2002880.**

**R4-2002880 Email discussion summary for RAN4#94e\_#10\_NR\_unlic\_UE\_RF**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002753 WF on remaining UE Tx requirements for NR-U**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Approved.**

**R4-2002754 WF on enabling PC3 for NR-U in Rel-16**

*Type: other For: Approval  
 Source: Charter*

**Discussion:**

.

**Decision: Noted.**

**R4-2002755 WF on additional spurious emission requirements in Band n46**

*Type: other For: Approval  
 Source: Nokia*

**Discussion:**

.

**Decision: Approved.**

**R4-2002756 WF on UE receiver requirements for NR-U**

*Type: other For: Approval  
 Source: Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2002757 WF on method and assumptions in determining NR-U MPR and A-MPR in Band n46**

*Type: other For: Approval  
 Source: Skyworks*

**Discussion:**

.

**Decision: Noted.**

**R4-2000190 [DC] TP for DC\_n48-n46**

*Type: TS or TR cover For: Approval  
 37.716-11-11 v0.1.0  
 Source: Charter Communications*

**Discussion:**

.

**Decision: Noted.**

**R4-2000191 TP for CA\_n48-n46**

*Type: TS or TR cover For: Approval  
 38.716-02-00 v0.8.0  
 Source: Charter Communications*

**Discussion:**

.

**Decision: Noted.**

**R4-2001222 Harmonic MSD discussion for DC\_2\_n46, CA\_n25\_n46**

*Type: other For: Approval  
 38.101-1 v..  
 Source: MediaTek Inc., Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2001712 Standalone NR-U combinations in Rel-16**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we propose some of the relevant requirements for standalone NR-U and propose to approve the related TP

**Discussion:**

.

**Decision: Noted.**

**R4-2001713 Draft CR on Introduction of standalone NR-U combinations in Rel-16**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Ericsson*

**Abstract:**

In this draft CR, we propose some of the relevant requirements for standalone NR-U and propose to approve the related TP

**Discussion:**

.

**Decision: Noted.**

**R4-2001714 TP on Inclusion of NR-U standalone combinations in TR 38 716-01-01:**

*Type: other For: Approval  
 38.716-01-01 v..  
 Source: Ericsson*

**Abstract:**

In this contribution, we propose some of the relevant requirements for standalone NR-U and propose to approve the related TP

**Discussion:**

.

**Decision: Noted.**

**R4-2002019 TP to include CA\_n25A-n46A**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Ericsson, T-Mobile US, MediaTek*

**Abstract:**

TP to include CA\_n25A-n46A

**Discussion:**

.

**Decision: Noted.**

**R4-2002020 TP to include CA\_n46A-n66A**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Ericsson, T-Mobile US, MediaTek*

**Abstract:**

TP to include CA\_n46A-n66A

**Discussion:**

.

**Decision: Noted.**

**R4-2002021 TP to include DC\_2A\_n46A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, T-Mobile US, MediaTek*

**Abstract:**

TP to include DC\_2A\_n46A

**Discussion:**

.

**Decision: Noted.**

**R4-2002022 TP to include DC\_66A\_n46A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, T-Mobile US, MediaTek*

**Abstract:**

TP to include DC\_66A\_n46A

**Discussion:**

.

**Decision: Noted.**

**R4-2002023 CR 38.101-1 to include NR CA NR-U combinations**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0272 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 to include NR CA NR-U combinations

**Discussion:**

.

**Decision: Noted.**

**R4-2002024 CR 38.101-3 to include EN-DC NR-U combinations**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0214 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-3 to include EN-DC NR-U combinations

**Discussion:**

.

**Decision: Noted.**

##### 8.1.2.1 Transmitter characteristics [NR\_unlic-Core]

**R4-2000399 On NR-U ACLR requirement**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2000708 [NRU] Single Carrier Back-off measurements for UE power class and MPR**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

NRU spectrum mask was agreed in [2], to define the NRU UE power class and MPR we have performed more measurements on UE WiFi PAs that are presented here.

**Discussion:**

.

**Decision: Noted.**

**R4-2001321 Initial simualtions of required MPR and A-MPR for 5 GHz NR-U**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

In this contribution we present initial simulation results of required MPR and A-MPR for 5 GHz NR-U

**Discussion:**

.

**Decision: Noted.**

**R4-2002094 NR-U MPR for PC5 single carrier**

*Type: other For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2002095 NR-U general and Band n46 specific Tx requirements**

*Type: other For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

##### 8.1.2.2 Receiver characteristics [NR\_unlic-Core]

**R4-2002092 Band n46 reference sensitivity**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2002093 NR-U receiver ACS and blocking**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

#### 8.1.3 BS RF requirements [NR\_unlic-Core]

##### 8.1.3.1 Transmitter characteristics [NR\_unlic-Core]

##### 8.1.3.2 Receiver characteristics [NR\_unlic-Core]

#### 8.1.4 RRM core requirements (38.133) [NR\_unlic-Core]

##### 8.1.4.1 Cell re-selection [NR\_unlic-Core]

##### 8.1.4.2 Handover [NR\_unlic-Core]

##### 8.1.4.3 RRC connection mobility control [NR\_unlic-Core]

##### 8.1.4.4 SCell activation/deactivation (delay and interruption) [NR\_unlic-Core]

##### 8.1.4.5 PSCell addition/release (delay and interruption) [NR\_unlic-Core]

##### 8.1.4.6 Active TCI state switching [NR\_unlic-Core]

##### 8.1.4.7 Interruptions due to operation in non-NR-U serving cells [NR\_unlic-Core]

##### 8.1.4.8 Active BWP switching [NR\_unlic-Core]

##### 8.1.4.9 RLM and link recovery procedures [NR\_unlic-Core]

##### 8.1.4.10 Measurement requirements [NR\_unlic-Core]

##### 8.1.4.11 Measurement accuracy [NR\_unlic-Core]

##### 8.1.4.12 Measurement capability and reporting criteria [NR\_unlic-Core]

##### 8.1.4.13 Timing [NR\_unlic-Core]

##### 8.1.4.14 Others [NR\_unlic-Core]

### 8.2 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR [NR\_CLI\_RIM]

#### 8.2.1 General [NR\_CLI\_RIM-Core]

#### 8.2.2 RRM core requirements maintenance (38.133) [NR\_CLI\_RIM-Core]

#### 8.2.3 RRM perf. requirements (38.133) [NR\_CLI\_RIM-Perf]

##### 8.2.3.1 CLI measurement accuracy [NR\_CLI\_RIM-Perf]

##### 8.2.3.2 Test cases [NR\_CLI\_RIM-Perf]

##### 8.2.3.3 Others [NR\_CLI\_RIM-Perf]

### 8.3 NR mobility enhancement [NR\_Mob\_enh]

#### 8.3.1 General [NR\_Mob\_enh-Core]

#### 8.3.2 RRM core requirements (38.133) [NR\_Mob\_enh-Core]

##### 8.3.2.1 Handover with simultaneous Rx/Tx with source and target cells [NR\_Mob\_enh-Core]

##### 8.3.2.2 Conditional handover [NR\_Mob\_enh-Core]

##### 8.3.2.3 Conditional PSCell addition/change [NR\_Mob\_enh-Core]

##### 8.3.2.4 Others [NR\_Mob\_enh-Core]

### 8.4 5G V2X with NR sidelink [5G\_V2X\_NRSL]

#### 8.4.1 General [5G\_V2X\_NRSL]

**R4-2002685 Email discussion summary for RAN4#94e\_#11\_5G\_V2X\_NRSL\_UE\_TX**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Discussion:**

.

**Decision: Revised to R4-2002881.**

**R4-2002881 Email discussion summary for RAN4#94e\_#11\_5G\_V2X\_NRSL\_UE\_TX**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Discussion:**

.

**Decision: Noted.**

**R4-2002758 WF on MPR/A-MPR simulation assumptions and parameters for simultaneous PSFCH transmission**

*Type: other For: Approval  
 Source: Huawei*

**Discussion:**

.

**Decision: Approved.**

**R4-2002759 WF on MPR on S-SSB simulation assumptions and parameters**

*Type: other For: Approval  
 Source: CATT*

**Discussion:**

.

**Decision: Approved.**

**R4-2002760 WF on on/off time mask for 5G V2X UE for single carrier SL transmission**

*Type: other For: Approval  
 Source: LG Electronics*

**Discussion:**

.

**Decision: Approved.**

**R4-2002784 WF on on/off time switched period for TDM operation between LTE SL and NR SL transmission without dual PA capability**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Approved.**

**R4-2002787 WF on inter-band con-current operation and example band combinations in rel-16**

*Type: other For: Approval  
 Source: Dish Network*

**Discussion:**

.

**Decision: Approved.**

**R4-2002791 WF on MPR/A-MPR simulation assumptions for NR V2X PC2 UE**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000703 Reply LS to RAN1 on simultaneous transmission of PSFCH**

*Type: LS out For: Approval  
 to -  
 Source: Futurewei*

**Abstract:**

Reply LS to RAN1 on simultaneous transmission of PSFCH

**Discussion:**

.

**Decision: Noted.**

**R4-2000706 Reply LS to RAN2 on UL-SL Prioritization**

*Type: LS out For: Approval  
 to -  
 Source: Futurewei*

**Abstract:**

Reply LS to RAN2 on UL-SL Prioritization

**Discussion:**

.

**Decision: Revised to R4-2002790.**

**R4-2002790 Reply LS to RAN2 on UL-SL Prioritization**

*Type: LS out For: Approval  
 to -  
 Source: Futurewei*

**Abstract:**

Reply LS to RAN2 on UL-SL Prioritization

**Discussion:**

.

**Decision: Noted.**

**R4-2001214 TR update TR38.886 v0.5.0**

*Type: draft TR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001215 Summary on E-mail discussion for NR V2X**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001221 TP on conclusion of NR V2X WI**

*Type: pCR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

#### 8.4.2 Co-existence Study [5G\_V2X\_NRSL-Core]

##### 8.4.2.1 Simulation Results [5G\_V2X\_NRSL-Core]

**R4-2000472 MPR, A-MPR results for PSSCH/PSCCH transmission**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000473 MPR, A-MPR results for simultaneous PSFCH transmission**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

##### 8.4.2.2 In-device coexistence [5G\_V2X\_NRSL-Core]

**R4-2000701 TP on Indevice Coexistence**

*Type: other For: Approval  
 Source: Futurewei*

**Abstract:**

TP on indevice coexistence

**Discussion:**

.

**Decision: Noted.**

##### 8.4.2.3 UE-to-UE coexistence [5G\_V2X\_NRSL-Core]

#### 8.4.3 System parameters [5G\_V2X\_NRSL-Core]

**R4-2002686 Email discussion summary for RAN4#94e\_#13\_5G\_V2X\_NRSL\_SysParameters**

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

**Discussion:**

.

**Decision: Revised to R4-2002882.**

**R4-2002882 Email discussion summary for RAN4#94e\_#13\_5G\_V2X\_NRSL\_SysParameters**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000471 Switching time between NR SL and LTE SL**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000567 Remaining issues on channel raster for band n47**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000568 CR on UE system parameters for NR V2X UE for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0227 Cat: B (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Revised to R4-2002793.**

**R4-2002793 CR on UE system parameters for NR V2X UE for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0227 Cat: B (Rel-16)  
  
 Source: vivo*

**Discussion:**

Session chair: Contents are agreeable. It is postponed because of coversheet issue.

**Decision: Postponed.**

**R4-2000569 CR on system parameters for NR V2X for TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0128 Cat: B (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001003 TP on channel arrangement for NR V2X**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: vivo*

**Discussion:**

.

**Decision: Revised to R4-2002795.**

**R4-2002795 TP on channel arrangement for NR V2X**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: vivo*

**Discussion:**

.

**Decision: Approved.**

##### 8.4.3.1 Bands and bandwidth [5G\_V2X\_NRSL-Core]

**R4-2000570 Channel bandwidths for NR V2X licensed bands**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000571 TP on channel bandwidths for NR V2X licensed band n38**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000902 NR V2X licensed frequency bands for SL operation**

*Type: other For: Approval  
 Source: CMCC*

**Discussion:**

.

**Decision: Noted.**

##### 8.4.3.2 Others [5G\_V2X\_NRSL-Core]

**R4-2002028 On channle raster for NR-V2X**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

#### 8.4.4 UE RF requirements [5G\_V2X\_NRSL-Core]

**R4-2000688 Addition of TX diversity into V2X**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0235 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000690 Declare Supported Post Antenna Gain for UE**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0236 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2002029 On remaining NR-V2X UE RF requirements**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002030 draftCR for TS 38.101-1 Con-current operation for NR-V2X**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002788.**

**R4-2002788 draftCR for TS 38.101-1 Con-current operation for NR-V2X**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002031 draftCR for TS 38.101-3 Con-current operation for NR-V2X**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002789.**

**R4-2002789 draftCR for TS 38.101-3 Con-current operation for NR-V2X**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

##### 8.4.4.1 Transmitter characteristics [5G\_V2X\_NRSL-Core ]

**R4-2000702 NR V2X UE RF requirements considerations**

*Type: other For: Decision  
 Source: Futurewei*

**Abstract:**

Discussion document analyzing consideration RF requirements

**Discussion:**

.

**Decision: Noted.**

**R4-2000704 On Simultaneous Transmission of PSFCH**

*Type: other For: Discussion  
 Source: Futurewei*

**Abstract:**

On Simultaneous Transmission of PSFCH

**Discussion:**

.

**Decision: Noted.**

**R4-2000705 On UL-SL Prioritization**

*Type: other For: Discussion  
 Source: Futurewei*

**Abstract:**

On UL-SL Prioritization

**Discussion:**

.

**Decision: Noted.**

**R4-2001079 [V2X] TP on PSFCH MPR requirements for NR V2X in band n47**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001080 [V2X] MPR simulation results for PC3 NR V2X in band n47**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001081 [V2X] MPR simulation results for PC2 NR V2X in band n47**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001082 [V2X] TP to update MPR simulation assumption for NR V2X in band n47**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001083 [V2X] TP on MPR requirements for PC3 NR V2X in band n47**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001084 [V2X] TP on RF requirements for PC2 NR V2X UE in band n47**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001085 [V2X] TP on S-SSB MPR requirements for NR V2X in band n47**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001216 TP on additional On/OFF Switching Time Mask for TDM operation between LTE SL and NR SL at n47**

*Type: pCR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Revised to R4-2002785.**

**R4-2002785 TP on additional On/OFF Switching Time Mask for TDM operation between LTE SL and NR SL at n47**

*Type: pCR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001217 Draft CR on NR V2X UE Transmitter requirements for single carrier**

*Type: draftCR For: Endorsement  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Revised to R4-2002763.**

**R4-2002763 Draft CR on NR V2X UE Transmitter requirements for single carrier**

*Type: draftCR For: Endorsement  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

Huawei: In general, we can accept to endorse the big draft CRs to have a baseline version to further check and merge, some open issues are still exist in the following tdocs:

For R4-2002763 (Draft CR draft Tx)

• NR n38 operates synchronous with Uu, the sync mechanism should be further studied

• Channel raster still keeps 30kHz and 60kHz SCS

• n38 still has 30MHz CBW

• A-MPR should be kept in [ ] for further check

• suggest to change the time mask figure according to NR mask.

Qualcomm: We agree with Huawei all A-MPR should be in [] for further check. Specifically all the Tables in 6.2E.3

**Decision: Endorsed.**

**R4-2001218 TP on revised MPR simulation assumptions and update NR requirements to cover open issue**

*Type: pCR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Revised to R4-2002761.**

**R4-2002761 TP on revised MPR simulation assumptions and update NR requirements to cover open issue**

*Type: pCR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001220 A-MPR simulation assumptions and initial results for NR V2X at n47**

*Type: pCR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Revised to R4-2002783.**

**R4-2002783 A-MPR simulation assumptions and initial results for NR V2X at n47**

*Type: pCR For: Approval  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

Moderator: A-MPR requirements will be revised by updated ETSI regulatory requirements.

**Decision: Endorsed.**

**R4-2001224 Draft CR on additional On/OFF Switching Time Mask for TDM operation between LTE SL and NR SL at n47**

*Type: draftCR For: Endorsement  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Revised to R4-2002786.**

**R4-2002786 Draft CR on additional On/OFF Switching Time Mask for TDM operation between LTE SL and NR SL at n47**

*Type: draftCR For: Endorsement  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2002798 Draft CR on additional On/OFF Switching Time Mask for TDM operation between LTE SL and NR SL at n47**

*Type: draftCR For: Endorsement  
 38.886 v0.5.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001240 MPR simulation results for PSSCH/PSCCH NR V2X UE**

*Type: other For: Approval  
 Source: LG Electronics Finland*

**Discussion:**

.

**Decision: Revised to R4-2002762.**

**R4-2002762 MPR simulation results for PSSCH/PSCCH NR V2X UE**

*Type: other For: Approval  
 Source: LG Electronics Finland*

**Discussion:**

.

**Decision: Noted.**

**R4-2001719 MPR simulations results for multi-UE PSFCH transmission**

*Type: other For: Approval  
 Source: LG Electronics Finland*

**Abstract:**

This contribution presents MPR simulation results for UE transmitter with 20MHz bandwidth with non-contiguous allocation of simultaneous PSFCH transmissions.

**Discussion:**

.

**Decision: Noted.**

**R4-2002032 draftCR for TS 38.101-1 PC2 RF requirements NR V2X**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002033 draftCR for TS 38.101-1 UL MIMO for NR-V2X**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002792.**

**R4-2002792 draftCR for TS 38.101-1 UL MIMO for NR-V2X**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

##### 8.4.4.2 Receiver characteristics [5G\_V2X\_NRSL-Core ]

**R4-2002687 Email discussion summary for RAN4#94e\_#14\_5G\_V2X\_NRSL\_UE\_RX**

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

**Discussion:**

.

**Decision: Revised to R4-2002883.**

**R4-2002883 Email discussion summary for RAN4#94e\_#14\_5G\_V2X\_NRSL\_UE\_RX**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000599 CR for TS38.101-1, Introduce Rx requirements for NR V2X**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0232 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2002796.**

**R4-2002796 CR for TS38.101-1, Introduce Rx requirements for NR V2X**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0232 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

Session chair: this CR is agreeable. But since TX CR is not available yet, it is better to postpone it to when all CRs are agreed on at the same meeting.

**Decision: Endorsed.**

**R4-2000600 CR for TS38.101-3, Introduce Rx requirements for NR V2X concurrent operation**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0183 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2002797.**

**R4-2002797 CR for TS38.101-3, Introduce Rx requirements for NR V2X concurrent operation**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0183 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

Session chair: this CR is agreeable. But since TX CR is not available yet, it is better to postpone it to when all CRs are agreed on at the same meeting.

**Decision: Endorsed.**

**R4-2000606 CR for TS38.104, Introduce frequency band and channel arrangement for NR V2X**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0129 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2002794.**

**R4-2002794 CR for TS38.104, Introduce frequency band and channel arrangement for NR V2X**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0129 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000607 Dicussion on remaining RF requirements for NR V2X**

*Type: other For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2000966 TP on REFSENS for NR V2X**

*Type: pCR For: Approval  
 38.886 v0.4.0  
 Source: LG Electronics Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 8.4.5 RRM core requirements (38.133) [5G\_V2X\_NRSL-Core]

##### 8.4.5.1 Transmit timing requirements [5G\_V2X\_NRSL-Core]

##### 8.4.5.2 Synchronization requirements [5G\_V2X\_NRSL-Core]

##### 8.4.5.3 Measurement requirements [5G\_V2X\_NRSL-Core]

##### 8.4.5.4 Interruption requirements [5G\_V2X\_NRSL-Core]

##### 8.4.5.5 Unicast, groupcast related [5G\_V2X\_NRSL-Core]

##### 8.4.5.6 Others [5G\_V2X\_NRSL-Core]

### 8.5 Integrated Access and Backhaul for NR [NR\_IAB]

#### 8.5.1 General [NR\_IAB-Core/Perf]

#### 8.5.2 Co-existence study [NR\_IAB-Core]

#### 8.5.3 System parameters [NR\_IAB-Core]

#### 8.5.4 RF requirements [NR\_IAB-Core]

##### 8.5.4.1 Conductive RF core requirements [NR\_IAB-Core]

###### 8.5.4.1.1 Transmitter characteristics [NR\_IAB-Core]

###### 8.5.4.1.2 Receiver characteristics [NR\_IAB-Core]

##### 8.5.4.2 Radiated RF core requirements [NR\_IAB-Core]

###### 8.5.4.2.1 Transmitter characteristics [NR\_IAB-Core]

###### 8.5.4.2.2 Receiver characteristics [NR\_IAB-Core]

#### 8.5.5 RRM core requirements (38.133) [NR\_IAB-Core]

##### 8.5.5.1 RRC connection mobility control [NR\_IAB-Core]

##### 8.5.5.2 MT timing related requirements [NR\_IAB-Core]

##### 8.5.5.3 DU timing related requirements [NR\_IAB-Core]

##### 8.5.5.4 RLM requirements [NR\_IAB-Core]

##### 8.5.5.5 BFD/BFR requirements [NR\_IAB-Core]

##### 8.5.5.6 Other requirements [NR\_IAB-Core]

#### 8.5.6 EMC core requirements [NR\_IAB-Core]

#### 8.5.7 Others [NR\_IAB-Core]

### 8.6 Multi-RAT Dual-Connectivity and Carrier Aggregation enhancements [LTE\_NR\_DC\_CA\_enh]

#### 8.6.1 General [LTE\_NR\_DC\_CA\_enh-Core]

#### 8.6.2 RF requirements [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.2.1 RF requirements for EN-DC [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.2.2 RF requirements for CA [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.2.3 RF requirements for NR-DC [LTE\_NR\_DC\_CA\_enh-Core]

#### 8.6.3 RRM core requirements (38.133) [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.3.1 Asynchronous and synchronous NR-NR Dual Connectivity [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.3.2 Early Measurement reporting [LTE\_NR\_DC\_CA\_enh-Core]

###### 8.6.3.2.1 NR measurements for EMR [LTE\_NR\_DC\_CA\_enh-Core]

###### 8.6.3.2.2 LTE NR Inter-RAT EMR [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.3.3 Efficient and low latency serving cell configuration, activation and setup [LTE\_NR\_DC\_CA\_enh-Core]

###### 8.6.3.3.1 Direct SCell activation [LTE\_NR\_DC\_CA\_enh-Core]

###### 8.6.3.3.2 SCell dormancy [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.3.4 Interruption under EN-DC and NE-DC [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.3.5 Fast recovery [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.3.6 Cross-carrier scheduling with different numerologies on the scheduling and scheduled carriers [LTE\_NR\_DC\_CA\_enh-Core]

##### 8.6.3.7 Others [LTE\_NR\_DC\_CA\_enh-Core]

### 8.7 UE power saving in NR [NR\_UE\_pow\_sav]

#### 8.7.1 General [NR\_UE\_pow\_sav]

**R4-2002688 Email discussion summary for RAN4#94e\_#15\_NR\_UE\_pow\_sav\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2002884.**

**R4-2002884 Email discussion summary for RAN4#94e\_#15\_NR\_UE\_pow\_sav\_RF**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002799 WF on NR UE power saving**

*Type: other For: Approval  
 Source: CATT*

**Discussion:**

.

**Decision: Approved.**

#### 8.7.2 Switching and interruption time [NR\_UE\_pow\_sav]

**R4-2000601 Further discussion on switching and interruption for maximum MIMO layer adaptation**

*Type: other For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2000767 Switching time for MIMO only change**

*Type: other For: Discussion  
 Source: Qualcomm, Inc.*

**Abstract:**

Propose switching delay for MIMO layer only BWP change

**Discussion:**

.

