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

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for  
TSG RAN WG4  
meeting: e**

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## 1 Opening of the E-meeting

The Chairman Steven Chen (Apple) opened the meeting on RAN4 reflector on /11/2020.

**Intellectual Property Rights Policy**

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of Essential IPRs they become aware of.

The delegates were asked to take note that they were thereby invited:

- to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.

- to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms.

**Statement regarding competition law**

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

**Meeting Arrangements**

The meeting was conducted on three parallel sessions; Main session, RRM session and BS RF Test Demod session. The Main session was chaired by RAN4 Chairman Steven Chen (Apple), RRM session was chaired by RAN4 Vice Chairman Andrey Chervyakov (Intel) and BS RF Test Demod session was chaired by RAN4 ViceChairman Haijie Qiu (Samsung). The sessions were further broken down into separate email threads to address specific technical topics lead by assigned discussion moderators. Webinar sessions were used to summarize progress, resolve controversial issues and decide way forward.

## 2 Approval of the agenda

**R4-2014000 Agenda for RAN4 #97-e**

*Type: agenda For: Approval  
 Source: Apple (UK) Limited*

**Decision: Approved.**

**R4-2014001 RAN4#96-e Meeting Report**

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

**Decision: Approved.**

**R4-2016599 RAN4#97-e E-meeting Arrangements and Guidelines**

*Type: other For: Approval  
 Source: RAN4 Chair (Apple)*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2016602 RAN4 Meeting Efficiency Improvements**

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

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

## 3 Letters / reports from other groups / meetings

**R4-2014147 LS on updated Rel-16 RAN1 UE features lists for NR**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007136, to RAN2, RAN4, cc -  
 Source: RAN1*

**Decision: Noted.**

**R4-2014148 LS on updated Rel-16 RAN1 UE features list for LTE**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007139, to RAN2, RAN4, cc -  
 Source: RAN1*

**Decision: Noted.**

**R4-2014149 LS on updated Rel-16 RAN1 UE features lists for NR**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007327, to RAN2, RAN4, cc -