**Decision: Noted.**

**R4-2000969 Discussion on switching time for MIMO layer adaptation**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001758 On switching time for MIMO layer/antenna number adaption**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001793 Discussion on UE dynamic adaptation to the maximum number of MIMO layers**

*Type: other For: Discussion  
 Source: MediaTek inc.*

**Discussion:**

.

**Decision: Noted.**

#### 8.7.3 RRM core requirements (38.133) [NR\_UE\_pow\_sav-Core]

##### 8.7.3.1 RRM measurement relaxation [NR\_UE\_pow\_sav-Core]

##### 8.7.3.2 Requirements for MIMO layer adaptation [NR\_UE\_pow\_sav-Core]

**R4-2000153 Regarding switching and interruption timing requirement for MIMO layer adaption**

*Type: other For: Approval  
 38.133 v..  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000602 CR on RRM requirement for maximum MIMO layer adaptation**

*Type: CR For: Agreement  
 38.133 v16.2.0 CR-0455 Cat: B (Rel-16)  
  
 Source: vivo, CATT*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000787 On baseband requirement with MIMO layer adaptation**

*Type: other For: Discussion  
 38.133 v..  
 Source: Apple*

**Discussion:**

.

**Decision: Noted.**

**R4-2000990 On requirements for MIMO layer adaptation for power saving**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2001655 Discussion on RRM requirement for MIMO layer adaption case2**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002136 Interruption time during MIMO layer adaptation**

*Type: other For: (not specified)  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Noted.**

### 8.8 NR Positioning Support [NR\_pos]

#### 8.8.1 General (Work plan, rapporteur input) [NR\_pos-Core/Perf]

#### 8.8.2 RRM core requirements (38.133) [NR\_pos-Core]

##### 8.8.2.1 UE requirements [NR\_pos-Core]

###### 8.8.2.1.1 System-level evaluations for PRS-RSTD and PRS-RSRP [NR\_pos-Core]

###### 8.8.2.1.2 PRS-RSTD measurements [NR\_pos-Core]

###### 8.8.2.1.3 PRS-RSRP measurements [NR\_pos-Core]

###### 8.8.2.1.4 Rx-Tx time difference measurements [NR\_pos-Core]

###### 8.8.2.1.5 SSB and CSI-RS RSRP/RSRQ measurements [NR\_pos-Core]

###### 8.8.2.1.6 Link-level evaluations for PRS-RSTD and PRS-RSRP [NR\_pos-Core]

##### 8.8.2.2 gNB requirements [NR\_pos-Core]

##### 8.8.2.3 Impact on existing RRM requirements [NR\_pos-Core]

##### 8.8.2.4 Others [NR\_pos-Core]

### 8.9 Physical layer enhancements for NR URLLC [NR\_L1enh\_URLLC-Core]

#### 8.9.1 Demodulation and CSI requirements [NR\_L1enh\_URLLC-Perf]

##### 8.9.1.1 Test feasibility [NR\_L1enh\_URLLC-Perf]

##### 8.9.1.2 UE demodulation and CSI requirements (38.101-4) [NR\_L1enh\_URLLC-Perf]

##### 8.9.1.3 BS demodulation requirements (38.104) [NR\_L1enh\_URLLC-Perf]

### 8.10 Single radio voice call continuity from 5G to 3G (SRVCC) [SRVCC\_NR\_to\_UMTS-Core]

#### 8.10.1 RRM core requirements maintenance (38.133) [SRVCC\_NR\_to\_UMTS-Core]

#### 8.10.2 RRM perf requirements (38.133) [SRVCC\_NR\_to\_UMTS-Perf]

### 8.11 Enhancements on MIMO for NR [NR\_eMIMO]

#### 8.11.1 UE RF core requirements (38.101) [NR\_eMIMO-Core]

##### 8.11.1.1 DMRS enhancement with PI/2 BPSK [NR\_eMIMO-Core]

**R4-2002689 Email discussion summary for RAN4#94e\_#16\_NR\_eMIMO\_UE\_RF**

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

**Discussion:**

.

**Decision: Revised to R4-2002885.**

**R4-2002885 Email discussion summary for RAN4#94e\_#16\_NR\_eMIMO\_UE\_RF**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002800 WF on MPR with Pi/2 BPSK DMRS**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Noted.**

**R4-2002801 WF on Uplink Full Power Transmission**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Approved.**

**R4-2000470 Pi/2 BPSK DMRS investigation**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000517 PI/2 BPSK MPR simulations with new REL16 DMRS**

*Type: other For: (not specified)  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2002035 On eMIMO full power transmission**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 8.11.1.2 Uplink Tx Full Power transmission [NR\_eMIMO-Core]

**R4-2000315 Further discussion on Uplink full power transmission**

*Type: other For: Discussion  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2000469 TX full power capability**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000751 Discussion on UE RF requirments for eMIMO UL Full power Tx**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2001230 About full power transmission tests in eMIMO**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2001322 Verification of FP transmission and power-class indication for full power with two layers**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose an updated test scope for the FP modes and that an additional power-class capability is introduced for UEs supporting a higher power class only for two-layer transmission

**Discussion:**

.

**Decision: Noted.**

**R4-2002036 On Pi\_2 BPSK DMRS**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

#### 8.11.2 RRM core requirements (38.133) [NR\_eMIMO-Core]

##### 8.11.2.1 L1-SINR [NR\_eMIMO-Core]

##### 8.11.2.2 SCell Beam failure recovery [NR\_eMIMO-Core]

##### 8.11.2.3 DL/UL beam indication with reduced latency and overhead [NR\_eMIMO-Core]

##### 8.11.2.4 Others [NR\_eMIMO-Core]

#### 8.11.3 Demodulation and CSI requirements [NR\_eMIMO-Perf]

##### 8.11.3.1 General [NR\_eMIMO-Perf]

##### 8.11.3.2 Demodulation requirements [NR\_eMIMO-Perf]

##### 8.11.3.3 CSI requirements [NR\_eMIMO-Perf]

### 8.12 Add support of NR DL 256QAM for FR2 [NR\_DL256QAM\_FR2]

**R4-2002690 Email discussion summary for RAN4#94e\_#17\_NR\_DL256QAM\_FR2**

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

**Discussion:**

.

**Decision: Revised to R4-2002886.**

**R4-2002886 Email discussion summary for RAN4#94e\_#17\_NR\_DL256QAM\_FR2**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002803 WF on the requirements for FR2 DL 256QAM**

*Type: other For: Approval  
 Source: China Telecom*

**Discussion:**

.

**Decision: Approved.**

#### 8.12.1 General (Ad-hoc MoM/TR maintenance) [NR\_DL256QAM\_FR2]

**R4-2000909 Draft TR 38.883 for FR2 DL 256QAM v1.1.0**

*Type: draft TR For: Approval  
 38.883 v1.1.0  
 Source: China Telecom*

**Abstract:**

Update TR to implement TPs approved in last meeting.

**Discussion:**

.

**Decision: Approved.**

#### 8.12.2 BS RF core requirements (38.104) [NR\_DL256QAM\_FR2]

**R4-2000910 TP for TR 38.883 BS RF requirements for FR2 DL 256QAM**

*Type: pCR For: Approval  
 38.883 v1.1.0  
 Source: China Telecom*

**Abstract:**

This TP is intended to capture the BS core requirement for FR2 DL 256QAM

**Discussion:**

.

**Decision: Approved.**

**R4-2001189 NR BS TX EVM for FR2 DL 256QAM**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001426 CR to TS 38.104 Introduction of FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0155 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, China Telecom, Verizon, NTT Docomo, T-Mobile*

**Abstract:**

FR2 DL 256QAM requirements are introduced to the technical specification

**Discussion:**

.

**Decision: Revised to R4-2002802.**

**R4-2002802 CR to TS 38.104 Introduction of FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0155 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, China Telecom, Verizon, NTT Docomo, T-Mobile*

**Abstract:**

FR2 DL 256QAM requirements are introduced to the technical specification

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001427 CR to TS 38.141-2: Introduction of FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.141-2 v16.2.0 CR-0125 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, China Telecom, Verizon, NTT Docomo, T-Mobile*

**Abstract:**

FR2 DL 256QAM requirements are introduced to the conformance specification

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001729 CR to TS 38.104: Addition of EVM for 256 QAM**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0160 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Add minimum EVM requirement for BS type 2-O carrier

**Discussion:**

.

**Decision: Not pursued.**

**R4-2002103 CR to TS 38.141-2: Addition of EVM for 256 QAM**

*Type: CR For: Agreement  
 38.141-2 v16.2.0 CR-0142 Cat: B (Rel-16)  
  
 Source: Ericsson Inc.*

**Discussion:**

.

**Decision: Not pursued.**

#### 8.12.3 UE RF core requirements (38.101-2) [NR\_DL256QAM\_FR2]

**R4-2000823 UE maximum input level for DL 256QAM**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000911 TP for TR 38.883 UE RF requirements for FR2 DL 256QAM**

*Type: pCR For: Approval  
 38.883 v1.1.0  
 Source: China Telecom*

**Abstract:**

This TP is intended to capture the UE core requirement for FR2 DL 256QAM

**Discussion:**

.

**Decision: Noted.**

**R4-2000954 Discussion on FR2 Maximum Input Level requirements for 256QAM**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001190 NR UE maximum input level for FR2 DL 256QAM**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Noted.**

**R4-2001425 CR to TS 38.101-2: Introduction of FR2 DL 256QAM**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0123 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, China Telecom, Verizon, NTT Docomo, T-Mobile*

**Abstract:**

Introduction of UE requirements related to the feature of 256QAM DL transmission in FR2, i.e. maximum input power requirement and RMC for 256QAM.

**Discussion:**

.

**Decision: Not pursued.**

### 8.13 RF requirements for NR frequency range 1 (FR1) [NR\_RF\_FR1]

#### 8.13.1 RF core requirements [NR\_RF\_FR1]

**R4-2002691 Email discussion summary for RAN4#94e\_#18\_NR\_RF\_FR1\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2002887.**

**R4-2002887 Email discussion summary for RAN4#94e\_#18\_NR\_RF\_FR1\_Part\_1**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002804 WF on emission RF requirement for intra-band contiguous UL CA**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2002805 WF on MPR requirement for intra-band contiguous UL CA**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2002812 WF on RF architecture for intra-band UL non-contiguous CA**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Approved.**

**R4-2002813 WF on testability of transient period capability**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002814 LS on testability of transient period capability**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000069 Time masks for ULSUP in R16**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000070 CR to 38.101-3 on time masks for ULSUP in R16**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0158 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000754 CR for TS 38.101-1: Corrections for n48 receiver requirements**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0239 Cat: F (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Revised to R4-2002908.**

**R4-2002908 CR for TS 38.101-1: Corrections for n48 receiver requirements**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0239 Cat: F (Rel-16)  
  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001323 UE behavior and time masks for ULSUP-TDM**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

In this contribution we discuss the UE behaviour and time masks when the UL timing difference between CGs is non-zero for ULSUP-TDM

**Discussion:**

.

**Decision: Noted.**

##### 8.13.1.1 Almost contiguous allocations for CP-OFDM UL for FR1 [NR\_RF\_FR1]

**R4-2001762 CR for 38.101-1 almost contiguous resource allocation**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0263 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

##### 8.13.1.2 Intra-band contiguous DL CA for FR1 [NR\_RF\_FR1]

**R4-2000234 CR for 38.101-1 to introduce BCS1 for CA\_n77C and CA\_n78C**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0201 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

.

**Decision: Revised to R4-2002810.**

**R4-2002810 CR for 38.101-1 to introduce BCS1 for CA\_n77C and CA\_n78C**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0201 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon, CKH IOD UK*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001077 CR for 38.101-1 to correct bandwidth class B**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0248 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001385 Problems with CA channel arrangement**

*Type: other For: (not specified)  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2001771 CR for intra-band CA configuration and DL requirement**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0266 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002811.**

**R4-2002811 CR for intra-band CA configuration and DL requirement**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0266 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

##### 8.13.1.3 Intra-band non-contiguous DL CA for FR1 for generic and n77 and n78 [NR\_RF\_FR1]

**R4-2001074 CR for 38.101-1: simply intra-band CA operating band table in clause 5.2A.1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0246 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

##### 8.13.1.4 Intra-band contiguous UL CA for FR1 power class 3 [NR\_RF\_FR1]

**R4-2000093 Intra-band Contiguous ULCA MPR**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000711 [NRULCA] Definition of Intra-band Contiguous UL CA Allocation Types**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide generic definition of all the different allocation types for the NR contiguous UL CA MPR definition

**Discussion:**

.

**Decision: Noted.**

**R4-2000712 [NRULCA] Definition of Intra-band Contiguous UL CA Bandwidths**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

in this contribution we provide a comprehensive definition of the different bandwidth and frequencies associated with intra-band contiguous UL CA, especially addressing CA bandwidth, ACLR measurement bandwidth and SEM mask

**Discussion:**

.

**Decision: Noted.**

**R4-2000713 [NRULCA] PC3 Back-off Measurements for NR intra-band contiguous UL CA**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide a large set of measurement results and propose associated MPR tables and also provide input to NS04 and NS27 A-MPR

**Discussion:**

.

**Decision: Noted.**

**R4-2001129 [NRULCA] Bandwidth Limitation in FR1 UL CA**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In NR single carrier operation the maximum channel bandwidth is 100 MHz and in UL and MPR is only defined for relative transmit bandwidths less than 4% for TDD and 3% for FDD. In this contribution we discuss the relevance of these limitations for UL CA.

**Discussion:**

.

**Decision: Noted.**

**R4-2001756 on FR1 UL CA MPR requirement Rel-16**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001759 CR on FR1 UL CA MPR requirement Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0262 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2002809 CR on FR1 UL CA MPR requirement Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0262 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001772 CR for intra-band UL CA emission requirement**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0267 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002808.**

**R4-2002808 CR for intra-band UL CA emission requirement**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0267 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001773 CR for intra-band UL CA output power**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0268 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002806.**

**R4-2002806 CR for intra-band UL CA output power**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0268 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001774 CR for intra-band UL CA signal quality**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0269 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002807.**

**R4-2002807 CR for intra-band UL CA signal quality**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0269 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

##### 8.13.1.5 Intra-band non-contiguous UL CA for FR1 power class [NR\_RF\_FR1]

**R4-2000104 Intra-band non-contiguous ULCA requirements and MPR connsideration**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2002051 draftCR for TS 38.101-1 intra-band UL contiguous CA combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

##### 8.13.1.6 Switching period between case 1 and case 2 [NR\_RF\_FR1]

**R4-2002692 Email discussion summary for RAN4#94e\_#19\_NR\_RF\_FR1\_Part\_2**

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

**Discussion:**

.

**Decision: Revised to R4-2002888.**

**R4-2002888 Email discussion summary for RAN4#94e\_#19\_NR\_RF\_FR1\_Part\_2**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002815 WF on RF requirements for Tx switching between two uplink carriers**

*Type: other For: Approval  
 Source: China Telecom*

**Discussion:**

.

**Decision: Approved.**

**R4-2002816 LS on Tx switching between two uplink carriers**

*Type: other For: Approval  
 Source: Apple*

**Discussion:**

.

**Decision: Approved.**

**R4-2000064 Discussion on the switching between 1Tx carrier and 2Tx carrier**

*Type: other For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000065 Views on DL interruptions during UE switching between 1Tx carrier and 2Tx carrier**

*Type: other For: Decision  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000066 CR to 38.101-1 on UE requirements for switching between 1Tx carrier and 2Tx carrier**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0184 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000067 CR to 38.101-3 on UE requirements for switching between 1Tx carrier and 2Tx carrier**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0157 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000068 Draft LS to RAN1 on DL reception interruption due to switching between 1Tx carrier and 2Tx carrier**

*Type: LS out For: Approval  
 to RAN1, cc RAN2  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000113 Switching time details**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

Why outage allowance should be 210 usec for a tuning time of 140 usec. Discussion on "single TAG"

**Discussion:**

.

**Decision: Noted.**

**R4-2000125 Discussion on potential gain of large switching periods**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000131 RF time mask requirements to allow Tx switching between two uplink carriers**

*Type: other For: Discussion  
 Source: China Telecom*

**Discussion:**

.

**Decision: Noted.**

**R4-2000132 CR to TS 38.101-1: Switching time mask between two uplink carriers in UL CA and SUL**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0190 Cat: B (Rel-16)  
  
 Source: China Telecom*

**Discussion:**

.

**Decision: Revised to R4-2002817.**

**R4-2002817 CR to TS 38.101-1: Switching time mask between two uplink carriers in UL CA and SUL**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0190 Cat: B (Rel-16)  
  
 Source: China Telecom*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000133 CR to TS 38.101-3: Switching time mask between two uplink carriers in EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0160 Cat: B (Rel-16)  
  
 Source: China Telecom*

**Discussion:**

.

**Decision: Revised to R4-2002818.**

**R4-2002818 CR to TS 38.101-3: Switching time mask between two uplink carriers in EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0160 Cat: B (Rel-16)  
  
 Source: China Telecom*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000134 LS on UE capability for switching between two uplink carriers**

*Type: LS out For: Approval  
 to RAN2  
 Source: China Telecom*

**Discussion:**

.

**Decision: Noted.**

**R4-2000628 discussion on open issue for Tx switching between 2 uplink carriers**

*Type: other For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision: Noted.**

**R4-2000640 Discussion on DL interruption Tx switching between two uplink carriers**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000643 Requirements for switching between case1 and case2**

*Type: other For: Discussion  
 Source: CMCC*

**Discussion:**

.

**Decision: Noted.**

**R4-2000793 On RRM impact of Tx switching**

*Type: other For: Discussion  
 Source: Apple*

**Discussion:**

.

**Decision: Noted.**

**R4-2000810 Further consideration on uplink carrier switching**

*Type: other For: Discussion  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: Noted.**

**R4-2001307 Switching time between NR between FR1 uplink carriers**

*Type: other For: Approval  
 38.101-1 v..  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2001428 CR to TS 38.101-1: Time mask requirements for switching between 1Tx and 2Tx transmissions for inter-band UL CA**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0257 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of requirements for UE Tx switching between case 1 and case 2 transmissions for inter-band UL CA

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001429 CR to TS 38.101-3: Time mask requirements for switching between 1Tx and 2Tx transmissions for inter-band EN-DC without SUL**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0205 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of requirements for UE Tx switching between case 1 and case 2 transmissions for inter-band EN-DC without SUL

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001430 Switching between case 1 and case 2 for two NR FR1 carriers**

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

**Abstract:**

we discuss how to capture the RAN4 agreements to the UE requirements and how to conclude the remaining open items in RAN4.

**Discussion:**

.

**Decision: Noted.**

##### 8.13.1.7 Transient period capability [NR\_RF\_FR1]

**R4-2000442 Feasibility of on-to-on transient period measurement in FR1**

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

**Abstract:**

In this contribution we confirm a feasibility of the on-to-on transient period measurement with regards to some conditions described in the previously prepared WF in RAN4 #92bis and #93.

**Discussion:**

.

**Decision: Noted.**

**R4-2001757 On transient period UE capability**

*Type: other For: Approval  
 38.101-1 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002096 Summarizing the testability of transient capability reporting feature**

*Type: other For: Approval  
 Source: Qualcomm Incorporated, Skyworks Solutions Inc., Verizon, Dish Network, Ericsson, CMCC, Keysight Technologies, Nokia, Nokia Shanghai Bell, Sprint, AT&T, ZTE, Vodafone, Orange, T-mobile, Deutsche Telekom, Telecom Italia, CHTTL, China Telecom, SGS Wireless,*

**Discussion:**

.

**Decision: Noted.**

**R4-2002143 EVM Measurements for FR1 Transient Period Capability Testability**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 8.13.2 RRM core requirements (38.133) [NR\_RF\_FR1]

##### 8.13.2.1 RRM requirements for Tx switching between two uplink carriers [NR\_RF\_FR1]

### 8.14 NR RF requirement enhancements for frequency range 2 (FR2) [NR\_RF\_FR2\_req\_enh]

#### 8.14.1 RF core requirements [NR\_RF\_FR2\_req\_enh]

**R4-2000021 Multi-band requirement framework for FR2 in Rel-16 and beyond**

*Type: other For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000022 [draft] LS response on Multiband relaxation for FR2**

*Type: LS out For: Approval  
 to RAN5  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000235 Correction of the FR2 multi-band requirement framework**

*Type: CR For: Agreement  
 38.101-2 v15.8.0 CR-0096 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000236 Correction of the FR2 multi-band requirement framework**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0097 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002091 Correction of Inner Allocation Definition for Powerclass 3**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0133 Cat: F (Rel-16)  
  
 Source: Motorola Mobility España SA*

**Abstract:**

There are conflicting definitions of the the inner allocations for Powerclass 3 with bandwidth configurations <= 200 MHz. The second definition of the inner allocations conflicts with first definition.

**Discussion:**

.

**Decision: Agreed.**

**R4-2002104 Simplification of In-Band Emissions Requirements**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0134 Cat: D (Rel-16)  
  
 Source: Motorola Mobility España SA*

**Abstract:**

The first term in the general in-band emissions requirement is no longer needed as this term is <= -25 dB and Note 1 sets the lower limit as no less than -25 dB. As a result, the first term of the general in-band emissions requirement is never used.

**Discussion:**

.

**Decision: Not pursued.**

##### 8.14.1.1 FR2 MPE [NR\_RF\_FR2\_req\_enh]

**R4-2002693 Email discussion summary for RAN4#94e\_#20\_NR\_RF\_FR2\_req\_enh\_Part\_1**

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

**Discussion:**

.

**Decision: Revised to R4-2002889.**

**R4-2002889 Email discussion summary for RAN4#94e\_#20\_NR\_RF\_FR2\_req\_enh\_Part\_1**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002819 WF on MPE solutions**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Approved.**

**R4-2002820 LS on the misalignment in P-bit between single entry and multi-entry PHR**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Approved.**

**R4-2000006 Further considerations on the uplink duty cycle enhancements for the MPE scenario**

*Type: other For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000114 Further details on agreed signalling methods**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

How and what to report to network under MPE backoff situation. Focus on alert signal and P-MPR reportting and energy headroom reportting

**Discussion:**

.

**Decision: Noted.**

**R4-2000124 Discussion on FR2 MPE mitigation**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000197 Remaining issues for MPE issues mitigation**

*Type: other For: Approval  
 Source: InterDigital Communications*

**Abstract:**

This contribution discusses the remaining issues for a preemptive approach solution regarding the MPE mitigation issues in FR2.

**Discussion:**

.

**Decision: Noted.**

**R4-2000318 View on additional MPE enhancements**

*Type: other For: Approval  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2000495 Enhancement on FR2 MPE mitigation**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000955 Rel-16 signaling solution - open issues**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2001198 Discussion on enhancement of MPE in rel-16 on FR2**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Noted.**

**R4-2001231 Further on MPE enhancement**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2001324 P-MPR reporting for MPE enhancement**

*Type: other For: Approval  
 Source: Ericsson, Sony*

**Abstract:**

In this contributions we make proposals for reporting of P-MPR values

**Discussion:**

.

**Decision: Noted.**

**R4-2001382 UE FR2 MPE enhancements and solutions**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001383 [Draft] LS on MPE enhancements**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002821.**

**R4-2002821 [Draft] LS on MPE enhancements**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002916.**

**R4-2002916 [Draft] LS on MPE enhancements**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2001781 On MPE enhancement\_FR2**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 8.14.1.2 Beam Correspondence based on configured DL RS (SSB or CSI-RS) [NR\_RF\_FR2\_req\_enh]

**R4-2002694 Email discussion summary for RAN4#94e\_#21\_NR\_RF\_FR2\_req\_enh\_Part\_2**

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

**Discussion:**

.

**Decision: Revised to R4-2002890.**

**R4-2002890 Email discussion summary for RAN4#94e\_#21\_NR\_RF\_FR2\_req\_enh\_Part\_2**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002822 WF on remaining issues with Rel-16 beam correspondence**

*Type: other For: Approval  
 Source: Apple*

**Discussion:**

.

**Decision: Noted.**

**R4-2000012 Remaining issues with beam correspondence in Rel-16**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000077 FR2 Beam Correspondence using SSB only**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We propose SSB configuration for verification of beam correspondence based on SSB as the only reference signal

**Discussion:**

.

**Decision: Noted.**

**R4-2000078 Beam management CSI-RS design for BC requirement**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We proposed detailed configurations and side condition to support beam correspondence based on CSI-RS

**Discussion:**

.

**Decision: Noted.**

**R4-2000079 Further enhancement of Beam Correspondence**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We share views on further enhancement of BC based on reported measurement results

**Discussion:**

.

**Decision: Noted.**

**R4-2000199 On FR2 Initial access beam correspondence**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

We explore the initial access BC proposal in more depth towards understanding what the test conditions and requirements may be, and the timelines associated with completion

**Discussion:**

.

**Decision: Noted.**

**R4-2000271 Discussion on beam correspondence in Rel-16**

*Type: other For: Discussion  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2000394 SSB based Beam Correspondence**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2000791 On SSB based beam correspondence**

*Type: other For: Discussion  
 Source: Apple*

**Discussion:**

.

**Decision: Noted.**

**R4-2000858 Views on beam correspondence enhancement based on SSB in Rel-16**

*Type: other For: Discussion  
 38.101 v..  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Noted.**

**R4-2001065 On the effect of beamforming with CA on beam correspondence**

*Type: other For: Discussion  
 Source: Fraunhofer HHI*

**Abstract:**

In this contribution, we we support recent simulation results on the effect of beamforming with CA on beam correspondence with measurement results.

**Discussion:**

.

**Decision: Noted.**

**R4-2001199 Discussion on enhancement of BC in rel-16 at FR2**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Noted.**

**R4-2001232 Environmental condition based beam correspondence enhancement**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2001325 Test configuration and requirements for beam correspondence during initital access**

*Type: other For: Approval  
 Source: Ericsson, Sony*

**Abstract:**

In this contribution we complete the proposed test configuration for BC during initial access.

**Discussion:**

.

**Decision: Noted.**

**R4-2001384 FR2 Beam Correspondence enhancements**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001490 Views on SSB only and CSI-RS only beam correspondence**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2001493 Enhanced reporting for beam correspondence in poor SNR condition**

*Type: other For: Approval  
 Source: Sony*

**Discussion:**

.

**Decision: Noted.**

**R4-2001761 On beam correspondence enhancement**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001777 TP for beam correspondence based on CSI-RS only**

*Type: pCR For: Approval  
 38.831 v0.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 8.14.1.3 Intra-band cont DL CA for aggregated BW larger than 1400 MHz [NR\_RF\_FR2\_req\_enh]

**R4-2002695 Email discussion summary for RAN4#94e\_#22\_NR\_RF\_FR2\_req\_enh\_Part\_3**

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

**Discussion:**

.

**Decision: Revised to R4-2002920.**

**R4-2002891 Email discussion summary for RAN4#94e\_#22\_NR\_RF\_FR2\_req\_enh\_Part\_3**

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

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002920 Email discussion summary for RAN4#94e\_#22\_NR\_RF\_FR2\_req\_enh\_Part\_3**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002823 WF on Intra-band contiguous DL CA**

*Type: other For: Approval  
 Source: MediaTek*

**Discussion:**

.

**Decision: Approved.**

**R4-2002824 WF on Intra-band non-contiguous DL CA**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Noted.**

**R4-2002825 WF on Inter-band DL CA**

*Type: other For: Approval  
 Source: Apple*

**Discussion:**

.

**Decision: Noted.**

**R4-2000756 FR2 CA bandwidth classes for aggregated channel BW > 1200 MHz**

*Type: other For: Approval  
 38.101-2 v..  
 Source: MediaTek Inc.*

**Abstract:**

In this contribution, we share our views on how the FR2 CA bandwidth classes with aggregated bandwidth > 1200 MHz can be better defined and propose the notations for 3 new CA bandwidth classes in fallback group “1” to facilitate the closure of this Rel-16

**Discussion:**

.

**Decision: Noted.**

##### 8.14.1.4 Intra-band non-cont DL CA for aggregated BW larger than 1400 MHz [NR\_RF\_FR2\_req\_enh]

**R4-2000013 Remaining issues with the FR2 frequency separation class**

*Type: other For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000014 CR to 38.101-2 on FR2 frequency separation class enhancement**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0083 Cat: B (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000015 Views on FR2 DL intra-band CA REFSENS**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000207 FR2 DL Intra-band CA BW Enhancement Feature Parameters**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

In this contribution, we capture a UE’s enhanced DL CA BW capability in terms of a parameter set

**Discussion:**

.

**Decision: Noted.**

**R4-2000208 TP to TR38.831: FR2 UE architectures for DL Intra-band CA BW Enhancement**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

TP contains UE architecture study supporting the DL CA BW enhancement feature

**Discussion:**

.

**Decision: Noted.**

**R4-2000209 LS on FR2 DL Intra-band CA BW Enhancement Feature Parameters**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Abstract:**

List of parameters to describe enhancement parameter

**Discussion:**

.

**Decision: Noted.**

**R4-2000210 FR2 enhanced DL BW definitions**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

In this contribution, we establish definitions of parameters that will serve as building blocks for the Rel-16 FR2 enhancement WI

**Discussion:**

.

**Decision: Noted.**

**R4-2000211 Draft CR to 38.101-2: DL CA BW Enhancement for Rel-16**

*Type: draftCR For: Endorsement  
 38.101-2 v16.2.0  
 Source: Qualcomm Incorporated*

**Abstract:**

In this contribution, we capture framework of the DL CA BW enhancement feature

**Discussion:**

.

**Decision: Noted.**

**R4-2000759 On FR2 DL intra-band CA cumulative aggregated BW enhancement**

*Type: other For: Approval  
 38.101-2 v..  
 Source: MediaTek Inc.*

**Abstract:**

In this contribution, we provide our views on both the signalling aspects as well as the associated UE RF requirements for supporting the extended DL frequency separation for Rel-16.

**Discussion:**

.

**Decision: Noted.**

**R4-2001760 On intra-band NC DL CA\_FR2**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

##### 8.14.1.5 Intra-band contiguous UL CA [NR\_RF\_FR2\_req\_enh]

**R4-2002696 Email discussion summary for RAN4#94e\_#23\_NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Discussion:**

.

**Decision: Revised to R4-2002892.**

**R4-2002892 Email discussion summary for RAN4#94e\_#23\_NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002826 WF on radiative degradation mechanisms for larger frequency separation**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Approved.**

**R4-2002827 WF on FR2 ACLR MBW**

*Type: other For: Approval  
 Source: Skyworks*

**Discussion:**

.

**Decision: Approved.**

**R4-2002828 WF on multiband relaxation framework**

*Type: other For: Approval  
 Source: Sony*

**Discussion:**

.

**Decision: Approved.**

##### 8.14.1.6 Intra-band non-contiguous UL CA [NR\_RF\_FR2\_req\_enh]

**R4-2000019 Non-simultaneous UL for non-contiguous UL CA in FR2**

*Type: other For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000509 FR2 nc-in-ca MPR**

*Type: other For: (not specified)  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2000693 On using Rel-15 CA MPR table format for FR2 NC UL CA**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

In this contribution, we identify a problem with re-using the Rel-15 CA MPR table for Rel-16 NC UL CA. We also propose a non-invasive remedy

**Discussion:**

.

**Decision: Noted.**

**R4-2000694 dCR to 38.101-2: Simultaneous NC UL CA framework for Rel-16**

*Type: draftCR For: Endorsement  
 38.101-2 v16.2.0  
 Source: Qualcomm Incorporated*

**Abstract:**

Introduce framework to accommodate simultaneous Rel-16 NC UL CA feature

**Discussion:**

.

**Decision: Noted.**

**R4-2002147 Beam squint analysis for FR2 PC3 UEs**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Qualcomm Incorporated*

**Abstract:**

As frequency separation or aggregated BWs increase in CA, the conducted domain mechanisms (like PA nonlinearity) are joined by radiative mechanisms (like beam squint) in reducing a UE’s EIRP or EIS performance. Radiative domain mechanisms for wide BW need

**Discussion:**

.

**Decision: Noted.**

##### 8.14.1.7 Inter-band DL CA [NR\_RF\_FR2\_req\_enh]

**R4-2000016 Remaining issues with FR2 inter-band CA**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000017 Views on FR2 DL inter-band CA REFSENS**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000018 EIS spherical coverage for inter-band CA in FR2**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000115 Inter-band CA remaining open requirements**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

Discussion and proposal on spherical coverage relaxation for inter-band CA

**Discussion:**

.

**Decision: Noted.**

**R4-2000116 draftCR: Introduction of inter-band CA to 38.101-2**

*Type: draftCR For: Endorsement  
 38.101-2 v16.2.0  
 Source: Qualcomm Incorporated*

**Abstract:**

Intro on 38.101-2

**Discussion:**

.

**Decision: Noted.**

**R4-2000357 Inter-band CA with/without independent Rx beam**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Abstract:**

Discussion on two flawors of inter-band CA regarding beam management and how to handle the work

**Discussion:**

.

**Decision: Noted.**

**R4-2000395 PSD imbalance in Inter-band DL CA**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2000443 Test system for inter-band DL CA in FR2**

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

**Abstract:**

In this contribution we introduce our views on the considerable test system configuration for inter-band DL CA in FR2.

**Discussion:**

.

**Decision: Noted.**

**R4-2000444 Consideration on two-DL spherical coverage test with power imbalance**

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

**Abstract:**

In this contribution we introduce our views on a meaning of defining a different PSD condition (power imbalance) with DL signals during the inter-band DL CA spherical coverage measurements.

**Discussion:**

.

**Decision: Noted.**

**R4-2000445 Consideration on capability of multi signal transmission from single AoA in FR2 OTA test system**

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

**Abstract:**

In this contribution we consider a capability of multi signal transmission from single AoA (Angle of arrival) in FR2 OTA test system and also provide a view on a necessity of offset antennas as secondary cell or blocker.

**Discussion:**

.

**Decision: Noted.**

**R4-2000446 Influences of multiple offset antennas in FR2 chamber**

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

**Abstract:**

This contribution introduces a result of our investigation regarding an influence to the OTA measurement when multiple antennas are arranged as different feed antennas in the FR2 IFF chamber.

**Discussion:**

.

**Decision: Noted.**

**R4-2000796 FR2 inter-band DL CA relaxation framework**

*Type: other For: Approval  
 Source: MediaTek Beijing Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2001044 Discussion on FR2 intra-band DL CA enhancement**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001494 Views spherical coverage relaxation for inter band DL CA**

*Type: other For: Discussion  
 Source: Sony, Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2001776 On inter band DL CA\_FR2**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001779 TP for inter-band CA refsens FR2\_Rel-16**

*Type: pCR For: Approval  
 38.831 v0.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002114 PSD imbalance for FR2 Inter-band DL CA of 28GHz + 40GHz**

*Type: other For: (not specified)  
 38.101-2 v..  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Noted.**

##### 8.14.1.8 Improvement of UE MPR [NR\_RF\_FR2\_req\_enh]

**R4-2000396 FR2 CA MPR improvement**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2000518 FR2 boosting**

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

**Discussion:**

.

**Decision: Noted.**

##### 8.14.1.9 Improvement of spherical coverage requirements for PC3 [NR\_RF\_FR2\_req\_enh]

**R4-2002697 Email discussion summary for RAN4#94e\_#24\_NR\_RF\_FR2\_req\_enh\_Part\_5**

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

**Discussion:**

.

**Decision: Revised to R4-2002893.**

**R4-2002893 Email discussion summary for RAN4#94e\_#24\_NR\_RF\_FR2\_req\_enh\_Part\_5**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002829 WF on spherical coverage improvements**

*Type: other For: Approval  
 Source: Samsung*

**Discussion:**

.

**Decision: Approved.**

**R4-2000020 Views on PC3 spherical coverage requirements in Rel-16 and beyond**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000317 View on spherical coverage improvement for Rel-16**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

View on spherical coverage improvement for Rel-16

**Discussion:**

.

**Decision: Noted.**

**R4-2000750 Views on spherical coverage enhancement for PC3**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000956 Views on potential spherical coverage enhancements**

*Type: other For: Discussion  
 38.101-2 v..  
 Source: Intel Corporation*

**Discussion:**

.

**Decision: Noted.**

**R4-2001233 About spherical coverage enhancement**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2001234 About multi-band relaxation tests**

*Type: other For: Approval  
 Source: OPPO*

**Discussion:**

.

**Decision: Noted.**

**R4-2001495 Views on improvement to spherical coverage requirements for PC3**

*Type: other For: Discussion  
 Source: Sony*

**Discussion:**

.

**Decision: Noted.**

**R4-2002113 Further discussion on Spherical coverage enhancement**

*Type: other For: (not specified)  
 38.101-2 v..  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Noted.**

#### 8.14.2 RRM core requirements (38.133) [NR\_RF\_FR2\_req\_enh]

##### 8.14.2.1 Inter-band DL CA MRTD [NR\_RF\_FR2\_req\_enh]

### 8.15 NR RRM requirement enhancement [NR\_RRM\_Enh\_Core]

#### 8.15.1 RRM core requirements (38.133) [NR\_RRM\_Enh\_Core]

##### 8.15.1.1 SRS carrier switching requirements [NR\_RRM\_Enh\_Core]

##### 8.15.1.2 Multiple Scell activation/deactivation [NR\_RRM\_Enh\_Core]

##### 8.15.1.3 CGI reading requirements with autonomous gap [NR\_RRM\_Enh\_Core]

##### 8.15.1.4 BWP switching on multiple CCs [NR\_RRM\_Enh\_Core]

##### 8.15.1.5 Inter-frequency measurement requirement without MG [NR\_RRM\_Enh\_Core]

##### 8.15.1.6 Mandatory MG patterns [NR\_RRM\_Enh\_Core]

##### 8.15.1.7 UE-specific CBW change [NR\_RRM\_Enh\_Core]

##### 8.15.1.8 Spatial relation switch for uplink [NR\_RRM\_Enh\_Core]

##### 8.15.1.9 Non-simultaneous UL carrier operation in FR2 [NR\_RRM\_Enh\_Core]

##### 8.15.1.10 Inter-band CA requirement for FR2 UE measurement capability of independent Rx beam and/or common beam [NR\_RRM\_Enh\_Core]

##### 8.15.1.11 Others [NR\_RRM\_Enh\_Core]

### 8.16 NR RRM requirements for CSI-RS based L3 measurement [NR\_CSIRS\_L3meas]

#### 8.16.1 RRM core requirements (38.133) [NR\_CSIRS\_L3meas-Core]

##### 8.16.1.1 CSI-RS measurement bandwidth [NR\_CSIRS\_L3meas-Core]

##### 8.16.1.2 CSI-RS based intra-frequency and inter-frequency measurements definition [NR\_CSIRS\_L3meas-Core]

##### 8.16.1.3 Measurement capability [NR\_CSIRS\_L3meas-Core]

##### 8.16.1.4 Intra-frequency measurement requirements [NR\_CSIRS\_L3meas-Core]

##### 8.16.1.5 Inter-frequency measurement requirements [NR\_CSIRS\_L3meas-Core]

##### 8.16.1.6 Others [NR\_CSIRS\_L3meas-Core]

### 8.17 NR support for high speed train scenario [NR\_HST]

#### 8.17.1 RRM core requirements (38.133) [NR\_HST-Core]

##### 8.17.1.1 Cell re-selection [NR\_HST-Core]

##### 8.17.1.2 Cell identification delay [NR\_HST-Core]

##### 8.17.1.3 RLM [NR\_HST-Core]

##### 8.17.1.4 Beam management [NR\_HST-Core]

##### 8.17.1.5 Inter-RAT measurement [NR\_HST-Core]

##### 8.17.1.6 Network assistance and UE capability signalling [NR\_HST-Core]

#### 8.17.2 Demodulation and CSI requirements (38.101-4 / 38.104) [NR\_HST-Perf]

##### 8.17.2.1 UE demodulation and CSI requirements (38.101-4) [NR\_HST-Perf]

###### 8.17.2.1.1 Scenarios and transmission schemes [NR\_HST-Perf]

###### 8.17.2.1.2 Requirements for HST-SFN [NR\_HST-Perf]

###### 8.17.2.1.3 Requirements for HST single tap [NR\_HST-Perf]

###### 8.17.2.1.4 Requirements for multi-path fading channels [NR\_HST-Perf]

###### 8.17.2.1.5 Network assistance and UE capability signalling [NR\_HST-Perf]

##### 8.17.2.2 BS demodulation requirements (38.104) [NR\_HST-Perf]

###### 8.17.2.2.1 PUSCH requirements [NR\_HST-Perf]

###### 8.17.2.2.2 PRACH requirements [NR\_HST-Perf]

###### 8.17.2.2.3 UL timing adjustment requirements [NR\_HST-Perf]

### 8.18 NR performance requirement enhancement [NR\_perf\_enh-Perf]

#### 8.18.1 UE demodulation and CSI requirements (38.101-4) [NR\_perf\_enh-Perf]

##### 8.18.1.1 NR CA PDSCH requirementS [NR\_perf\_enh-Perf]

##### 8.18.1.2 PMI reporting requirements with larger number of Tx ports [NR\_perf\_enh-Perf]

##### 8.18.1.3 LTE-NR co-existence for TDD [NR\_perf\_enh-Perf]

##### 8.18.1.4 FR1 CA power imbalance requirements [NR\_perf\_enh-Perf]

#### 8.18.2 BS demodulation requirements (38.104) [NR\_perf\_enh-Perf]

##### 8.18.2.1 30% TP test point [NR\_perf\_enh-Perf]

##### 8.18.2.2 Additional FR2 requirements [NR\_perf\_enh-Perf]

### 8.19 Over the air (OTA) base station (BS) testing TR [OTA\_BS\_testing-Perf]

#### 8.19.1 General (such as work plan, AH minutes) [OTA\_BS\_testing-Perf]

#### 8.19.2 Others [OTA\_BS\_testing-Perf]

### 8.20 2-step RACH for NR [NR\_2step\_RACH-Perf]

#### 8.20.1 BS Demodulation requirements (38.104/38.141-1/38.141-2) [NR\_2step\_RACH-Perf]

#### 8.20.2 Others [NR\_2step\_RACH-Perf]

### 8.21 SON/MDT Support for NR [NR\_SON\_MDT]

#### 8.21.1 MDT related RRM requirements (38.133, 36.133) [NR\_SON\_MDT-Core]

## 9 Rel-16 spectrum related Work Items for NR

### 9.1 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y) [NR\_CA\_R16\_intra]

**R4-2002698 Email discussion summary for RAN4#94e\_#25\_NR\_Baskets\_Part\_1**

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

**Discussion:**

.

**Decision: Noted.**

#### 9.1.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_intra-Core /Perf]

**R4-2001499 Revised WID NR Intra-band Rel-16**

*Type: WID revised For: Agreement  
 Source: Ericsson*

**Abstract:**

Revised WID NR Intra-band Rel-16

**Discussion:**

.

**Decision: Revised to R4-2002611.**

**R4-2002611 Revised WID NR Intra-band Rel-16**

*Type: WID revised For: Agreement  
 Source: Ericsson*

**Abstract:**

Revised WID NR Intra-band Rel-16

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001502 TR 38.716-01-01 v0.9.0 Rel-16 NR Intra-band**

*Type: draft TR For: Approval  
 38.716-01-01 v0.8.0  
 Source: Ericsson*

**Abstract:**

TR 38.716-01-01 v0.9.0 Rel-16 NR Intra-band

**Discussion:**

.

**Decision: Approved.**

**R4-2001506 TP for TR 38.716-01-01 for updated scope from RAN #86**

*Type: pCR For: Approval  
 38.716-01-01 v0.8.0  
 Source: Ericsson*

**Abstract:**

TP for TR 38.716-01-01 for updated scope from RAN #86

**Discussion:**

.

**Decision: Approved.**

**R4-2001510 CR introduction completed band combinations 38.716-01-01 -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0258 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-01-01 -> 38.101-1

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001511 CR introduction completed band combinations 38.716-01-01 -> 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0124 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-01-01 -> 38.101-2

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001515 Rel-16 CR to 38.101-1 for editorial corrections**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0260 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Rel-16 CR to 38.101-1 for editorial corrections

**Discussion:**

.

**Decision: Revised to R4-2002575.**

**R4-2002575 Rel-16 CR to 38.101-1 for editorial corrections**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0260 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Rel-16 CR to 38.101-1 for editorial corrections

**Discussion:**

.

**Decision: Agreed.**

**R4-2001516 Rel-16 CR to 38.101-2 for editorial corrections**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0261 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Rel-16 CR to 38.101-2 for editorial corrections

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002025 Rel-16 CR to 38.101-2 for editorial corrections**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0132 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Rel-16 CR to 38.101-2 for editorial corrections

**Discussion:**

.

**Decision: Agreed.**

#### 9.1.2 UE RF for FR1 [NR\_CA\_R16\_intra-Core]

**R4-2000127 Editorial correction of NR CA bandwidth classe**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Verizon, Ericsson*

**Discussion:**

.

**Decision: Noted.**

**R4-2000328 CR to TS 38.101-1 on corrections to intra-band non-contiguous CA operating bands (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0204 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-1 on corrections to intra-band non-contiguous CA operating bands (Rel-16)

**Discussion:**

.

**Decision: Not pursued.**

**R4-2002581 CR to TS 38.101-1 on corrections to intra-band non-contiguous CA operating bands (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0204 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-1 on corrections to intra-band non-contiguous CA operating bands (Rel-16)

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000418 CR for 38.101-1: Corrections to intra-band CA tables**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0211 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002582.**

**R4-2002582 CR for 38.101-1: Corrections to intra-band CA tables**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0211 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002911.**

**R4-2002911 CR for 38.101-1: Corrections to intra-band CA tables**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0211 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000520 CA\_n48B A-MPR**

*Type: other For: (not specified)  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2000563 CR to TS 38.101-1 on corrections to NR CA bandwidth classes (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0226 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

CR to TS 38.101-1 on corrections to NR CA bandwidth classes (Rel-16)

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000794 TP for TR 38.716-01-01: CA\_3DL\_n77(3A)\_1UL\_n77A**

*Type: pCR For: Approval  
 38.716-01-01 v0.7.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Noted.**

**R4-2002600 TP for TR 38.716-01-01: CA\_3DL\_n77(3A)\_1UL\_n77A**

*Type: pCR For: Approval  
 38.716-01-01 v0.7.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Withdrawn.**

#### 9.1.3 UE RF for FR2 [NR\_CA\_R16\_intra-Core]

### 9.2 NR inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R16\_2BDL\_xBUL]

**R4-2002699 Email discussion summary for RAN4#94e\_#26\_NR\_Baskets\_Part\_2**

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

**Discussion:**

.

**Decision: Noted.**

#### 9.2.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R16\_2BDL\_xBUL-Core/Perf]

**R4-2000497 CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into Rel16 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0222 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000498 CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into Rel16 TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0178 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000502 Revised WID on Rel-16 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)**

*Type: WID revised For: Agreement  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000803 TR 38.716-02-00 v090**

*Type: draft TR For: Approval  
 38.716-02-00 v0.9.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: Approved.**

#### 9.2.2 NR inter band CA without any FR2 band(s) [NR\_CADC\_R16\_2BDL\_xBUL-Core]

**R4-2000128 Editorial correction of band n66 bandwidth**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Verizon, Ericsson*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000143 TP for TR38.716-02-00: Requirements for DL CA\_n29A-n70A, DL CA\_n29A-n66B, DL CA\_n29A-n66(2A) and for UL CA\_n66A-n71A, UL CA\_n70A-n71A**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Dish Network*

**Discussion:**

.

**Decision: Revised to R4-2002635.**

**R4-2002635 TP for TR38.716-02-00: Requirements for DL CA\_n29A-n70A, DL CA\_n29A-n66B, DL CA\_n29A-n66(2A) and for UL CA\_n66A-n71A, UL CA\_n70A-n71A**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Dish Network*

**Discussion:**

.

**Decision: Approved.**

**R4-2000181 TP to TR 38.716-02-00: CA\_n28-n78**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell, BT plc*

**Discussion:**

.

**Decision: Revised to R4-2002636.**

**R4-2002636 TP to TR 38.716-02-00: CA\_n28-n78**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell, BT plc*

**Discussion:**

.

**Decision: Approved.**

**R4-2000183 TP to TR 38.716-02-00: CA\_n41-n66**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell, T-Mobile USA*

**Discussion:**

.

**Decision: Revised to R4-2002637**

**R4-2002637 TP to TR 38.716-02-00: CA\_n41-n66**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell, T-Mobile USA*

**Discussion:**

.

**Decision: Approved.**

**R4-2000184 TP to TR 38.716-02-00: CA\_n41-n71**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell, T-Mobile USA*

**Discussion:**

.

**Decision: Revised to R4-2002638.**

**R4-2002638 TP to TR 38.716-02-00: CA\_n41-n71**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell, T-Mobile USA*

**Discussion:**

.

**Decision: Approved.**

**R4-2000189 TP to TR 38.716-02-00: Corrections to CA\_n5-n261 and CA\_n66-n261**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002639.**

**R4-2002639 TP to TR 38.716-02-00: Corrections to CA\_n5-n261 and CA\_n66-n261**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

**R4-2000448 CR to TS 38.101-1: Corrections on MSD tables for CA\_n20-n78 and CA\_n66-n78**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0216 Cat: F (Rel-16)  
  
 Source: Xiaomi*

**Abstract:**

1. The superscript of n78 for the band combination of n20 and n78 since only 4th harmonic shall be considered.

2. The superscript 1 is missing for the band combination of n66 and n78

**Discussion:**

.

**Decision: Agreed.**

**R4-2000478 TP for TR 38.716-02-00: CA\_n3A-n38A**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002640.**

**R4-2002640 TP for TR 38.716-02-00: CA\_n3A-n38A**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000691 TP for TR 38.716-02-00 CA\_n2A\_n66A**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2002641.**

**R4-2002641 TP for TR 38.716-02-00 CA\_n2A\_n66A**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000692 TP for TR 38.716-02-00 CA\_n5A\_n66A**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2002642.**

**R4-2002642 TP for TR 38.716-02-00 CA\_n5A\_n66A**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000831 TP for TR 38.716-02-00: CA\_n2-n78**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002643.**

**R4-2002643 TP for TR 38.716-02-00: CA\_n2-n78**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000832 TP for TR 38.716-02-00: CA\_n38-n66**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002644.**

**R4-2002644 TP for TR 38.716-02-00: CA\_n38-n66**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000833 TP for TR 38.716-02-00: CA\_n7-n25**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000834 TP for TR 38.716-02-00: CA\_n25-n66**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002714.**

**R4-2002714 TP for TR 38.716-02-00: CA\_n25-n66**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000835 TP for TR 38.716-02-00: CA\_n25-n78**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002645.**

**R4-2002645 TP for TR 38.716-02-00: CA\_n25-n78**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000836 TP for TR 38.716-02-00: CA\_n66A-n78(2A)**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002646.**

**R4-2002646 TP for TR 38.716-02-00: CA\_n66A-n78(2A)**

*Type: pCR For: Approval  
 38.716-02-00 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001060 Updated TP for TR 38.716-02-00: CA\_n1A-n78(2A)**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Huawei, HiSilicon, BT plc*

**Discussion:**

.

**Decision: Revised to R4-2002647.**

**R4-2002647 Updated TP for TR 38.716-02-00: CA\_n1A-n78(2A)**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Huawei, HiSilicon, BT plc*

**Discussion:**

.

**Decision: Approved.**

**R4-2001061 TP for TR 38.716-02-00: CA\_n20-n75**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002648.**

**R4-2002648 TP for TR 38.716-02-00: CA\_n20-n75**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001062 Draft CR for 38.101-1 to correct editoral errors**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001071 Discussion on improvement of Reference sensitivity exception table in 38.101-1 and 38.101-3**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001072 CR for 38.101-1: improvement of Reference sensitivity exception table (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0245 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001073 CR for 38.101-3: improvement of Reference sensitivity exception table (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0197 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001076 Discussion on introduction of some sub-clause title for NR inter-band CA**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001519 TP for TR 38.716-02-00 to include CA\_n20-n78**

*Type: pCR For: Approval  
 38.716-02-00 v0.8.0  
 Source: Ericsson, Telia, BT plc*

**Abstract:**

TP for TR 38.716-02-00 to include CA\_n20-n78

**Discussion:**

.

**Decision: Withdrawn.**

#### 9.2.3 NR inter band CA with at least one FR2 band [NR\_CADC\_R16\_2BDL\_xBUL-Core]

**R4-2000986 CR to TS 38.101-3: adding 90MHz channel BW support for Rel.16 CA\_n78A-n257 configurations**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0195 Cat: B (Rel-16)  
  
 Source: CHTTL*

**Discussion:**

.

**Decision: Agreed.**

### 9.3 EN-DC of 1 LTE band and 1 NR band [DC\_R16\_1BLTE\_1BNR\_2DL2UL]

#### 9.3.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core/Perf]

**R4-2000881 Updated TR 37.716-11-11 V1.0.0 Rel.16 1 LTE band + 1 NR band EN-DC**

*Type: draft TR For: Approval  
 37.716-11-11 v0.1.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: Approved.**

**R4-2000886 Revised WID for EN-DC of 1 band LTE + 1 band NR**

*Type: WID revised For: Agreement  
 Source: CHTTL*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000887 CR on introduction of completed EN-DC of 1 band LTE and 1 band NR**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0190 Cat: B (Rel-16)  
  
 Source: CHTTL*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001517 Rel-16 CR to 38.101-3 for editorial corrections**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0208 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Rel-16 CR to 38.101-3 for editorial corrections

**Discussion:**

.

**Decision: Revised to R4-2002613.**

**R4-2002613 Rel-16 CR to 38.101-3 for editorial corrections**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0208 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Rel-16 CR to 38.101-3 for editorial corrections

**Discussion:**

.

**Decision: Agreed.**

#### 9.3.2 EN-DC without FR2 band [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core]

**R4-2000096 TP for TR 38.716-11-11 for DC\_2A\_n48B**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2002570.**

**R4-2002570 TP for TR 38.716-11-11 for DC\_2A\_n48B**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000097 TP for TR 37.716-11-11: DC\_66\_n48**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2002571.**

**R4-2002571 TP for TR 37.716-11-11: DC\_66\_n48**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000098 TP for TR 37.716-11-11: DC\_13A\_n48B**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000099 TP for TR 37.716-11-11: DC\_5A\_n48B**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000100 TP for TR 37.716-11-11: DC\_5\_n2**

*Type: other For: Discussion  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2002572.**

**R4-2002572 TP for TR 37.716-11-11: DC\_5\_n2**

*Type: other For: Discussion  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000101 TP for TR 37.716-11-11: DC\_5\_n66A**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Revised to R4-2002573.**

**R4-2002573 TP for TR 37.716-11-11: DC\_5\_n66A**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Approved.**

**R4-2000474 TP for TR37.716-11-11:DC\_13\_n78**

*Type: pCR For: Approval  
 37.716-11-11 v1.0.0  
 Source: ZTE Corporation, Bell, Telus*

**Discussion:**

.

**Decision: Noted.**

**R4-2002583 TP for TR37.716-11-11:DC\_13\_n78**

*Type: pCR For: Approval  
 37.716-11-11 v1.0.0  
 Source: ZTE Corporation, Bell, Telus*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000488 CR to TS 38.101-3: Updated the MSD values for ENDC 3-n41**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0175 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002584.**

**R4-2002584 CR to TS 38.101-3: Updated the MSD values for ENDC 3-n41**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0175 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000540 TP for TR 37.716-11-11: DC\_66\_n12**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000541 TP for TR 37.716-11-11: DC\_48\_n71**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000707 CR for 38.101-3: Correction of MOP tolerance for DC\_39\_n41**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0186 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000764 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_8\_n77, 11\_n77 and 28\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000774 TP for TR 37.716-11-11: DC\_11\_n3**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Revised to R4-2002598.**

**R4-2002598 TP for TR 37.716-11-11: DC\_11\_n3**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000775 TP for TR 37.716-11-11: DC\_11\_n28**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Revised to R4-2002599.**

**R4-2002599 TP for TR 37.716-11-11: DC\_11\_n28**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000837 TP for TR 37.716-11-11: DC\_13\_n7**

*Type: pCR For: Approval  
 37.716-11-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002601.**

**R4-2002601 TP for TR 37.716-11-11: DC\_13\_n7**

*Type: pCR For: Approval  
 37.716-11-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000838 TP for TR 37.716-11-11: DC\_13\_n78**

*Type: pCR For: Approval  
 37.716-11-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000839 TP for TR 37.716-11-11: DC\_66\_n38**

*Type: pCR For: Approval  
 37.716-11-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002602.**

**R4-2002602 TP for TR 37.716-11-11: DC\_66\_n38**

*Type: pCR For: Approval  
 37.716-11-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000853 TP to TR 37.716-11-11 DC\_20A\_n41A**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002603.**

**R4-2002603 TP to TR 37.716-11-11 DC\_20A\_n41A**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000855 TP for TR 37.716-11-11: DC\_71A\_n48A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Revised to R4-2002597.**

**R4-2002597 TP for TR 37.716-11-11: DC\_71A\_n48A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Approved.**

**R4-2001046 TP to TR 37.716-11-11: DC\_28\_n5**

*Type: pCR For: Approval  
 37.716-11-11 v1.0.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Noted.**

**R4-2002604 TP to TR 37.716-11-11: DC\_28\_n5**

*Type: pCR For: Approval  
 37.716-11-11 v1.0.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001047 TP for TR 37.716-11-11: DC\_3A\_n8A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002605.**

**R4-2002605 TP for TR 37.716-11-11: DC\_3A\_n8A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001048 TP for TR 37.716-11-11: DC\_7A\_n8A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002606.**

**R4-2002606 TP for TR 37.716-11-11: DC\_7A\_n8A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001078 draft CR for 38.101-3 to correct editoral errors for spurious emissions for UE co-existence**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2002607 draft CR for 38.101-3 to correct editoral errors for spurious emissions for UE co-existence**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001287 TP for 37.716-11-11 to introduce DC\_48\_n5**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001288 TP for 37.716-11-11 to introduce DC\_48\_n66**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Revised to R4-2002609.**

**R4-2002609 TP for 37.716-11-11 to introduce DC\_48\_n66**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001298 TP for 37.716-11-11 to introduce DC\_12\_n25**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2001524 TP for TR 37 716-11-11 to include DC\_12A\_n78A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_12A\_n78A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001525 TP for TR 37 716-11-11 to include DC\_12A\_n38A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_12A\_n38A

**Discussion:**

.

**Decision: Approved.**

**R4-2001526 TP for TR 37 716-11-11 to include DC\_5A\_n38A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_5A\_n38A

**Discussion:**

.

**Decision: Revised to R4-2002614.**

**R4-2002614 TP for TR 37 716-11-11 to include DC\_5A\_n38A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_5A\_n38A

**Discussion:**

.

**Decision: Approved.**

**R4-2001527 TP for TR 37 716-11-11 to include DC\_12A\_n7A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_12A\_n7A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001528 TP for TR 37 716-11-11 to include DC\_66A\_n7A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_66A\_n7A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001529 TP for TR 37 716-11-11 to include DC\_71A\_n38A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_71A\_n38A

**Discussion:**

.

**Decision: Approved.**

**R4-2001530 TP for TR 37 716-11-11 to include DC\_71A\_n66A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_71A\_n66A

**Discussion:**

.

**Decision: Revised to R4-2002615.**

**R4-2002615 TP for TR 37 716-11-11 to include DC\_71A\_n66A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_71A\_n66A

**Discussion:**

.

**Decision: Approved.**

**R4-2001531 TP for TR 37 716-11-11 to include DC\_71A\_n78A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_71A\_n78A

**Discussion:**

.

**Decision: Revised to R4-2002616.**

**R4-2002616 TP for TR 37 716-11-11 to include DC\_71A\_n78A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_71A\_n78A

**Discussion:**

.

**Decision: Approved.**

**R4-2001969 TP for TR 37 716-11-11 to include DC\_2A\_n12A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_2A\_n12A

**Discussion:**

.

**Decision: Approved.**

**R4-2001970 TP for TR 37 716-11-11 to include DC\_5A\_n12A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_5A\_n12A

**Discussion:**

.

**Decision: Approved.**

**R4-2001971 TP for TR 37 716-11-11 to include DC\_48A\_n5A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_48A\_n5A

**Discussion:**

.

**Decision: Revised to R4-2002617.**

**R4-2002617 TP for TR 37 716-11-11 to include DC\_48A\_n5A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_48A\_n5A

**Discussion:**

.

**Decision: Approved.**

**R4-2001972 TP for TR 37 716-11-11 to include DC\_48A\_n12A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_48A\_n12A

**Discussion:**

.

**Decision: Revised to R4-2002618.**

**R4-2002618 TP for TR 37 716-11-11 to include DC\_48A\_n12A**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_48A\_n12A

**Discussion:**

.

**Decision: Approved.**

**R4-2001973 TP for TR 37 716-11-11 to include DC\_12\_n71**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_12\_n71

**Discussion:**

.

**Decision: Noted.**

**R4-2002619 TP for TR 37 716-11-11 to include DC\_12\_n71**

*Type: pCR For: Approval  
 37.716-11-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-11-11 to include DC\_12\_n71

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002003 draft Rel-16 CR to 38.101-3 to add missing CA\_n7B UL for two band DC combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, Telstra*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add missing CA\_n7B UL for two band DC combinations

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002009 draft Rel-16 CR to 38.101-3 to add new configurations for 2\_n41, 66\_n41 to existing combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add new configurations for 2\_n41, 66\_n41 to existing combinations

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002049 TP for TR 37.716-11-11: DC\_(n)48 and DC\_48\_n48**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: Google Inc.*

**Discussion:**

.

**Decision: Approved.**

**R4-2002109 TP for TR 37.716-11-11:DC\_48B\_n71A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Noted.**

**R4-2002630 TP for TR 37.716-11-11:DC\_48B\_n71A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002111 TP for TR 37.716-11-11: DC\_48C\_n71A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Noted.**

**R4-2002631 TP for TR 37.716-11-11: DC\_48C\_n71A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002112 TP for TR 37.716-11-11: DC\_48D\_n71A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Revised to R4-2002632.**

**R4-2002632 TP for TR 37.716-11-11: DC\_48D\_n71A**

*Type: other For: (not specified)  
 Source: Comcast*

**Discussion:**

.

**Decision: Approved.**

#### 9.3.3 EN-DC with FR2 band [DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core]

**R4-2000126 Introduction of completed EN-DC of 1 band LTE and 1 band NR**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Verizon, Ericsson*

**Discussion:**

.

**Decision: Revised to R4-2002574.**

**R4-2002574 Introduction of completed EN-DC of 1 band LTE and 1 band NR**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Verizon, Ericsson*

**Discussion:**

.

**Decision: Approved.**

### 9.4 EN-DC of 2 LTE band and 1 NR band [DC\_R16\_2BLTE\_1BNR\_3DL2UL]

#### 9.4.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core/Perf]

**R4-2000840 TR 37.716-21-11 v0.9.0**

*Type: draft TR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000841 Revised WID: Dual Connectivity (EN-DC) of 2 bands LTE inter-band CA (2DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Agreement  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000842 CR on introduction of completed EN-DC of 2 bands LTE and 1 band NR from RAN4#94-e into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0187 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

#### 9.4.2 EN-DC without FR2 band [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2000237 TP for TR 37.716-21-11: DC\_2-2-13\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000238 TP for TR 37.716-21-11: DC\_2-5\_n2 and DC\_2-5-5\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000239 TP for TR 37.716-21-11: DC\_2-5\_n5 and DC\_2-2-5\_n5**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000240 TP for TR 37.716-21-11: DC\_2-5\_n66 and DC\_2-5-5\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000241 TP for TR 37.716-21-11: DC\_2-13\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000242 TP for TR 37.716-21-11: DC\_2-13\_n5 and DC\_2-2-13\_n5**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000243 TP for TR 37.716-21-11: DC\_2-66\_n48 and DC\_2-66-66\_n48**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Revised to R4-2002576.**

**R4-2002576 TP for TR 37.716-21-11: DC\_2-66\_n48 and DC\_2-66-66\_n48**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000244 TP for TR 37.716-21-11: DC\_5-5-66\_n66 and DC\_5-5-66-66\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000245 TP for TR 37.716-21-11: DC\_5-13\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000246 TP for TR 37.716-21-11: DC\_5-66\_n2, DC\_5-5-66\_n2, DC\_5-66-66\_n2 and DC\_5-5-66-66\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Revised to R4-2002577.**

**R4-2002577 TP for TR 37.716-21-11: DC\_5-66\_n2, DC\_5-5-66\_n2, DC\_5-66-66\_n2 and DC\_5-5-66-66\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000247 TP for TR 37.716-21-11: DC\_5-66\_n66 and DC\_5-66-66\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000248 TP for TR 37.716-21-11: DC\_5-66-66\_n5**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000249 TP for TR 37.716-21-11: DC\_13-46\_n5**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Revised to R4-2002578.**

**R4-2002578 TP for TR 37.716-21-11: DC\_13-46\_n5**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000250 TP for TR 37.716-21-11: DC\_13-66\_n2 and DC\_13-66-66\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Revised to R4-2002579.**

**R4-2002579 TP for TR 37.716-21-11: DC\_13-66\_n2 and DC\_13-66-66\_n2**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000251 TP for TR 37.716-21-11: DC\_13-66\_n48 and DC\_13-66-66\_n48**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Revised to R4-2002580.**

**R4-2002580 TP for TR 37.716-21-11: DC\_13-66\_n48 and DC\_13-66-66\_n48**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000252 TP for TR 37.716-21-11: DC\_13A-66A-66A\_n66A**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000416 TP for TR 37.716-21-11: DC\_25A-41D\_n41A correction**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000417 CR for 38.101-3: DC\_25-41\_n41 correction**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0166 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000479 TP for TR37.716-21-11: DC\_5A-66A\_n78**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: ZTE Corporation, Bell, Telus*

**Discussion:**

.

**Decision: Approved.**

**R4-2000528 TP to TR 37.716-21-11: DC\_(n)12AA**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Revised to R4-2002585.**

**R4-2002585 TP to TR 37.716-21-11: DC\_(n)12AA**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000529 TP to TR 37.716-21-11: DC\_(n)5AA**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Revised to R4-2002586.**

**R4-2002586 TP to TR 37.716-21-11: DC\_(n)5AA**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000530 TP to TR 37.716-21-11: DC\_2A-12A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002587 TP to TR 37.716-21-11: DC\_2A-12A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000531 TP to TR 37.716-21-11: DC\_5A-12A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002588 TP to TR 37.716-21-11: DC\_5A-12A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000532 TP to TR 37.716-21-11: DC\_2A-5A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000533 TP to TR 37.716-21-11: DC\_2A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000534 TP to TR 37.716-21-11: DC\_5A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000535 TP to TR 37.716-21-11: DC\_48A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000536 TP to TR 37.716-21-11: DC\_66A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000740 Draft CR to TS 38.101-3: Adding DC\_1A-7C\_n3A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: VODAFONE Group Plc*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000741 Draft CR to TS 38.101-3: Adding DC\_7C-20A\_n3A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: VODAFONE Group Plc*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000742 Draft CR to TS 38.101-3: Adding DC\_7C-20A\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: VODAFONE Group Plc*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000766 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_1-8\_n77, 1-11\_n77, 3-28\_n77 and 8-11\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000843 TP for TR 37.716-21-11: DC\_2-66\_n38**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000844 TP for TR 37.716-21-11: DC\_3C-8A\_n1A**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000874 TP for TR 37.716-21-11: DC\_1A-18A\_n3A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000876 TP for TR 37.716-21-11 DC\_1A-28A\_n3A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2001045 TP to TR 37.716-21-11: CA\_3-20\_n7**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Nokia, Nokia, Shanghai Bell, BT plc*

**Discussion:**

.

**Decision: Approved.**

**R4-2001049 TP for TR 37.716-21-11: DC\_1A-3A\_n8A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001050 TP for TR 37.716-21-11: DC\_1A-7A\_n8A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001051 TP for TR 37.716-21-11: DC\_1A-20A\_n8A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001052 TP for TR 37.716-21-11: DC\_3A-7A\_n8A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001053 TP for TR 37.716-21-11: DC\_3A-20A\_n8A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001054 TP for TR 37.716-21-11: DC\_7A-20A\_n8A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001055 updated TP for TR 37.716-21-11: add UL DC\_1\_n38 for DC\_1-20\_n38**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001056 TP for TR 37.716-21-11: DC\_1A-41A\_n41A\DC\_1A-41C\_n41A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001057 TP for TR 37.716-21-11: DC\_1A-(n)41AA\DC\_1A-(n)41CA**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001058 Updated TP for TR 37.716-21-11: DC\_7C-20A\_n1A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Huawei, HiSilicon, BT plc*

**Discussion:**

.

**Decision: Approved.**

**R4-2001059 Draft CR for TS 38.101-3: adding UL configurations for DC\_3A-7C\_n78A/DC\_3C-7C\_n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Huawei, HiSilicon, BT plc*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001299 TP for 37.716-21-11 to introduce DC\_2-66\_n25**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2001300 TP for 37.716-21-11 to introduce DC\_12-66\_n25**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2001301 TP for 37.716-21-11 to introduce DC\_46-66\_n25**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Revised to R4-2002610.**

**R4-2002610 TP for 37.716-21-11 to introduce DC\_46-66\_n25**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2001532 TP for TR 37.716-21-11 to include DC\_2-7\_n38**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_2-7\_n38

**Discussion:**

.

**Decision: Approved.**

**R4-2001533 TP for TR 37.716-21-11 to include DC\_2-71\_n38**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_2-71\_n38

**Discussion:**

.

**Decision: Approved.**

**R4-2001534 TP for TR 37.716-21-11 to include DC\_7-66\_n38**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_7-66\_n38

**Discussion:**

.

**Decision: Approved.**

**R4-2001535 TP for TR 37.716-21-11 to include DC\_66-71\_n38**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_66-71\_n38

**Discussion:**

.

**Decision: Approved.**

**R4-2001536 TP for TR 37.716-21-11 to include DC\_2-66\_n38**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_2-66\_n38

**Discussion:**

.

**Decision: Approved.**

**R4-2001537 TP for TR 37.716-21-11 to include DC\_7-66\_n71**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Samsung, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_7-66\_n71

**Discussion:**

.

**Decision: Approved.**

**R4-2001538 TP for TR 37.716-21-11 to include DC\_2-71\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_2-71\_n66

**Discussion:**

.

**Decision: Approved.**

**R4-2001539 TP for TR 37.716-21-11 to include DC\_66-71\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_66-71\_n66

**Discussion:**

.

**Decision: Approved.**

**R4-2001540 TP for TR 37.716-21-11 to include DC\_2-71\_n78**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_2-71\_n78

**Discussion:**

.

**Decision: Approved.**

**R4-2001541 TP for TR 37.716-21-11 to include DC\_66-71\_n78**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_66-71\_n78

**Discussion:**

.

**Decision: Approved.**

**R4-2001974 TP for TR 37 716-21-11 to include DC\_2A-48A\_n12A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_2A-48A\_n12A

**Discussion:**

.

**Decision: Approved.**

**R4-2001975 TP for TR 37 716-21-11 to include DC\_2A-66A\_n12A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_2A-66A\_n12A

**Discussion:**

.

**Decision: Approved.**

**R4-2001976 TP for TR 37 716-21-11 to include DC\_5A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular, MediaTek*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_5A-66A\_n71A

**Discussion:**

.

**Decision: Approved.**

**R4-2001977 TP for TR 37 716-21-11 to include DC\_12A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_12A-48A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002620 TP for TR 37 716-21-11 to include DC\_12A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_12A-48A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001978 TP for TR 37 716-21-11 to include DC\_12A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_12A-66A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002621 TP for TR 37 716-21-11 to include DC\_12A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_12A-66A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001979 TP for TR 37 716-21-11 to include DC\_48A-66A\_n12A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_48A-66A\_n12A

**Discussion:**

.

**Decision: Approved.**

**R4-2001980 TP for TR 37 716-21-11 to include DC\_48A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, US Cellular, MediaTek*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_48A-66A\_n71A

**Discussion:**

.

**Decision: Approved.**

**R4-2002004 draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for three band DC combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, Telstra*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for three band DC combinations

**Discussion:**

.

**Decision: Noted.**

**R4-2002628 draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for three band DC combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, Telstra*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for three band DC combinations

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002007 TP for TR 37.716-21-11 to include DC\_7A-28A\_n3A, DC\_7C-28A\_n3A**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.716-21-11 to include DC\_7A-28A\_n3A, DC\_7C-28A\_n3A

**Discussion:**

.

**Decision: Approved.**

**R4-2002010 draft Rel-16 CR to 38.101-3 to add new configurations for 2-66\_n41 to existing combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add new configurations for 2-66\_n41 to existing combinations

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002012 TP for TR 37 716-21-11 to include DC\_2-46\_n66**

*Type: pCR For: Approval  
 37.716-21-11 v0.8.0  
 Source: Ericsson, T-Mobile US, MediaTek*

**Abstract:**

TP for TR 37 716-21-11 to include DC\_2-46\_n66

**Discussion:**

.

**Decision: Approved.**

#### 9.4.3 EN-DC with FR2 band [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2000253 TP for TR 37.716-21-11: DC\_2-5\_n260**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000254 TP for TR 37.716-21-11: DC\_2-5\_n261**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000255 TP for TR 37.716-21-11: DC\_2-13\_n260**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000256 TP for TR 37.716-21-11: DC\_2-13\_n261**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000257 TP for TR 37.716-21-11: DC\_2-66\_n260 and DC\_2-66-66\_n260**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000258 TP for TR 37.716-21-11: DC\_2-66\_n261 and DC\_2-66-66\_n261**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000259 TP for TR 37.716-21-11: DC\_5-66\_n260 and DC\_5-66-66\_n260**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000260 TP for TR 37.716-21-11: DC\_5-66\_n261 and DC\_5-66-66\_n261**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000261 TP for TR 37.716-21-11: DC\_13-66\_n260 and DC\_13-66-66\_n260**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000262 TP for TR 37.716-21-11: DC\_13-66\_n261 and DC\_13-66-66\_n261**

*Type: pCR For: Approval  
 37.716-21-11 v0.9.0  
 Source: Samsung, Verizon*

**Discussion:**

.

**Decision: Approved.**

### 9.5 EN-DC of 3 LTE band and 1 NR band [DC\_R16\_3BLTE\_1BNR\_4DL2UL]

#### 9.5.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core/Perf]

**R4-2001500 Revised WID LTE 3DL and one NR band Rel-16**

*Type: WID revised For: Agreement  
 Source: Ericsson*

**Abstract:**

Revised WID LTE 3DL and one NR band Rel-16

**Discussion:**

.

**Decision: Revised to R4-2002612.**

**R4-2002612 Revised WID LTE 3DL and one NR band Rel-16**

*Type: WID revised For: Agreement  
 Source: Ericsson*

**Abstract:**

Revised WID LTE 3DL and one NR band Rel-16

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001503 TR 37.716-31-11 v0.9.0 Rel-16 DC combinations LTE 3DL and one NR band**

*Type: draft TR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson*

**Abstract:**

TR 37.716-31-11 v0.9.0 Rel-16 DC combinations LTE 3DL and one NR band

**Discussion:**

.

**Decision: Approved.**

**R4-2001507 TP for TR 37.716-31-11 for updated scope from RAN #86**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.716-31-11 for updated scope from RAN #86

**Discussion:**

.

**Decision: Approved.**

**R4-2001512 CR introduction completed band combinations 37.716-31-11 -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0206 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 37.716-31-11 -> 38.101-3

**Discussion:**

.

**Decision: Agreed.**

#### 9.5.2 EN-DC without FR2 band [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core]

**R4-2000542 TP to TR 37.716-31-11: Addition of DC\_2A-5A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002589 TP to TR 37.716-31-11: Addition of DC\_2A-5A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000543 TP to TR 37.716-31-11: Addition of DC\_2A-5A-48A\_n12A**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000544 TP to TR 37.716-31-11: Addition of DC\_ 2A-5A-66A\_n12A**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000545 TP to TR 37.716-31-11: Addition of DC\_2A-12A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002590 TP to TR 37.716-31-11: Addition of DC\_2A-12A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000546 TP to TR 37.716-31-11: Addition of DC\_2A-12A-48A\_n5A**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000547 TP to TR 37.716-31-11: Addition of DC\_2A-12A-66A\_n5A**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000548 TP to TR 37.716-31-11: Addition of DC\_2A-48A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002591 TP to TR 37.716-31-11: Addition of DC\_2A-48A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000549 TP to TR 37.716-31-11: Addition of DC\_2A-48A-66A\_n5A**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000550 TP to TR 37.716-31-11: Addition of DC\_2A-66A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002592 TP to TR 37.716-31-11: Addition of DC\_2A-66A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000551 TP to TR 37.716-31-11: Addition of DC\_5A-48A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002593 TP to TR 37.716-31-11: Addition of DC\_5A-48A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000552 TP to TR 37.716-31-11: Addition of DC\_5A-48A-66A\_n12A**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000553 TP to TR 37.716-31-11: Addition of DC\_5A-66A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002594 TP to TR 37.716-31-11: Addition of DC\_5A-66A\_(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000554 TP to TR 37.716-31-11: Addition of DC\_12A-48A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002595 TP to TR 37.716-31-11: Addition of DC\_12A-48A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000555 TP to TR 37.716-31-11: Addition of DC\_12A-48A-66A\_n5A**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000556 TP to TR 37.716-31-11: Addition of DC\_12A-66A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Noted.**

**R4-2002596 TP to TR 37.716-31-11: Addition of DC\_12A-66A\_(n)5AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000710 Draft CR to TS 38.101-3: Adding DC\_1A-7C-20A\_n3A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: VODAFONE Group Plc*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000739 Draft CR to TS 38.101-3: Adding DC\_3A-7C-20A\_n1A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: VODAFONE Group Plc*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000763 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_1-8-11\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000845 TP for TR 37.716-31-11: DC\_3C-7A-8A\_n1A**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001289 TP for 37.716-31-11 to introduce DC\_2-5-66\_n2**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001290 TP for 37.716-31-11 to introduce DC\_2-5-66\_n5**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001291 TP for 37.716-31-11 to introduce DC\_2-5-66\_n66**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001292 TP for 37.716-31-11 to introduce DC\_2-13-66\_n2**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001293 TP for 37.716-31-11 to introduce DC\_2-13-66\_n5**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001294 TP for 37.716-31-11 to introduce DC\_2-13-66\_n48**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001295 TP for 37.716-31-11 to introduce DC\_2-13-66\_n66**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001296 TP for 37.716-31-11 to introduce DC\_2-46-48\_n5**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001297 TP for 37.716-31-11 to introduce DC\_2-46-48\_n66**

*Type: pCR For: Approval  
 37.716-31-11 v0.9.0  
 Source: Nokia, Verizon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001542 TP for TR 37 716-31-11 to include DC\_2-7-66\_n38**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2-7-66\_n38

**Discussion:**

.

**Decision: Approved.**

**R4-2001543 TP for TR 37 716-31-11 to include DC\_2-66-71\_n38**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2-66-71\_n38

**Discussion:**

.

**Decision: Approved.**

**R4-2001544 TP for TR 37 716-31-11 to include DC\_2-7-66\_n71**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2-7-66\_n71

**Discussion:**

.

**Decision: Approved.**

**R4-2001545 TP for TR 37 716-31-11 to include DC\_2-66-71\_n66**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2-66-71\_n66

**Discussion:**

.

**Decision: Approved.**

**R4-2001546 TP for TR 37 716-31-11 to include DC\_2-66-71\_n78**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, Rogers*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2-66-71\_n78

**Discussion:**

.

**Decision: Approved.**

**R4-2001984 TP for TR 37 716-31-11 to include DC\_2A-48A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-48A-66A\_n71A

**Discussion:**

.

**Decision: Approved.**

**R4-2001985 TP for TR 37 716-31-11 to include DC\_12A-48A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_12A-48A-66A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002622 TP for TR 37 716-31-11 to include DC\_12A-48A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_12A-48A-66A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001986 TP for TR 37 716-31-11 to include DC\_2A-12A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-12A-48A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002623 TP for TR 37 716-31-11 to include DC\_2A-12A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-12A-48A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001987 TP for TR 37 716-31-11 to include DC\_2A-12A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-12A-66A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002624 TP for TR 37 716-31-11 to include DC\_2A-12A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-12A-66A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001988 TP for TR 37 716-31-11 to include DC\_5A-48A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_5A-48A-66A\_n71A

**Discussion:**

.

**Decision: Approved.**

**R4-2001989 TP for TR 37 716-31-11 to include DC\_2A-5A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-5A-48A\_n71A

**Discussion:**

.

**Decision: Approved.**

**R4-2001990 TP for TR 37 716-31-11 to include DC\_2A-5A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-5A-66A\_n71A

**Discussion:**

.

**Decision: Approved.**

**R4-2001991 TP for TR 37 716-31-11 to include DC\_5A-12A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_5A-12A-48A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002625 TP for TR 37 716-31-11 to include DC\_5A-12A-48A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_5A-12A-48A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001992 TP for TR 37 716-31-11 to include DC\_5A-12A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_5A-12A-66A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002626 TP for TR 37 716-31-11 to include DC\_5A-12A-66A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_5A-12A-66A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001993 TP for TR 37 716-31-11 to include DC\_2A\_5A-12A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A\_5A-12A\_n71A

**Discussion:**

.

**Decision: Noted.**

**R4-2002627 TP for TR 37 716-31-11 to include DC\_2A\_5A-12A\_n71A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A\_5A-12A\_n71A

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001994 TP for TR 37 716-31-11 to include DC\_2A-48A-66A\_n12A**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-48A-66A\_n12A

**Discussion:**

.

**Decision: Approved.**

**R4-2001995 TP for TR 37 716-31-11 to include DC\_48A-66A-(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_48A-66A-(n)12AA

**Discussion:**

.

**Decision: Approved.**

**R4-2001996 TP for TR 37 716-31-11 to include DC\_2A-48A-(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-48A-(n)12AA

**Discussion:**

.

**Decision: Approved.**

**R4-2001997 TP for TR 37 716-31-11 to include DC\_2A-66A-(n)12AA**

*Type: pCR For: Approval  
 37.716-31-11 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37 716-31-11 to include DC\_2A-66A-(n)12AA

**Discussion:**

.

**Decision: Approved.**

**R4-2002005 draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for four band DC combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, Telstra*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for four band DC combinations

**Discussion:**

.

**Decision: Noted.**

**R4-2002629 draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for four band DC combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, Telstra*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add CA\_n7B UL for four band DC combinations

**Discussion:**

.

**Decision: Withdrawn.**

#### 9.5.3 EN-DC with FR2 band [DC\_R16\_3BLTE\_1BNR\_4DL2UL-Core]

### 9.6 EN-DC of 4 LTE band and 1 NR band [DC\_R16\_4BLTE\_1BNR\_5DL2UL]

#### 9.6.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core/Perf]

**R4-2001284 Revised WID on Dual Connectivity (EN-DC) of 4 bands LTE inter-band CA (4DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Agreement  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001285 CR to introduce new combinations of LTE 4band + NR 1band for TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0200 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001286 draftTR 37.716-41-11 v0.7.0**

*Type: draft TR For: Approval  
 37.716-41-11 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Revised to R4-2002608.**

**R4-2002608 draftTR 37.716-41-11 v0.7.0**

*Type: draft TR For: Approval  
 37.716-41-11 v0.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

.

**Decision: Approved.**

#### 9.6.2 EN-DC without FR2 band [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core]

#### 9.6.3 EN-DC with FR2 band [DC\_R16\_4BLTE\_1BNR\_5DL2UL-Core]

**R4-2000877 draft CR for correction DC of LTE 4bands + NR 1band (FR2) for TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Endorsed.**

### 9.7 EN-DC of x bands (x=1,2, 3, 4) LTE inter-band CA and 2 bands NR inter-band CA [DC\_R16\_xBLTE\_2BNR\_yDL2UL]

#### 9.7.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core/Per]

**R4-2001042 TR 37.716-21-21 v0.9.0 update: LTE(xDL/1UL)+ NR(2DL/1UL) DC in rel-16**

*Type: draft TR For: Approval  
 37.716-21-21 v0.9.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001064 Revised WID on LTE (xDL/UL x=1.2,3,4) with NR 2 bands (2DL/1UL) EN DC in rel-16**

*Type: WID revised For: Agreement  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001066 Introducing CR on new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in rel-16**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0196 Cat: B (Rel-16)  
  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Agreed.**

#### 9.7.2 EN-DC including NR inter CA without FR2 band [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2000102 TP for TR 37.716-21-21: DC\_66\_n5-n48**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

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

**R4-2000103 TP for TR 37.716-21-21: DC\_13\_n48-n66**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

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

**R4-2000105 TP for TR 37.716-21-21: DC\_13\_n5-n48**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

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

**R4-2000106 TP for TR 37.716-21-21: DC\_13-66\_n5-n48**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

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

**R4-2000182 Draft CR: Adding EN-DC configurations to DC\_3-20\_n28-n78**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Nokia, Nokia Shanghai Bell, BT plc*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000263 TP for TR 37.716-21-21: DC\_2A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Approved.**

**R4-2000264 TP for TR 37.716-21-21: DC\_2A-7A\_n66A-n78A and DC\_2A-7A-7A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Approved.**

**R4-2000265 TP for TR 37.716-21-21: DC\_2A-7A-66A\_n66A-n78A and DC\_2A-7A-7A-66A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Approved.**

**R4-2000266 TP for TR 37.716-21-21: DC\_2A-66A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Revised to R4-2002649.**

**R4-2002649 TP for TR 37.716-21-21: DC\_2A-66A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Approved.**

**R4-2000267 TP for TR 37.716-21-21: DC\_7A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Revised to R4-2002650.**

**R4-2002650 TP for TR 37.716-21-21: DC\_7A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Approved.**

**R4-2000268 TP for TR 37.716-21-21: DC\_7A-7A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Noted.**

**R4-2000269 TP for TR 37.716-21-21: DC\_7A-66A\_n66A-n78A and DC\_7A-7A-66A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Approved.**

**R4-2000270 TP for TR 37.716-21-21: DC\_66A\_n66A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Samsung, Bell mobility*

**Discussion:**

.

**Decision: Approved.**

**R4-2000480 TP for TR37.716-21-21: DC\_1A-3A-20A\_n38A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000481 TP for TR37.716-21-21\_ DC\_1A-20A\_n3A-n38A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002651.**

**R4-2002651 TP for TR37.716-21-21\_ DC\_1A-20A\_n3A-n38A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000482 TP for TR37.716-21-21\_ DC\_1A-20A\_n3A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000483 TP for TR37.716-21-21\_ DC\_1A-20A-38A\_n3A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002652.**

**R4-2002652 TP for TR37.716-21-21\_ DC\_1A-20A-38A\_n3A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000484 TP for TR37.716-21-21: DC\_3A-20A\_n38A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000485 TP for TR37.716-21-21: DC\_7A-20A\_n3A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000846 TP for TR 37.716-21-21:DC\_2\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002653.**

**R4-2002653 TP for TR 37.716-21-21:DC\_2\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000851 TP for TR 37.716-21-21: UE requirements for DC\_3-3-7-8\_n1-n78, DC\_3-7-7-8\_n1-n78, DC\_3-3-7-7-8\_n1-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: Approved.**

**R4-2000856 TP for TR 37.716-21-21: UE requirements for DC\_3-3-8\_n1-n78, DC\_7-7-8\_n1-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: CHTTL*

**Discussion:**

.

**Decision: Approved.**

**R4-2001092 TP to TR 37.716.21-21: Addition of CA configuration for DC\_1A\_n8A-n78A**

*Type: other For: Agreement  
 Source: Huawei Technologies UK*

**Abstract:**

This paper proposes the addition of DC\_1A\_n8A-n78A.

**Discussion:**

.

**Decision: Approved.**

**R4-2001128 TP on summary of self-interference analysis for new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in rel-16**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001130 MSD results for new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in rel-16**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Revised to R4-2002654`.**

**R4-2002654 MSD results for new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in rel-16**

*Type: pCR For: Approval  
 37.716-21-21 v0.9.0  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Approved.**

**R4-2001998 TP for TR 37.716-21-21 to include DC\_28\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_28\_n7-n78

**Discussion:**

.

**Decision: Approved.**

**R4-2001999 TP for TR 37.716-21-21 to include DC\_3-28\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_3-28\_n7-n78

**Discussion:**

.

**Decision: Approved.**

**R4-2002000 TP for TR 37.716-21-21 to include DC\_1-28\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_1-28\_n7-n78

**Discussion:**

.

**Decision: Approved.**

**R4-2002001 TP for TR 37.716-21-21 to include DC\_1-3-28\_n7-n78**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_1-3-28\_n7-n78

**Discussion:**

.

**Decision: Approved.**

**R4-2002002 draft CR adding configurations for 1\_n7-n78, 3\_n7-n78, 1-3\_n7-n78, 3\_n7-n78**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR adding configurations for 1\_n7-n78, 3\_n7-n78, 1-3\_n7-n78, 3\_n7-n78

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002008 TP for TR 37.716-21-21 to include DC\_7A-28A\_n3A-n78A, DC\_7C-28A\_n3A-n78A**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_7A-28A\_n3A-n78A, DC\_7C-28A\_n3A-n78A

**Discussion:**

.

**Decision: Approved.**

**R4-2002011 draft Rel-16 CR to 38.101-3 to add new configurations for 2\_n41-n71, 66\_n25-n41, 66\_n41-n71, 2-66\_n41-n71 to existing combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft Rel-16 CR to 38.101-3 to add new configurations for 2\_n41-n71, 66\_n25-n41, 66\_n41-n71, 2-66\_n41-n71 to existing combinations

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002013 TP for TR 37.716-21-21 to include DC\_2\_n41-n66**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2\_n41-n66

**Discussion:**

.

**Decision: Approved.**

**R4-2002014 TP for TR 37.716-21-21 to include DC\_2\_n66-n71**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2\_n66-n71

**Discussion:**

.

**Decision: Approved.**

**R4-2002016 TP for TR 37.716-21-21 to include 66\_n25-n71**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include 66\_n25-n71

**Discussion:**

.

**Decision: Approved.**

**R4-2002017 TP for TR 37.716-21-21 to include DC\_2-46\_n41-n66**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2-46\_n41-n66

**Discussion:**

.

**Decision: Revised to R4-2002655.**

**R4-2002655 TP for TR 37.716-21-21 to include DC\_2-46\_n41-n66**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2-46\_n41-n66

**Discussion:**

.

**Decision: Approved.**

**R4-2002018 TP for TR 37.716-21-21 to include DC\_2-66\_n71-n261**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2-66\_n71-n261

**Discussion:**

.

**Decision: Revised to R4-2002656.**

**R4-2002656 TP for TR 37.716-21-21 to include DC\_2-66\_n71-n261**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2-66\_n71-n261

**Discussion:**

.

**Decision: Approved.**

#### 9.7.3 EN-DC including NR inter CA with FR2 band [DC\_R16\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2000537 TP for TR 37.716-21-21: DC\_66A\_n12A-n258A**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Revised to R4-2002657.**

**R4-2002657 TP for TR 37.716-21-21: DC\_66A\_n12A-n258A**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000538 TP for TR 37.716-21-21: DC\_66A\_n12A-n260A**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Revised to R4-2002658.**

**R4-2002658 TP for TR 37.716-21-21: DC\_66A\_n12A-n260A**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000539 TP for TR 37.716-21-21: DC\_66A\_n12A-n261A**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Revised to R4-2002659.**

**R4-2002659 TP for TR 37.716-21-21: DC\_66A\_n12A-n261A**

*Type: pCR For: Approval  
 37.716-11-11 v0.1.0  
 Source: Nokia, US Cellular*

**Discussion:**

.

**Decision: Approved.**

**R4-2000762 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_1-8\_n77-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000765 Draft CR for TS 38.101-3: Support of n77(2A) in DC\_1\_n77-n257, 3\_n77-n257 and 8\_n77-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000776 TP for TR 37.716-21-21: EN-DC\_11\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000777 TP for TR 37.716-21-21: EN-DC\_28\_n77-n257**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000860 TP for EN-DC of 1-3-21\_n78-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000861 TP for EN-DC of 1-19-42\_n78-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000862 TP for EN-DC of 1-21-42\_n78-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000863 TP for EN-DC of 19-21-42\_n78-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000864 TP for EN-DC of 1-3-21\_n79-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000865 TP for EN-DC of 1-19-42\_n79-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000866 TP for EN-DC of 1-21-42\_n79-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000867 TP for EN-DC of 19-21-42\_n79-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000868 TP for EN-DC of 1-3-21\_n77-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000869 TP for EN-DC of 1-19-42\_n77-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000870 TP for EN-DC of 1-21-42\_n77-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Revised to R4-2002660.**

**R4-2002660 TP for EN-DC of 1-21-42\_n77-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000871 TP for EN-DC of 19-21-42\_n77-n257 for TR37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000879 draft CR for introduce DC of LTE 2bands + NR 2band for TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000880 draft CR for introduce DC of LTE 3bands + NR 2band for TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000882 draft CR for introduce DC of LTE 4bands + NR 2band for TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: KDDI Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000888 CR to TS38.101-3 on band combination for Inter-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0191 Cat: F (Rel-16)  
  
 Source: Samsung*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001093 draft CR for EN-DC inc NR CA FR1+FR2 w xDL\_2ULfor TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001094 TP for DC\_1-19\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001095 TP for DC\_1-19\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001096 TP for DC\_1-19\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001097 TP for DC\_1-21\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001098 TP for DC\_1-21\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001099 TP for DC\_1-21\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001100 TP for DC\_1-3\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001101 TP for DC\_1-42\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001102 TP for DC\_1-42\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001103 TP for DC\_19-21\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001104 TP for DC\_19-21\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001105 TP for DC\_19-21\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001106 TP for DC\_19-42\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001107 TP for DC\_19-42\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001108 TP for DC\_19-42\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001109 TP for DC\_21-42\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001110 TP for DC\_21-42\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001111 TP for DC\_21-42\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001112 TP for DC\_3-19\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001113 TP for DC\_3-19\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001114 TP for DC\_3-19\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001115 TP for DC\_3-21\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001116 TP for DC\_3-21\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001117 TP for DC\_3-21\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001118 TP for DC\_3-42\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001119 TP for DC\_3-42\_n78-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001120 TP for DC\_3-42\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001121 TP for DC\_42\_n77-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001122 TP for DC\_42\_n79-n257 for TR 37.716-21-21**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001981 TP for TR 37.716-21-21 to include DC\_2A\_n12A-n258A**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2A\_n12A-n258A

**Discussion:**

.

**Decision: Revised to R4-2002661.**

**R4-2002661 TP for TR 37.716-21-21 to include DC\_2A\_n12A-n258A**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2A\_n12A-n258A

**Discussion:**

.

**Decision: Approved.**

**R4-2001982 TP for TR 37.716-21-21 to include DC\_2A\_n12A-n260A**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2A\_n12A-n260A

**Discussion:**

.

**Decision: Revised to R4-2002662.**

**R4-2002662 TP for TR 37.716-21-21 to include DC\_2A\_n12A-n260A**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2A\_n12A-n260A

**Discussion:**

.

**Decision: Approved.**

**R4-2001983 TP for TR 37.716-21-21 to include DC\_2A\_n12A-n261A**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2A\_n12A-n261A

**Discussion:**

.

**Decision: Revised to R4-2002663.**

**R4-2002663 TP for TR 37.716-21-21 to include DC\_2A\_n12A-n261A**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, US Cellular*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2A\_n12A-n261A

**Discussion:**

.

**Decision: Approved.**

**R4-2002015 TP for TR 37.716-21-21 to include DC\_2\_n71-n261**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2\_n71-n261

**Discussion:**

.

**Decision: Revised to R4-2002664.**

**R4-2002664 TP for TR 37.716-21-21 to include DC\_2\_n71-n261**

*Type: pCR For: Approval  
 37.716-21-21 v0.8.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for TR 37.716-21-21 to include DC\_2\_n71-n261

**Discussion:**

.

**Decision: Approved.**

### 9.8 Band combinations for SA NR supplementary uplink (SUL), NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP) [NR\_SUL\_combos\_R16]

#### 9.8.1 Rapporteur Input (WID/TR/CR) [NR\_SUL\_combos\_R16-Core/Per]

**R4-2001067 Revised WID on Band combinations for SA NR Supplementary uplink (SUL), NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP)**

*Type: WID revised For: Agreement  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Endorsed.**

#### 9.8.2 UE RF [NR\_SUL\_combos\_R16-Core]

**R4-2001302 TP for 37.716-21-21 to introduce DC\_2-46\_n41-n71**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2001303 TP for 37.716-21-21 to introduce DC\_2-46-66\_n41-n71**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2001304 TP for 37.716-21-21 to introduce DC\_46-66\_n25-n41**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2001305 TP for 37.716-21-21 to introduce DC\_46-66\_n41-n71**

*Type: pCR For: Approval  
 37.716-21-21 v0.7.0  
 Source: Nokia, T-Mobile US*

**Discussion:**

.

**Decision: Approved.**

**R4-2002026 UL Configuration for ULSUP TDM combinations**

*Type: other For: Discussion  
 38.101-3 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we have looked at some potential clarification needed in TDM for SUL UL configurations to avoid LTE de-sense for ULSUP TDM combinations the corresponding LTE DL band.

**Discussion:**

.

**Decision: Noted.**

**R4-2002071 CR to 38.101-3 on EN-DC band combination with SUL for n41**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0215 Cat: F (Rel-16)  
  
 Source: Google Inc.*

**Discussion:**

.

**Decision: Revised to R4-2002665.**

**R4-2002665 CR to 38.101-3 on EN-DC band combination with SUL for n41**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0215 Cat: F (Rel-16)  
  
 Source: Google Inc.*

**Discussion:**

.

**Decision: Agreed.**

### 9.9 NR Inter-band Carrier Aggregation for 3 bands DL with 1 band UL [NR\_CA\_R16\_3BDL\_1BUL]

#### 9.9.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_3BDL\_1BUL-Core/Per]

**R4-2000624 TR 38.716-03-01 v 0.2.0**

*Type: draft TR For: Approval  
 38.716-03-01 v0.5.0  
 Source: CATT*

**Discussion:**

.

**Decision: Approved.**

**R4-2000625 Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0234 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Revised to R4-2002921.**

**R4-2002921 Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0234 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000626 Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0185 Cat: B (Rel-16)  
  
 Source: CATT*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2000627 Revised WID: Rel-16 NR inter-band CA for 3 bands DL with 1 band UL**

*Type: WID revised For: Agreement  
 Source: CATT*

**Discussion:**

.

**Decision: Endorsed.**

#### 9.9.2 UE RF [NR\_CA\_R16\_3BDL\_1BUL-Core]

**R4-2000144 TP for TR38.716-03-01: Requirements for CA\_n29A-n66A-n70A, CA\_n29A-n66B-n70A, and CA\_n29A-n66(2A)-n70A**

*Type: pCR For: Approval  
 38.716-03-01 v0.3.0  
 Source: Dish Network*

**Discussion:**

.

**Decision: Revised to R4-2002666.**

**R4-2002666 TP for TR38.716-03-01: Requirements for CA\_n29A-n66A-n70A, CA\_n29A-n66B-n70A, and CA\_n29A-n66(2A)-n70A**

*Type: pCR For: Approval  
 38.716-03-01 v0.3.0  
 Source: Dish Network*

**Discussion:**

.

**Decision: Approved.**

**R4-2000185 TP to TR 38.716-03-01: CA\_n25-n41-n71**

*Type: pCR For: Approval  
 38.716-03-01 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, T-Mobile USA*

**Discussion:**

.

**Decision: Approved.**

**R4-2000186 TP to TR 38.716-03-01: CA\_n41-n66-n71**

*Type: pCR For: Approval  
 38.716-03-01 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell, T-Mobile USA*

**Discussion:**

.

**Decision: Approved.**

**R4-2000420 CR for 38.101-1: Removal of inter-band CA redundancies**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0213 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000487 CR to TS 38.101-1: Improvement on NR 3DL inter-band CA combination**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0219 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002715.**

**R4-2002715 CR to TS 38.101-1: Improvement on NR 3DL inter-band CA combination**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0219 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000760 Draft CR for TS 38.101-1: Support of n77(2A) in CA\_n3-n28-n77**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000847 TP for TR 38.716-03-01:CA\_n25-n66-n78**

*Type: pCR For: Approval  
 38.716-03-01 v0.5.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000848 TP for TR 38.716-03-01: CA\_n7-n66-n78**

*Type: pCR For: Approval  
 38.716-03-01 v0.5.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000849 TP for TR 38.716-03-01: CA\_n5-n66-n78**

*Type: pCR For: Approval  
 38.716-03-01 v0.5.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2000850 TP for TR 38.716-03-01: CA\_n7-n25-n66**

*Type: pCR For: Approval  
 38.716-03-01 v0.5.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001063 TP for TR 38.716-03-01: CA\_n20A-n28A-n78A\_BCS0**

*Type: pCR For: Approval  
 38.716-03-01 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002667.**

**R4-2002667 TP for TR 38.716-03-01: CA\_n20A-n28A-n78A\_BCS0**

*Type: pCR For: Approval  
 38.716-03-01 v0.3.0  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001520 TP for TR 38.716-03-01 to include CA\_n1-n7-n28**

*Type: pCR For: Approval  
 38.716-03-01 v0.8.0  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.716-03-01 to include CA\_n1-n7-n28

**Discussion:**

.

**Decision: Approved.**

**R4-2001521 TP for TR 38.716-03-01 to include CA\_n1-n7-n78**

*Type: pCR For: Approval  
 38.716-03-01 v0.8.0  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.716-03-01 to include CA\_n1-n7-n78

**Discussion:**

.

**Decision: Approved.**

### 9.10 NR Inter-band Carrier Aggregation for 4 bands DL with 1 band UL [NR\_CA\_R16\_4BDL\_1BUL]

#### 9.10.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R16\_4BDL\_1BUL-Core/Per]

**R4-2001501 Revised WID 4 bands NR CA Rel-16**

*Type: WID revised For: Agreement  
 Source: Ericsson*

**Abstract:**

Revised WID 4 bands NR CA Rel-16

**Discussion:**

.

**Decision: Revised to R4-2002668.**

**R4-2002668 Revised WID 4 bands NR CA Rel-16**

*Type: WID revised For: Agreement  
 Source: Ericsson*

**Abstract:**

Revised WID 4 bands NR CA Rel-16

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001504 TR 38.716-04-01 v0.2.0 Rel-16 NR Inter-band 4 bands CA**

*Type: draft TR For: Approval  
 38.716-04-01 v0.1.0  
 Source: Ericsson*

**Abstract:**

TR 38.716-04-01 v0.2.0 Rel-16 NR Inter-band 4 bands CA

**Discussion:**

.

**Decision: Approved.**

**R4-2001508 TP for TR 38.716-04-01 for updated scope from RAN #86**

*Type: pCR For: Approval  
 38.716-04-01 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 38.716-04-01 for updated scope from RAN #86

**Discussion:**

.

**Decision: Approved.**

**R4-2001513 CR introduction completed band combinations 38.716-04-01 -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0259 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-04-01 -> 38.101-1

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2001514 CR introduction completed band combinations 38.716-04-01 -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0207 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations 38.716-04-01 -> 38.101-3

**Discussion:**

.

**Decision: Agreed.**

#### 9.10.2 UE RF [NR\_CA\_R16\_4BDL\_1BUL-Core]

**R4-2000761 Draft CR for TS 38.101-3: Support of n77(2A) in CA\_n3-n28-n77-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Endorsed.**

### 9.11 NR Inter-band Carrier Aggregation/Dual connectivity for 3 bands DL with 2 bands UL [NR\_CADC\_R16\_3BDL\_2BUL]

#### 9.11.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R16\_3BDL\_2BUL-Core/Per]

**R4-2000499 CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into Rel16 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0223 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000500 CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into Rel16 TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0179 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000503 Revised WID on Rel-16 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with 2 bands UL**

*Type: WID revised For: Agreement  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2000804 TR 38.716-03-02 v040**

*Type: draft TR For: Approval  
 38.716-03-02 v0.4.0  
 Source: ZTE Wistron Telecom AB*

**Discussion:**

.

**Decision: Approved.**

#### 9.11.2 UE RF [NR\_CADC\_R16\_3BDL\_2BUL-Core]

**R4-2000145 TP for TR38.716-03-02: UL CA Requirements for CA\_n66A-n70A-n71A, CA\_n66B-n70A-n71A, and CA\_n66(2A)-n70A-n71A**

*Type: pCR For: Approval  
 38.716-03-02 v0.3.0  
 Source: Dish Network*

**Discussion:**

.

**Decision: Revised to R4-2002669.**

**R4-2002669 TP for TR38.716-03-02: UL CA Requirements for CA\_n66A-n70A-n71A, CA\_n66B-n70A-n71A, and CA\_n66(2A)-n70A-n71A**

*Type: pCR For: Approval  
 38.716-03-02 v0.3.0  
 Source: Dish Network*

**Discussion:**

.

**Decision: Approved.**

**R4-2000415 CR for 38.101-3: Remove delta Tib and delta Rib for FR1+FR2 CA**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0165 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002716.**

**R4-2002716 CR for 38.101-3: Remove delta Tib and delta Rib for FR1+FR2 CA**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0165 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000475 TP for TR38.716-03-02: updated the MSD value for CA\_n3-n40A-n41A**

*Type: pCR For: Approval  
 38.716-03-02 v0.4.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000476 TP for TR38.716-03-02: updated the MSD value for CA\_n40A-n41A-n79A**

*Type: pCR For: Approval  
 38.716-03-02 v0.4.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000778 TP for TR 38.716-03-02: CA\_n3-n28-n77**

*Type: pCR For: Approval  
 38.716-03-02 v0.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Revised to R4-2002670.**

**R4-2002670 TP for TR 38.716-03-02: CA\_n3-n28-n77**

*Type: pCR For: Approval  
 38.716-03-02 v0.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2000779 TP for TR 38.716-03-02: CA\_n3-n28-n257**

*Type: pCR For: Approval  
 38.716-03-02 v0.3.0  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001522 TP for TR 38.716-03-02 to include CA\_n1-n7-n28**

*Type: pCR For: Approval  
 38.716-03-01 v0.8.0  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.716-03-02 to include CA\_n1-n7-n28

**Discussion:**

.

**Decision: Revised to R4-2002671.**

**R4-2002671 TP for TR 38.716-03-02 to include CA\_n1-n7-n28**

*Type: pCR For: Approval  
 38.716-03-01 v0.8.0  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.716-03-02 to include CA\_n1-n7-n28

**Discussion:**

.

**Decision: Approved.**

**R4-2001523 TP for TR 38.716-03-02 to include CA\_n1-n7-n78**

*Type: pCR For: Approval  
 38.716-03-01 v0.8.0  
 Source: Ericsson, BT plc*

**Abstract:**

TP for TR 38.716-03-02 to include CA\_n1-n7-n78

**Discussion:**

.

**Decision: Approved.**

**R4-2002159 CR for 38.101-3: delta Tib corrections**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0279 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

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

**R4-2002161 CR for 38.101-1: delta Tib corrections**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0280 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2002672 CR for 38.101-1: delta Tib corrections**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0280 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Withdrawn.**

### 9.12 Dual Connectivity (EN-DC) with 3 bands DL and 3 bands UL [DC\_R16\_LTE\_NR\_3DL3UL]

#### 9.12.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_LTE\_NR\_3DL3UL-Core/Per]

**R4-2000501 CR to reflect the completed ENDC combinations for 3 bands DL with 3 bands UL into Rel16 TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0180 Cat: B (Rel-16)  
  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000504 Revised WID: Dual Connectivity (EN-DC) with 3 bands DL and 3 bands UL**

*Type: WID revised For: Agreement  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Endorsed.**

#### 9.12.2 UE RF [DC\_R16\_LTE\_NR\_3DL3UL-Core]

**R4-2000477 TP for TR 37.716-33: DC\_3A\_n79A-n258**

*Type: pCR For: Approval  
 37.716-33 v0.1.0  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision: Approved.**

**R4-2000558 Correction to remedy missing implementation of approved CR0093r1**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0181 Cat: F (Rel-16)  
  
 Source: ETSI MCC*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001123 draft CR for EN-DC inc NR CA FR1+FR2 w 3DL\_3ULfor TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Revised to R4-2002673.**

**R4-2002673 draft CR for EN-DC inc NR CA FR1+FR2 w 3DL\_3ULfor TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2001124 TP for DC\_21\_n77-n257 for TR 37.716-33**

*Type: pCR For: Approval  
 37.716-33 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001125 TP for DC\_21\_n78-n257 for TR 37.716-33**

*Type: pCR For: Approval  
 37.716-33 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001126 TP for DC\_21\_n79-n257 for TR 37.716-33**

*Type: pCR For: Approval  
 37.716-33 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

### 9.13 Dual Connectivity (EN-DC) of LTE inter-band CA xDL/1UL bands (x=2,3,4) and NR FR1 1DL/1UL band and NR FR2 1DL/1UL band [DC\_R16\_xBLTE\_2BNR\_yDL3UL]

#### 9.13.1 Rapporteur Input (WID/TR/CR) [DC\_R16\_xBLTE\_2BNR\_yDL3UL-Core/Per]

**R4-2000755 draft TR skeleton TR 37.716-41-22 v0.0.1**

*Type: draft TR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Revised to R4-2002674.**

**R4-2002674 draft TR skeleton TR 37.716-41-22 v0.0.1**

*Type: draft TR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2002105 Revised WID for Dual Connectivity (EN-DC) of LTE inter-band CA xDL/1UL bands (x=2,3,4) and NR FR1 1DL/1UL band and NR FR2 1DL/1UL band**

*Type: WID revised For: Agreement  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Endorsed.**

**R4-2002106 Updated TR 37.716-41-22 v0.1.0**

*Type: draft TR For: Approval  
 37.716-41-22 v0.1.0  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002107 CR for introduce new EN-DC of LTE 2,3,4 band + NR FR1 1UL/1DL band + NR FR2 1UL/1DL band for TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0218 Cat: B (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Agreed.**

#### 9.13.2 UE RF [DC\_R16\_xBLTE\_2BNR\_yDL3UL-Core]

**R4-2001131 TP for DC\_1-3\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001132 TP for DC\_1-21\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001133 TP for DC\_1-42\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001134 TP for DC\_3-19\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001135 TP for DC\_3-21\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001136 TP for DC\_3-42\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001137 TP for DC\_19-21\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001138 TP for DC\_19-42\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001139 TP for DC\_21-42\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001140 TP for DC\_1-3\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001141 TP for DC\_1-21\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001142 TP for DC\_1-42\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001143 TP for DC\_3-19\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001144 TP for DC\_3-21\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001145 TP for DC\_3-42\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001146 TP for DC\_19-21\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001147 TP for DC\_19-42\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001148 TP for DC\_21-42\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001149 TP for DC\_1-3\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001150 TP for DC\_1-21\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001151 TP for DC\_1-42\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001152 TP for DC\_3-19\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001153 TP for DC\_3-21\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001154 TP for DC\_3-42\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001155 TP for DC\_19-21\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001156 TP for DC\_19-42\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001157 TP for DC\_21-42\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001158 TP for DC\_1-19\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001159 TP for DC\_1-3-21\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001160 TP for DC\_19-21-42\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001161 TP for DC\_1-21-42\_n77-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001162 TP for DC\_1-3-21\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001163 TP for DC\_19-21-42\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001164 TP for DC\_1-21-42\_n78-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001165 TP for DC\_1-3-21\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001166 TP for DC\_19-21-42\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001167 TP for DC\_1-21-42\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

**R4-2001168 TP for DC\_1-19-42\_n79-n257 for TR37.716-41-22**

*Type: pCR For: Approval  
 37.716-41-22 v0.0.1  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Approved.**

### 9.14 29dBm UE Power Class for B41 and n41 [LTE\_NR\_B41\_Bn41\_PC29dBm]

**R4-2002700 Email discussion summary for RAN4#94e\_#27\_LTE\_NR\_B41\_Bn41\_PC29dBm**

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

**Discussion:**

.

**Decision: Revised to R4-2002894.**

**R4-2002894 Email discussion summary for RAN4#94e\_#27\_LTE\_NR\_B41\_Bn41\_PC29dBm**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002830 WF on the clarification of A-MPR for different CG and EN-DC power classes**

*Type: other For: Approval  
 Source: Sprint*

**Discussion:**

.

**Decision: Withdrawn.**

**R4-2002831 WF on intra-band MPR/A-MPR curves**

*Type: other For: Approval  
 Source: Sprint*

**Discussion:**

.

**Decision: Noted.**

**R4-2002833 WF on PC 1.5 behavior when P-Max is not present**

*Type: other For: Approval  
 Source: KDDI*

**Discussion:**

.

**Decision: Approved.**

**R4-2002834 WF on EVM Impact of Reverse IMD3 on UL MIMO Modulation Order Capability**

*Type: other For: Approval  
 Source: Qualcomm*

**Discussion:**

.

**Decision: Approved.**

**R4-2002913 WF on A-MPR for PC1.5 intra-band EN-DC**

*Type: other For: Approval  
 Source: Sprint*

**Discussion:**

.

**Decision: Approved.**

#### 9.14.1 Rapporteur Input (WID/TR/CR) [LTE\_NR\_B41\_Bn41\_PC29dBm]

#### 9.14.2 UE RF (36.101, 38.101-1, 38.101-3) [LTE\_NR\_B41\_Bn41\_PC29dBm]

**R4-2000007 A-MPR Proposal for B41/n41 EN-DC**

*Type: other For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000111 Discussion on TX diversity enabling 29 dBm power class**

*Type: other For: (not specified)  
 Source: Qualcomm Incorporated*

**Abstract:**

How to enable TX diversity now that it is part of the WI.

**Discussion:**

.

**Decision: Noted.**

**R4-2000112 Draft CR to enable tx diversity for 29 dBm power class**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Qualcomm Incorporated*

**Abstract:**

Draft CR for discussion on how th changes for TX diversity for 29 dBm power class could be incorporated in the TS 38.101-1

**Discussion:**

.

**Decision: Noted.**

**R4-2000423 CR for 38.101-3: Allocation aware MPR for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0167 Cat: C (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002832.**

**R4-2002832 CR for 38.101-3: Allocation aware MPR for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0167 Cat: C (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000424 New SIB parameter to allow 29 dBm operation for LTE**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000425 Applying the PC2 A-MPR requirements to PC1.5**

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

**Discussion:**

.

**Decision: Revised to R4-2002914.**

**R4-2002914 Applying the PC2 A-MPR requirements to PC1.5**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000426 29 dBm HPUE Power Class logic**

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

**Discussion:**

.

**Decision: Approved.**

**R4-2000427 CR for 36.101: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5594 Cat: B (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000428 CR for 36.307: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 36.307 v16.1.0 CR-4440 Cat: B (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000429 CR for 38.101-1: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0214 Cat: B (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000430 CR for 38.101-3: Introduction of Power Class 1.5**

*Type: CR For: Agreement  
 38.101-3 v16.2.0 CR-0168 Cat: B (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000431 CR for 38.307: Introduction of power class 1.5**

*Type: CR For: Agreement  
 38.307 v16.1.0 CR-0015 Cat: B (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2000905 Proposal on 29dBm P-Max issue for NR and LTE**

*Type: other For: Approval  
 Source: CMCC*

**Discussion:**

.

**Decision: Noted.**

**R4-2001239 New A-MPR curves for 29dBm HPUE B41/n41 EN-DC**

*Type: other For: Approval  
 Source: LG Electronics Finland*

**Discussion:**

.

**Decision: Noted.**

**R4-2001547 [29dBm] EVM Impact of Reverse IMD3 on UL MIMO Modulation Order Capability**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

One aspect that has not been properly assessed yet is the potential impact of Reverse IMD3 on EVM and the related support of higher order modulations in UL MIMO or TX diversity operation, This paper provides a preliminary study of the issue.

**Discussion:**

.

**Decision: Noted.**

**R4-2002138 Draft CR for 38.101-1: Introduction of Power Class 1.5**

*Type: draftCR For: Endorsement  
 38.101-1 v16.2.0  
 Source: Sprint Corporation*

**Abstract:**

Draft CR being provided for discussion only to generate feedback from interested parties. Comments welcome and appreciated.

**Discussion:**

.

**Decision: Noted.**

**R4-2002140 Draft CR for 38.101-3: Introduction of Power Class 1.5**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Sprint Corporation*

**Abstract:**

Draft CR being provided for discussion. Feedback welcome and appreciated.

**Discussion:**

.

**Decision: Noted.**

#### 9.14.3 Others [LTE\_NR\_B41\_Bn41\_PC29dBm]

### 9.15 Power Class 2 UE for EN-DC (1 LTE FDD band +1 NR TDD band) [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2002701 Email discussion summary for RAN4#94e\_#28\_ENDC\_UE\_PC2\_FDD\_TDD**

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

**Discussion:**

.

**Decision: Revised to R4-2002895.**

**R4-2002895 Email discussion summary for RAN4#94e\_#28\_ENDC\_UE\_PC2\_FDD\_TDD**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002835 WF on Power Class 2 high power UE for EN-DC**

*Type: other For: Approval  
 Source: China Unicom*

**Discussion:**

.

**Decision: Approved.**

#### 9.15.1 General [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2000316 Discussion on power class 2 UE for EN-DC FDD-TDD**

*Type: other For: Discussion  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2000878 Discussion on configurations for FDD-TDD EN-DC High Power UE**

*Type: other For: Approval  
 Source: CHTTL*

**Discussion:**

.

**Decision: Noted.**

**R4-2001037 Consideration on SAR compliance schemes for PC2 FDD+TDD HPUE**

*Type: other For: Approval  
 Source: China Unicom*

**Discussion:**

.

**Decision: Noted.**

#### 9.15.2 UE RF requirement [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2000447 MSD analysis on high power UE for DC\_3-n78**

*Type: other For: Approval  
 Source: Xiaomi*

**Abstract:**

In this paper, we give the initial analysis on the Rx desense requirements for DC\_3-n78 due to high power UE.

**Discussion:**

.

**Decision: Noted.**

**R4-2000908 CR for adding power class 2 output power requirement for DC\_3A\_n41A**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0194 Cat: A (Rel-16)  
  
 Source: CMCC*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001188 MSD test results for Power Class 2 UE for EN-DC (1 LTE FDD band +1 NR TDD band)**

*Type: other For: Approval  
 Source: LG Electronics France*

**Discussion:**

.

**Decision: Noted.**

**R4-2001326 Specification of EN-DC Power Class 2 for FDD-TDD band combinations**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose a specification framework for EN-DC power class 2 for FDD-TDD combination based on both duty-cycle indication and reducing the FDD power

**Discussion:**

.

**Decision: Noted.**

**R4-2001327 Introduction of EN-DC power class 2 for FDD-TDD band combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson*

**Abstract:**

Draft CR to introduce requirements for EN-DC power class 2 for FDD-TDD band combinations

**Discussion:**

.

**Decision: Noted.**

**R4-2002097 Power class and configured power for PC2 FDD-TDD EN-DC**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2002101 Introduction of EN-DC power class 2 for FDD-TDD band combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.2.1  
 Source: Ericsson*

**Abstract:**

Draft CR to introduce requirements for EN-DC power class 2 for FDD-TDD band combinations

**Discussion:**

.

**Decision: Noted.**

#### 9.15.3 Signaling [ENDC\_UE\_PC2\_FDD\_TDD-Core]

**R4-2000121 on UE capability reporting for EN-DC (FDD+TDD) HPUE**

*Type: other For: Approval  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000122 Draft LS on UE capability for PC2 inter-band EN-DC (LTE FDD+NR TDD)**

*Type: LS out For: Approval  
 to RAN2  
 Source: vivo*

**Discussion:**

.

**Decision: Noted.**

**R4-2000968 Discussion on HPUE for TDD+FDD**

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

**Discussion:**

.

**Decision: Noted.**

### 9.16 Introduction of NR band n259 [NR\_n259]

**R4-2002702 Email discussion summary for RAN4#94e\_#29\_NR\_n259**

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

**Discussion:**

.

**Decision: Revised to R4-2002896.**

**R4-2002896 Email discussion summary for RAN4#94e\_#29\_NR\_n259**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001961 TP to TR 38.887 on General issues**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on general issues

**Discussion:**

.

**Decision: Approved.**

**R4-2001968 TR 38.887: Introduction of band n259**

*Type: draft TR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

TR 38.88:7: Introduction of band n259

**Discussion:**

.

**Decision: Approved.**

**R4-2002912 TR 38.887: Introduction of band n259**

*Type: draft TR For: Approval  
 38.887 v0.4.0  
 Source: Ericsson*

**Abstract:**

TR 38.88:7: Introduction of band n259

**Discussion:**

.

**Decision: Email approval by 5pm UTC time of March 10**

#### 9.16.1 UE RF (38.101-2) [NR\_n259-Core]

**R4-2000023 Band n259 multi-band framework**

*Type: other For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000233 EESS protection from n259**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Abstract:**

ITU WRC-19 concluded that in order to protect the EESS (passive) in the frequency band 36-37 GHz the unwanted emissions of IMT stations operating in the frequency band 37-40.5 GHz shall meet -43 dB(W/MHz) and -23 dB(W/GHz).

This contribution discusses how

**Discussion:**

.

**Decision: Noted.**

**R4-2000797 n259 associated multi-band relaxation**

*Type: other For: Approval  
 Source: MediaTek Beijing Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2001957 Multiband relaxation for band n259**

*Type: other For: Approval  
 Source: Ericsson, Sony*

**Abstract:**

In this paper we propose new MBR framework for band n259

**Discussion:**

.

**Decision: Noted.**

**R4-2001962 TP to TR 38.887 on multiband relaxation**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on multiband relaxation

**Discussion:**

.

**Decision: Revised to R4-2002837.**

**R4-2002837 TP to TR 38.887 on General issues**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on general issues

**Discussion:**

.

**Decision: Noted.**

**R4-2001964 CR to 38.101-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0131 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Revised to R4-2002836.**

**R4-2002836 CR to 38.101-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.101-2 v16.2.0 CR-0131 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Not pursued.**

**R4-2002034 Multi-band relaxation for n259**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

#### 9.16.2 BS RF (38.104) [NR\_n259-Core]

**R4-2001192 Additional unwanted emission requirements for the EESS protection from Band n259**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Discussion:**

.

**Decision: Noted.**

**R4-2001960 TP to TR 38.887 on BS RF requirements**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on BS RF requirements

**Discussion:**

.

**Decision: Revised to R4-2002838.**

**R4-2002838 TP to TR 38.887 on BS RF requirements**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on BS RF requirements

**Discussion:**

.

**Decision: Approved.**

**R4-2001965 CR to 38.141-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.141-2 v16.2.0 CR-0141 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Revised to R4-2002839.**

**R4-2002839 CR to 38.141-2 for Introduction of band n259**

*Type: CR For: Agreement  
 38.141-2 v16.2.0 CR-0141 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

Session chair: this CR is agreeable. It is better to postpone it to when all CRs are agreed on at the same meeting..

**Decision: Endorsed.**

**R4-2001966 CR to 38.104 for Introduction of band n259**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0161 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Revised to R4-2002840.**

**R4-2002840 CR to 38.104 for Introduction of band n259**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0161 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

Session chair: this CR is agreeable except coversheet error. It is better to postpone it to when all CRs are agreed on at the same meeting.

**Decision: Endorsed.**

#### 9.16.3 RRM (38.133) [NR\_n259-Core]

**R4-2001956 RRM requirements for introduction of band n259**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper we propose RRM requirements for band n259

**Discussion:**

.

**Decision: Approved.**

**R4-2001963 TP to TR 38.887 on RRM**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on RRM

**Discussion:**

.

**Decision: Revised to R4-2002841.**

**R4-2002841 TP to TR 38.887 on RRM**

*Type: pCR For: Approval  
 38.887 v0.3.0  
 Source: Ericsson*

**Abstract:**

Text proposal to TR 38.887 on RRM

**Discussion:**

.

**Decision: Noted.**

**R4-2001967 CR to 38.133 for Introduction of band n259**

*Type: CR For: Agreement  
 38.133 v16.2.0 CR-0571 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Revised to R4-2002842.**

**R4-2002842 CR to 38.133 for Introduction of band n259**

*Type: CR For: Agreement  
 38.133 v16.2.0 CR-0571 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce band n259

**Discussion:**

.

**Decision: Not pursued.**

#### 9.16.4 Others [NR\_n259-Core/Perf]

**R4-2001193 BS conformance requirements for Band n259**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Discussion:**

Session chair: status changed to “return to” after Nokia raised concern after first round.

**Decision: Noted.**

### 9.17 Adding 30MHz channel bandwidth for NR band n1 [NR\_n1\_BW]

**R4-2002703 Email discussion summary for RAN4#94e\_#30\_NR\_n1\_BW**

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

**Discussion:**

.

**Decision: Revised to R4-2002897.**

**R4-2002897 Email discussion summary for RAN4#94e\_#30\_NR\_n1\_BW**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002845 WF on UE RF requirements for adding 50 MHz channel BW to band n1**

*Type: other For: Approval  
 Source: Huawei*

**Discussion:**

.

**Decision: Approved.**

#### 9.17.1 UE RF (38.101-1) [NR\_n1\_BW-Core]

**R4-2000825 A-MPR simulation results for n1 30 MHz/40 MHz**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001203 CR to 38.101-1 Band n1 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0250 Cat: B (Rel-16)  
  
 Source: Ericsson, Huawei, China Unicom*

**Abstract:**

This CR is adding channel BW to band n1

**Discussion:**

.

**Decision: Revised to R4-2002843.**

**R4-2002843 CR to 38.101-1 Band n1 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0250 Cat: B (Rel-16)  
  
 Source: Ericsson, Huawei, China Unicom*

**Abstract:**

This CR is adding channel BW to band n1

**Discussion:**

.

**Decision: Agreed.**

#### 9.17.2 BS RF (38.104) [NR\_n1\_BW-Core]

**R4-2001204 CR to 38.104 Band n1 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0146 Cat: B (Rel-16)  
  
 Source: Ericsson, Huawei, China Unicom*

**Abstract:**

This CR is adding channel BW to band n1

**Discussion:**

.

**Decision: Revised to R4-2002844.**

**R4-2002844 CR to 38.104 Band n1 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0146 Cat: B (Rel-16)  
  
 Source: Ericsson, Huawei, China Unicom*

**Abstract:**

This CR is adding channel BW to band n1

**Discussion:**

.

**Decision: Agreed.**

#### 9.17.3 RRM (38.133) [NR\_n1\_BW]

#### 9.17.4 Others [NR\_n1\_BW]

### 9.18 Addition of wider channel bandwidth in NR band n28 [NR\_n28\_BW-Core]

**R4-2002704 Email discussion summary for RAN4#94e\_#31\_NR\_n28\_BW**

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

**Discussion:**

.

**Decision: Revised to R4-2002898.**

**R4-2002898 Email discussion summary for RAN4#94e\_#31\_NR\_n28\_BW**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000165 TR 38.888 v0.1.0 Adding wider channel bandwidths in NR band n28**

*Type: draft TR For: Approval  
 38.888 v0.1.0  
 Source: CBN*

**Abstract:**

A new WI was approved during RAN#85 meeting, aiming to add wider channel bandwidth in NR band n28. Internal TR 38.888 will be outputed from this WI.

**Discussion:**

.

**Decision: Approved.**

#### 9.18.1 UE RF (38.101-1) [NR\_n28\_BW-Core]

**R4-2000090 n28 AMPR for 30MHz BW**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000493 On UE REFSEN for 30MHz in band n28**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000621 UE co-existence reuiqrements for band n28 into 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0233 Cat: B (Rel-16)  
  
 Source: CATT, CBN, ZTE, Huawei*

**Discussion:**

.

**Decision: Not pursued.**

**R4-2001086 CR for 38.101-1: introduce UE RF requirements for adding wider channel bandwidth in band n28**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0249 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002849.**

**R4-2002849 CR for 38.101-1: introduce UE RF requirements for adding wider channel bandwidth in band n28**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0249 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001087 TP on UE RF REFSENS for adding wider channel bandwidth in band n28**

*Type: pCR For: Approval  
 38.888 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002847.**

**R4-2002847 TP on UE RF REFSENS for adding wider channel bandwidth in band n28**

*Type: pCR For: Approval  
 38.888 v0.0.1  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Approved.**

**R4-2001088 TP on UE Tx RF requirements for adding wider channel bandwidth in band n28**

*Type: pCR For: Approval  
 38.888 v0.0.1  
 Source: Huawei, HiSilicon, CBN*

**Discussion:**

.

**Decision: Revised to R4-2002846.**

**R4-2002846 TP on UE Tx RF requirements for adding wider channel bandwidth in band n28**

*Type: pCR For: Approval  
 38.888 v0.0.1  
 Source: Huawei, HiSilicon, CBN*

**Discussion:**

.

**Decision: Approved.**

**R4-2001089 Updated 30MHz AMPR simulation results for NS\_18 in band n28**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2001226 n28 supporting 30MHz REFSENS evaluation**

*Type: other For: Approval  
 38.101-1 v..  
 Source: MediaTek Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 9.18.2 BS RF (38.104) [NR\_n28\_BW-Core]

**R4-2000623 Introducing new channel bandwidth for band n28**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0131 Cat: B (Rel-16)  
  
 Source: CATT, CBN, ZTE, Huawei*

**Discussion:**

.

**Decision: Agreed.**

#### 9.18.3 RRM (38.133) [NR\_n28\_BW-Core]

#### 9.18.4 Others [NR\_n28\_BW-Core/Perf]

**R4-2000620 Introducing new channel bandwidth for band n28**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5595 Cat: B (Rel-16)  
  
 Source: CATT, CBN, ZTE, Huawei*

**Discussion:**

.

**Decision: Revised to R4-2002848.**

**R4-2002848 Introducing new channel bandwidth for band n28**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5595 Cat: B (Rel-16)  
  
 Source: CATT, CBN, ZTE, Huawei*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000622 UE co-existence reuiqrements for band n28 into 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0184 Cat: B (Rel-16)  
  
 Source: CATT, CBN, ZTE, Huawei*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001170 Remove band 39 from protected band list of DC\_1-n28**

*Type: pCR For: Approval  
 38.888 v0.1.0  
 Source: CATT*

**Discussion:**

.

**Decision: Approved.**

### 9.19 Introduction of NR Band n26 [NR\_n26]

**R4-2002705 Email discussion summary for RAN4#94e\_#32\_NR\_n26**

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

**Discussion:**

.

**Decision: Revised to R4-2002899.**

**R4-2002899 Email discussion summary for RAN4#94e\_#32\_NR\_n26**

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

**Discussion:**

.

**Decision: Noted.**

#### 9.19.1 UE RF (38.101-1) [NR\_n26]

**R4-2000008 A-MPR Proposal for n26**

*Type: other For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000092 n26 AMPR**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Revised to R4-2002850.**

**R4-2002850 n26 AMPR**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Approved.**

**R4-2000432 CR for 38.101-1: Introduction of n26**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0215 Cat: B (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

Session chair: wait for the outcome of R4-2002850 and R4-2000432 before agreed on other CRs.

**Decision: Agreed.**

**R4-2000527 n26 A-MPR simulation results**

*Type: other For: (not specified)  
 Source: Nokia*

**Discussion:**

.

**Decision: Noted.**

**R4-2002145 n26 PA Back-Off Measurements**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 9.19.2 BS RF (38.104) [NR\_n26]

**R4-2000332 Introduction of n26**

*Type: CR For: Agreement  
 36.104 v16.4.0 CR-4889 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000333 Introduction of n26**

*Type: CR For: Agreement  
 36.141 v16.4.0 CR-1247 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000334 Introduction of n26**

*Type: CR For: Agreement  
 37.104 v16.4.0 CR-0893 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000335 Introduction of n26**

*Type: CR For: Agreement  
 37.141 v16.4.0 CR-0918 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000336 Introduction of n26**

*Type: CR For: Agreement  
 37.105 v16.2.0 CR-0181 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000337 Introduction of n26**

*Type: CR For: Agreement  
 37.145-1 v16.2.0 CR-0208 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000338 Introduction of n26**

*Type: CR For: Agreement  
 37.145-2 v16.2.0 CR-0217 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000339 Introduction of n26**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0126 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000340 Introduction of n26**

*Type: CR For: Agreement  
 38.141-1 v16.2.0 CR-0086 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000341 Introduction of n26**

*Type: CR For: Agreement  
 38.141-2 v16.2.0 CR-0105 Cat: B (Rel-16)  
  
 Source: Nokia, Sprint*

**Discussion:**

.

**Decision: Agreed.**

#### 9.19.3 RRM (38.133) [NR\_n26]

**R4-2000506 n26 introduction to 38.133**

*Type: CR For: Agreement  
 38.133 v16.2.0 CR-0440 Cat: B (Rel-16)  
  
 Source: Dish Network*

**Discussion:**

.

**Decision: Agreed.**

#### 9.19.4 Others [NR\_n26]

### 9.20 Adding 25MHz and 50MHz channel bandwidth in NR band n1 [NR\_n1\_BW2]

**R4-2000813 Draft CR 38.104 adding Band n1 50MHz channel bandwidth**

*Type: draftCR For: Endorsement  
 38.104 v16.2.0  
 Source: China Unicom*

**Discussion:**

.

**Decision: Not pursued.**

#### 9.20.1 UE RF (38.101-1) [NR\_n1\_BW2-Core]

**R4-2000108 n1 AMPR for 50MHz Channel BW**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000494 On UE REFSEN for 50MHz of band n1**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000826 A-MPR simulation results for n1 25MHz**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000827 UE REFSENS for 50 MHz**

*Type: other For: Approval  
 Source: Huawei, HiSilicon, China Unicom*

**Discussion:**

.

**Decision: Noted.**

#### 9.20.2 BS RF (38.104) [NR\_n1\_BW2-Core]

#### 9.20.3 RRM (38.133) [NR\_n1\_BW2-Core]

#### 9.20.4 Others [NR\_n1\_BW2-Core/Perf]

### 9.21 Addition of asymmetric channel bandwidth for NR band n66 [NR\_n66\_BW]

**R4-2002706 Email discussion summary for RAN4#94e\_#33\_NR\_n66\_BW**

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

**Discussion:**

.

**Decision: Revised to R4-2002900.**

**R4-2002900 Email discussion summary for RAN4#94e\_#33\_NR\_n66\_BW**

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

**Discussion:**

.

**Decision: Noted.**

#### 9.21.1 UE RF (38.101-1) [NR\_n66\_BW]

**R4-2000689 Way forward on the n66 asymmetric channel bandwidth**

*Type: other For: Approval  
 Source: Verizon UK Ltd*

**Discussion:**

.

**Decision: Noted.**

**R4-2000828 Further discussion on the support of asymmetric channel bandwidth**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Noted.**

**R4-2000829 CR for TS 38.101: adding wider channel bandwidths for n66**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0240 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002851.**

**R4-2002851 CR for TS 38.101: adding wider channel bandwidths for n66**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0240 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001953 LS to RAN2 on addition of asymmetric channel bandwidth for band n66**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei*

**Discussion:**

.

**Decision: Revised to R4-2002852.**

**R4-2002852 LS to RAN2 on introduction of channel bandwidth combination set to asymmetric channel bandwidths**

*Type: LS out For: Approval  
 to RAN2  
 Source: Huawei*

**Discussion:**

.

**Decision: Approved.**

#### 9.21.2 BS RF (38.104) [NR\_n66\_BW]

**R4-2000830 CR for TS 38.104: adding wider channel bandwidths for n66**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0139 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

#### 9.21.3 RRM (38.133) [NR\_n66\_BW]

#### 9.21.4 OtherS [NR\_n66\_BW]

### 9.22 Adding wider channel bandwidth to NR band n38 [NR\_n38\_BW2]

**R4-2002707 Email discussion summary for RAN4#94e\_#34\_NR\_n38\_BW2**

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

**Discussion:**

.

**Decision: Revised to R4-2002901.**

**R4-2002901 Email discussion summary for RAN4#94e\_#34\_NR\_n38\_BW2**

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

**Discussion:**

.

**Decision: Noted.**

#### 9.22.1 UE RF (38.101-1) [NR\_n38\_BW2]

**R4-2001208 CR to 38.101-1 Band n38 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0252 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR is adding channel BW to band n38

**Discussion:**

.

**Decision: Revised to R4-2002853.**

**R4-2002853 CR to 38.101-1 Band n38 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0252 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR is adding channel BW to band n38

**Discussion:**

.

**Decision: Agreed.**

#### 9.22.2 BS RF (38.104) [NR\_n38\_BW2]

**R4-2001209 CR to 38.104 Band n38 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0148 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR is adding channel BW to band n38

**Discussion:**

.

**Decision: Agreed.**

#### 9.22.3 RRM (38.133) [NR\_n38\_BW2]

#### 9.22.4 Others [NR\_n38\_BW2]

### 9.23 LTE/NR spectrum sharing in band 48/n48 frequency range [NR\_n48\_LTE\_48\_coex-Core]

**R4-2002708 Email discussion summary for RAN4#94e\_#35\_NR\_n48\_LTE\_48\_coex**

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

**Discussion:**

.

**Decision: Revised to R4-2002902.**

**R4-2002902 Email discussion summary for RAN4#94e\_#35\_NR\_n48\_LTE\_48\_coex**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002854 WF on LTE/NR spectrum sharing in band 48/n48**

*Type: other For: Approval  
 Source: Apple*

**Discussion:**

.

**Decision: Noted.**

#### 9.23.1 General (such as work plan, AH minutes) [NR\_n48\_LTE\_48\_coex-Core]

**R4-2000085 Work plan for LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: Work Plan For: Approval  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

#### 9.23.2 Channel raster, sync raster, and UL shift [NR\_n48\_LTE\_48\_coex-Core]

**R4-2000086 LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: other For: Decision  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000087 Introduction of LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0185 Cat: B (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000095 Introduction of LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0125 Cat: B (Rel-16)  
  
 Source: Apple Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2000273 DSS in LTE/NR band 48/n48**

*Type: other For: Discussion  
 Source: Samsung*

**Discussion:**

.

**Decision: Noted.**

**R4-2001043 Views on band 48/n48 spectrum sharing**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2001386 LTE/NR spectrum sharing in band 48/n48**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Paper for approval.

**Discussion:**

.

**Decision: Noted.**

**R4-2002048 Views on dynamic spectrum sharing between LTE band 48 and NR band n48**

*Type: other For: Approval  
 Source: Google Inc.*

**Discussion:**

.

**Decision: Noted.**

**R4-2002068 CR to TS 38.104 on n48 dynamic spectrum sharing**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0162 Cat: B (Rel-16)  
  
 Source: Google Inc.*

**Discussion:**

.

**Decision: Not pursued.**

### 9.24 Adding 40 MHz channel bandwidth (15, 30 and 60kHz SCS) in NR band n3 [NR\_n3\_BW]

**R4-2002709 Email discussion summary for RAN4#94e\_#36\_NR\_n3\_BW**

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

**Discussion:**

.

**Decision: Revised to R4-2002903.**

**R4-2002903 Email discussion summary for RAN4#94e\_#36\_NR\_n3\_BW**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002855 WF on UE RF requirements for adding channel BW to band n3**

*Type: other For: Approval  
 Source: Ericsson*

**Discussion:**

.

**Decision: Approved.**

#### 9.24.1 UE RF (38.101-1) [NR\_n3\_BW]

**R4-2000088 n3 REFSENS**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2001205 Band n3 - 40 MHz CBW – UE RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Thsi contribution discusses the needed changes when adding 40 MHz CBW to band n3

**Discussion:**

.

**Decision: Noted.**

**R4-2001206 CR to 38.101-1 Band n3 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0251 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR is adding channel BW to band n3

**Discussion:**

.

**Decision: Not pursued.**

#### 9.24.2 BS RF (38.104) [NR\_n3\_BW]

**R4-2001207 CR to 38.104 Band n3 - wider CBW - Additional Channel BW**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0147 Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR is adding channel BW to band n3

**Discussion:**

.

**Decision: Not pursued.**

#### 9.24.3 RRM (38.133) [NR\_n3\_BW]

#### 9.24.4 Others [NR\_n3\_BW]

### 9.25 Adding 50 MHz channel bandwidth (15, 30 and 60kHz SCS) in NR band n65 [NR\_n65\_BW]

**R4-2002710 Email discussion summary for RAN4#94e\_#37\_NR\_n65\_BW**

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

**Discussion:**

.

**Decision: Revised to R4-2002904.**

**R4-2002904 Email discussion summary for RAN4#94e\_#37\_NR\_n65\_BW**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2002856 WF on UE RF requirements for adding channel BW to band n65**

*Type: other For: Approval  
 Source: Ericsson*

**Discussion:**

.

**Decision: Approved.**

#### 9.25.1 UE RF (38.101-1) [NR\_n65\_BW]

**R4-2000089 n65 50MHz AMPR**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2001210 Band n65 - Adding Channel BW - UE RF REFSENS**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is proposing REFSENS requirement adding 50MHZ CBW in band n65

**Discussion:**

.

**Decision: Noted.**

**R4-2001211 Band n65 - Adding Channel BW - UE RF A-MPR**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing A-MPR simulations for coexistence when adding 50MHZ CBW in band n65

**Discussion:**

.

**Decision: Noted.**

#### 9.25.2 BS RF (38.104) [NR\_n65\_BW]

#### 9.25.3 RRM (38.133) [NR\_n65\_BW]

#### 9.25.4 Others [NR\_n65\_BW]

### 9.26 Introduction of NR Band n53 [NR\_n53]

**R4-2002711 Email discussion summary for RAN4#94e\_#38\_NR\_n53**

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

**Discussion:**

.

**Decision: Revised to R4-2002905.**

**R4-2002905 Email discussion summary for RAN4#94e\_#38\_NR\_n53**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000325 Introduction of LTE re-farming band n53 to NR specification**

*Type: other For: Approval  
 Source: Samsung Electronics Co., Ltd*

**Discussion:**

.

**Decision: Noted.**

#### 9.26.1 UE RF (38.101-1) [NR\_n53]

**R4-2000094 n53 RF Requirements**

*Type: other For: Approval  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Noted.**

**R4-2000519 Introduction of n53 into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0224 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Revised to R4-2002857.**

**R4-2002857 Introduction of n53 into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0224 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

#### 9.26.2 BS RF (38.104) [NR\_n53]

**R4-2000342 Introduction of n53**

*Type: CR For: Agreement  
 36.104 v16.4.0 CR-4890 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000343 Introduction of n53**

*Type: CR For: Agreement  
 36.141 v16.4.0 CR-1248 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000344 Introduction of n53**

*Type: CR For: Agreement  
 37.104 v16.4.0 CR-0894 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Revised to R4-2002858.**

**R4-2002858 Introduction of n53**

*Type: CR For: Agreement  
 37.104 v16.4.0 CR-0894 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000345 Introduction of n53**

*Type: CR For: Agreement  
 37.141 v16.4.0 CR-0919 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000346 Introduction of n53**

*Type: CR For: Agreement  
 37.105 v16.2.0 CR-0182 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000347 Introduction of n53**

*Type: CR For: Agreement  
 37.145-1 v16.2.0 CR-0209 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000348 Introduction of n53**

*Type: CR For: Agreement  
 37.145-2 v16.2.0 CR-0218 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000349 Introduction of n53**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0127 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Revised to R4-2002859.**

**R4-2002859 Introduction of n53**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0127 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000350 Introduction of n53**

*Type: CR For: Agreement  
 38.141-1 v16.2.0 CR-0087 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000351 Introduction of n53**

*Type: CR For: Agreement  
 38.141-2 v16.2.0 CR-0106 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Revised to R4-2002860.**

**R4-2002860 Introduction of n53**

*Type: CR For: Agreement  
 38.141-2 v16.2.0 CR-0106 Cat: B (Rel-16)  
  
 Source: Nokia, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

#### 9.26.3 RRM (38.133) [NR\_n53]

**R4-2001347 Introduction of n53 into 38.133**

*Type: CR For: Agreement  
 38.133 v16.2.0 CR-0486 Cat: B (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Globalstar*

**Discussion:**

.

**Decision: Agreed.**

#### 9.26.4 Others [NR\_n53]

### 9.27 Closed Rel-16 NR spectrum related WIs [WI code]

**R4-2002712 Email discussion summary for RAN4#94e\_#39\_NR\_R16\_Closed\_WI**

*Type: other For: Information  
 Source: Moderator (Dish Network)*

**Discussion:**

.

**Decision: Revised to R4-2002906.**

**R4-2002906 Email discussion summary for RAN4#94e\_#39\_NR\_R16\_Closed\_WI**

*Type: other For: Information  
 Source: Moderator (Dish Network)*

**Discussion:**

.

**Decision: Noted.**

**R4-2000110 Correction n91 and n93 UL channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0186 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

5 MHz is missing from Table 5.3.6-1

**Discussion:**

.

**Decision: Not pursued.**

#### 9.27.1 UE RF [WI code]

**R4-2000123 CR on SAR solution for TDD&TDD EN-DC PC2 UE**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0159 Cat: F (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Revised to R4-2002861.**

**R4-2002861 CR on SAR solution for TDD&TDD EN-DC PC2 UE**

*Type: CR For: Agreement  
 38.101-3 v16.2.1 CR-0159 Cat: F (Rel-16)  
  
 Source: vivo*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000146 Corrections to n65**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0191 Cat: F (Rel-16)  
  
 Source: Dish Network*

**Abstract:**

Adding NS\_05 and NS\_05U for n65. Removing erroneous UE protection requirement from UE Spurious emissions table. Modifying B34 protection requirement to be applicable when the carrier is confined within 1920-1980MHz.

**Discussion:**

.

**Decision: Agreed.**

**R4-2000412 n41 and n90 network compatibility**

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

**Discussion:**

.

**Decision: Noted.**

**R4-2000419 CR for 38.101-1: Missing 70 MHz for NS\_01**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0212 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000852 Maintenance on the UE BW for n92 and n94**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0241 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Revised to R4-2002863.**

**R4-2002863 Maintenance on the UE BW for n92 and n94**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0241 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001038 Maintenance on the Rx-Tx separation terms**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0242 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001075 CR for 38.101-1 to correct CA\_n8A-n75A REFSENS**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0247 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

**R4-2002116 CR for 38.101-1: Mandatory support for n41 by UEs that support n90**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0273 Cat: F (Rel-16)  
  
 Source: Sprint Corporation*

**Abstract:**

At RAN4#91 there was an agreed Way Forward in R4-1907714 that says "The UE supporting new band shall also support band n41." This requirement has not adequately been reflected in the specs.

**Discussion:**

.

**Decision: Agreed.**

**R4-2002139 Correction to CA bandwidth class B**

*Type: CR For: Agreement  
 38.101-1 v16.2.0 CR-0276 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Discussion:**

.

**Decision: Not pursued.**

#### 9.27.2 BS RF [WI code]

**R4-2001039 Maintenance on the BS BW for n92 and n94**

*Type: CR For: Agreement  
 38.104 v16.2.0 CR-0143 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision: Agreed.**

#### 9.27.3 RRM [WI code]

**R4-2000814 introduce n18 into TS38.133**

*Type: CR For: Agreement  
 38.133 v16.2.0 CR-0460 Cat: F (Rel-16)  
  
 Source: KDDI Corporation*

**Abstract:**

This is agreed in R4-1906307 at RAN4#91 and RP-191244 at RAN#84 but not implemented in the specification correctly.

**Discussion:**

.

**Decision: Revised to R4-2002862.**

**R4-2002862 introduce n18 into TS38.133**

*Type: CR For: Agreement  
 38.133 v16.2.0 CR-0460 Cat: F (Rel-16)  
  
 Source: KDDI Corporation*

**Abstract:**

This is agreed in R4-1906307 at RAN4#91 and RP-191244 at RAN#84 but not implemented in the specification correctly.

**Discussion:**

.

**Decision: Agreed.**

#### 9.27.4 Demodulation and CSI [WI code]

## 10 Rel-16 Study Items for NR

### 10.2 Study on radiated metrics and test methodology for the verification of multi-antenna reception perf. of NR UEs [FS\_NR\_MIMO\_OTA\_test]

#### 10.2.1 General [FS\_NR\_MIMO\_OTA\_test]

#### 10.2.2 Performance metrics [FS\_NR\_MIMO\_OTA\_test]

#### 10.2.3 Testing methodologies [FS\_NR\_MIMO\_OTA\_test]

##### 10.2.3.1 FR1 test methodologies [FS\_NR\_MIMO\_OTA\_test]

##### 10.2.3.2 FR2 test methodologies [FS\_NR\_MIMO\_OTA\_test]

#### 10.2.4 Channel Models [FS\_NR\_MIMO\_OTA\_test]

### 10.3 Study on 7 - 24GHz frequency range [FS\_7to24GHz\_NR]

**R4-2002713 Email discussion summary for RAN4#94e\_#40\_FS\_7to24GHz\_NR**

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

**Discussion:**

.

**Decision: Revised to R4-2002907.**

**R4-2002907 Email discussion summary for RAN4#94e\_#40\_FS\_7to24GHz\_NR**

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

**Discussion:**

.

**Decision: Noted.**

#### 10.3.1 General [FS\_7to24GHz\_NR]

**R4-2001837 TP to TR 38.820: cleanup**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

Cleanup of the whole TS 38.820 is provided in this contribution.

**Discussion:**

.

**Decision: Revised to R4-2002865.**

**R4-2002865 TP to TR 38.820: cleanup**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

Cleanup of the whole TS 38.820 is provided in this contribution.

**Discussion:**

.

**Decision: Approved.**

**R4-2001838 TR 38.820, v2.0.0: implementation of TPs from RAN4#94-e**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

This is the TR 38.820 v.2.0.0 placeholder for implementation of TPs to be agreed during RAN4#94-e meeting.

**Discussion:**

.

**Decision: Revised to R4-2002866.**

**R4-2002866 TR 38.820, v2.0.0: implementation of TPs from RAN4#94-e**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

This is the TR 38.820 v.2.0.0 placeholder for implementation of TPs to be agreed during RAN4#94-e meeting.

**Discussion:**

.

**Decision: Email approval by 5pm UTC time of March 10**

#### 10.3.2 Regulatory survey [FS\_7to24GHz\_NR]

**R4-2001834 TP to TR 38.820: summary on the frequency bands of interest within 7-24 GHz range**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

This contribution provides a list of frequency bands of interest, capturing inputs collects during RAN Drafts discussion, and later extended by inputs from CEPT and ATU regional preparatory meetings towards WRC-19.

**Discussion:**

.

**Decision: Revised to R4-2002867.**

**R4-2002867 TP to TR 38.820: summary on the frequency bands of interest within 7-24 GHz range**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

This contribution provides a list of frequency bands of interest, capturing inputs collects during RAN Drafts discussion, and later extended by inputs from CEPT and ATU regional preparatory meetings towards WRC-19.

**Discussion:**

.

**Decision: Approved.**

**R4-2001835 WRC-19 conclusions on IMT in 7 – 24 GHz range**

*Type: other For: Discussion  
 Source: Huawei*

**Abstract:**

This contribution provides summary of the WRC-19 outcomes for IMT in 7 – 24 GHz range and related deployment scenarios.

**Discussion:**

.

**Decision: Noted.**

**R4-2001836 TP to TR 38.820: WRC-19 conclusions**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

TP to TR 38.820 on WRC-19 outcomes for IMT in 7 – 24 GHz range and related deployment scenarios.

**Discussion:**

.

**Decision: Revised to R4-2002868.**

**R4-2002868 TP to TR 38.820: WRC-19 conclusions**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Huawei*

**Abstract:**

TP to TR 38.820 on WRC-19 outcomes for IMT in 7 – 24 GHz range and related deployment scenarios.

**Discussion:**

.

**Decision: Approved.**

#### 10.3.3 Boundary frequency and/or boundary conditions [FS\_7to24GHz\_NR]

#### 10.3.4 NR system parameters analysis [FS\_7to24GHz\_NR]

#### 10.3.5 Deployment scenarios [FS\_7to24GHz\_NR]

**R4-2001017 TP to TR 38.820: Addition of technical background for BS classes in subclause 7.3**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Ericsson*

**Abstract:**

At the end of the contribution a text proposal with information relevant for 7 to 24 GHz is attached for approval. The text proposal adds missing information to TR 38.820, subclause 7.3.

**Discussion:**

.

**Decision: Revised to R4-2002869.**

**R4-2002869 TP to TR 38.820: Addition of technical background for BS classes in subclause 7.3**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Ericsson*

**Abstract:**

At the end of the contribution a text proposal with information relevant for 7 to 24 GHz is attached for approval. The text proposal adds missing information to TR 38.820, subclause 7.3.

**Discussion:**

.

**Decision: Approved.**

#### 10.3.6 RF technology aspects [FS\_7to24GHz\_NR]

**R4-2001018 TP to TR 38.820: Phase noise trends and example parameterized phase noise model in subclause 5.5.3 and Annex B**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Ericsson*

**Abstract:**

In this contribution, it is proposed to add the background information around phase noise trends considering PLL and VCO contributions in a new Annex and example parameterized model for phase noise characteristics in TR 38.820.

**Discussion:**

.

**Decision: Revised to R4-2002870.**

**R4-2002870 TP to TR 38.820: Phase noise trends and example parameterized phase noise model in subclause 5.5.3 and Annex B**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Ericsson*

**Abstract:**

In this contribution, it is proposed to add the background information around phase noise trends considering PLL and VCO contributions in a new Annex and example parameterized model for phase noise characteristics in TR 38.820.

**Discussion:**

.

**Decision: Noted.**

#### 10.3.7 NR UE [FS\_7to24GHz\_NR]

##### 10.3.7.1 NR UE architecture [FS\_7to24GHz\_NR]

##### 10.3.7.2 TX requirements [FS\_7to24GHz\_NR]

##### 10.3.7.3 RX requirements [FS\_7to24GHz\_NR]

#### 10.3.8 NR BS [FS\_7to24GHz\_NR]

##### 10.3.8.1 BS types, BS requirement sets [FS\_7to24GHz\_NR]

**R4-2000673 TP to TR 38.820: BS classes for 7-24 GHz frequency range**

*Type: pCR For: Approval  
 38.820 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The BS classes section 7.3 in TR 38.820 for 7 - 24 GHz frequency range remains to be filled in. This contribution provides a TP to fill in this section in the TR.

**Discussion:**

.

**Decision: Noted.**

**R4-2000686 TP to TR 38.820: BS classes for 7-24 GHz frequency range**

*Type: pCR For: Approval  
 38.820 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The BS classes section 7.3 in TR 38.820 for 7 - 24 GHz frequency range remains to be filled in. This contribution provides a TP to fill in this section in the TR.

**Discussion:**

.

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

##### 10.3.8.2 NR BS architecture [FS\_7to24GHz\_NR]

##### 10.3.8.3 TX requirements [FS\_7to24GHz\_NR]

##### 10.3.8.4 RX requirements [FS\_7to24GHz\_NR]

**R4-2000674 TP to TR 38.820: Update of BS receiver requirements for 7-24 GHz frequency range**

*Type: pCR For: Approval  
 38.820 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The TP to TR 38.820 for BS ICS requirements for 7 - 24 GHz frequency range was approved during RAN4#93. It has been identified that there are some issues in this approved TP. This contribution provides a TP to update TR 38.820 to rectify the identified is

**Discussion:**

.

**Decision: Revised to R4-2002871.**

**R4-2002871 TP to TR 38.820: Update of BS receiver requirements for 7-24 GHz frequency range**

*Type: pCR For: Approval  
 38.820 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The TP to TR 38.820 for BS ICS requirements for 7 - 24 GHz frequency range was approved during RAN4#93. It has been identified that there are some issues in this approved TP. This contribution provides a TP to update TR 38.820 to rectify the identified is

**Discussion:**

.

**Decision: Approved.**

**R4-2000687 TP to TR 38.820: Update of BS receiver requirements for 7-24 GHz frequency range**

*Type: pCR For: Approval  
 38.820 v0.3.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

The TP to TR 38.820 for BS ICS requirements for 7 - 24 GHz frequency range was approved during RAN4#93. It has been identified that there are some issues in this approved TP. This contribution provides a TP to update TR 38.820 to rectify the identified is

**Discussion:**

.

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

**R4-2001016 TP to TR 38.820: Addition of technical background for co-location OOB receiver blocking in subclause 7.4**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Ericsson*

**Abstract:**

The technical background for co-location out-of-band receiver blocking is currently not captured in TR 38.820. The text proposal [1] presented last meeting was not approved. In this contribution background information have been collected in a text proposa

**Discussion:**

.

**Decision: Revised to R4-2002872.**

**R4-2002872 TP to TR 38.820: Addition of technical background for co-location OOB receiver blocking in subclause 7.4**

*Type: pCR For: Approval  
 38.820 v1.0.0  
 Source: Ericsson*

**Abstract:**

The technical background for co-location out-of-band receiver blocking is currently not captured in TR 38.820. The text proposal [1] presented last meeting was not approved. In this contribution background information have been collected in a text proposa

**Discussion:**

.

**Decision: Approved.**

#### 10.3.9 BS EMC [FS\_7to24GHz\_NR]

## 12 Liaison and output to other groups

## 13 Revision of the Work Plan

### 13.1 Simplification of band combinations in RAN4 specifications

**R4-2001068 Discussion on improvement of request, SR and BC basket WID index table**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2002108 Further discussion on simplification of EN-DC configuration including FR2**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision:** The document was **not treated**.

### 13.2 R17 new proposals

**R4-2000009 Views on the NR FR1 TRP/TRS requirement specification**

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

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000753 New SID on high-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12 and in Band 5**

*Type: SID new For: Information  
 Source: US Cellular Corporation*

**Abstract:**

Support for fixed wireless and vehicle mounted user equipment usage scenarios, with broader rural coverage and higher data rates is envisioned as part of deployment configurations in LTE band 12 and band 5. Improvements in coverage, availability, and thr

**Discussion:**

.

**Decision:** The document was **not treated**.

#### 13.2.1 Basket WI approach for adding existing channel bandwidth on existing NR bands

**R4-2001213 New Basket WI adding new CBW in existing NR bands - status**

*Type: WID new For: Information  
 Source: Ericsson*

**Abstract:**

This contribution is giving updates on the new WI basket proposal submitted in last RAN meeting

**Discussion:**

.

**Decision:** The document was **not treated**.

#### 13.2.2 Proposals on adding “brand new” channel bandwidth

**R4-2000025 Solutions for unusual Spectrum allocations for NR bands**

*Type: other For: Approval  
 Source: Apple*

**Abstract:**

Discusses solutions to use "brand new" bandwidths

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000072 Discussion for new WI on introduction of brand new channel bandwidths for NR**

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

**Abstract:**

This paper provides the motivation on the new WI proposal of introduction of brand new channel bandwidth, and the initial consideration on methodology for it.

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000073 New WID proposal: introduction of brand new channel bandwidths for NR**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

Draft WID on introduction of brand new channel bandwidth for NR.

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000433 Channel BWs discussion**

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

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000434 Channel BWs motivation**

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

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000435 New SID: Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths**

*Type: SID new For: Information  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000651 Discussion on solutions to handle brand new channel bandwidth**

*Type: other For: Discussion  
 Source: CMCC*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2001219 On adding brand new channel bandwidth for existing band**

*Type: other For: Approval  
 Source: MediaTek Inc*

**Discussion:**

.

**Decision:** The document was **not treated**.

#### 13.2.3 Basket WIs for LTE CA, EN-DC, NR CA and NR DC

**R4-2000274 Proposal on new Rel-17 Basket: NR inter-band Carrier Aggregation and Dual connectivity for DL 4 bands and 2UL bands**

*Type: WID new For: Information  
 Source: Samsung*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000496 New WID: EN-DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL)**

*Type: WID new For: Information  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2001090 New WI Rel-17 NR inter-band CA for 5 bands DL with x bands UL (x=1, 2)**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2001091 Rel-17 New WID on SA NR SUL, NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP)**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Discussion:**

.

**Decision:** The document was **not treated**.

#### 13.2.4 Others

**R4-2000130 New WI Proposal: LTE / NR Spectrum sharing in Band 40/n40 for LTE-NR Coexistence**

*Type: WID new For: Information  
 Source: Reliance Jio*

**Abstract:**

To start discussion / work pertaining to LTE-NR Coexistance in Band 40/ n40. The primary intention is to enable 5G NR band n40 to dynamically share the LTE Band 40 (2300-2400 MHz)

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000024 FR2 RF enhancements for Rel-17**

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

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000074 New WID proposal: supporting overlapping CA for LTE**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

New WID for LTE overlapping CA.

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000075 New WID proposal: Introduction of new FR2 FWA UE power class**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Abstract:**

New WID for FR2 PC5 UE.

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000129 Addition of operating bands (Downlink-Only) for LTE-based 5G Terrestrial Broadcast**

*Type: WID new For: Information  
 Source: ABS*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000468 Motivation to introduce new R17 WI on further RRM enhancement**

*Type: other For: Discussion  
 Source: MediaTek inc.*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000587 Motivation on further enhancement for NR RRM requirement in Rel-17**

*Type: other For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000588 New WID on further enhancement for NR RRM requirement in Rel-17**

*Type: WID new For: Information  
 Source: CATT*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000629 Motivation on basket WI on V2X band combination**

*Type: other For: Discussion  
 Source: CATT*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000630 New basket WID: V2X band combination for supporting co-current operation between Uu frequency bands and V2X bands**

*Type: WID new For: Information  
 Source: CATT*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000757 New WID on Introduction of new FR2 FWA UE with maximum TRP of 23dBm**

*Type: WID new For: Information  
 Source: SoftBank Corp.*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000758 Motivation for Introduction of new FR2 FWA NR UE with maximum TRP of 23dBm**

*Type: other For: Information  
 Source: SoftBank Corp., Rakuten Mobile, KDDI, NTT DOCOMO*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000788 Motivation on Rel-17 further RRM enhancements**

*Type: other For: Information  
 Source: Apple*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000883 Consideration on NR SISO OTA WI**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: vivo*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000884 Motivation for NR FR1 UE TRP and TRS**

*Type: other For: Discussion  
 Source: vivo, CMCC, CAICT, Rohde & Schwarz*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000885 New WID: NR FR1 UE SA and EN-DC TRP and TRS**

*Type: WID new For: Information  
 Source: vivo, CMCC, CAICT, Rohde & Schwarz*

**Discussion:**

.

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

**R4-2000903 New WID on air-to-ground network for NR**

*Type: WID new For: Information  
 Source: CMCC*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000904 Motivation for new WI on air-to-ground network for NR**

*Type: WID new For: Information  
 Source: CMCC*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000957 Motivation to introduce new R17 SI\_WI on measurement gap enhancements**

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

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2000971 New proposed WID on Introduction of standalone NB-IoT into AAS spec**

*Type: WID new For: Information  
 Source: ZTE Corporation*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2001212 New SID - 6GHz range investigation**

*Type: SID new For: Information  
 Source: Ericsson*

**Abstract:**

This SI is proposing investigating requirements for the upper 6GHz band, preparing answers to ITU-R4-202164 requests after WRC-19 identified this frequency range for IMT

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2001235 New SID on NR FR1 and EN-DC FR1 UE TRP and TRS**

*Type: SID new For: Information  
 Source: OPPO*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2001236 Motivation of NR FR1 TRP TRS new study item**

*Type: other For: Information  
 Source: OPPO*

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2001801 New WID: NR FR1 UE SA and EN-DC TRP and TRS**

*Type: WID new For: Information  
 Source: vivo, CMCC, CAICT, Rohde & Schwarz*

**Discussion:**

.

**Decision:** The document was **not treated**.

### 13.3 Others

**R4-2000815 New WID on introduction of n13**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon, Bell*

**Discussion:**

.

**Decision:** The document was **not treated**.

## 14 Any other business

**R4-2000421 CR for 36.101: Missing Pcmax tolerance for 23-33 dBm in Table 6.2.5A-2 and Table 6.2.5B-1**

*Type: CR For: Agreement  
 36.101 v15.9.0 CR-5592 Cat: F (Rel-15)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Revised to R4-2002864.**

**R4-2002864 CR for 36.101: Missing Pcmax tolerance for 23-33 dBm in Table 6.2.5A-2 and Table 6.2.5B-1**

*Type: CR For: Agreement  
 36.101 v15.9.0 CR-5592 Cat: F (Rel-15)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2000422 Mirror CR for 36.101: Missing Pcmax tolerance for 23-33 dBm in Table 6.2.5A-2 and Table 6.2.5B-1**

*Type: CR For: Agreement  
 36.101 v16.4.0 CR-5593 Cat: A (Rel-16)  
  
 Source: Sprint Corporation*

**Discussion:**

.

**Decision: Agreed.**

**R4-2001860 Managing RAN4 work load**

*Type: other For: Approval  
 Source: Ericsson, Nokia, Nokia Shanghai Bell, ZTE, Mediatek, Qualcomm, Verizon, AT&T, T-Mobile, Softbank, KDDI, NTT DoCoMo, Rohde & Schwarz, US Cellular*

**Abstract:**

This is a wayforward containing proposals for managing RAN4 work load by reducing and avoiding redundant contributions.

**Discussion:**

.

**Decision:** The document was **not treated**.

**R4-2002110 Clarification on Rx image assumption for intra-band non-contiguous NR CA/EN-DC**

*Type: other For: (not specified)  
 Source: NTT DOCOMO INC.*

**Discussion:**

.

**Decision: Approved.**

## 15 Close of the E-meeting

Report prepared by: Kai-Erik Sunell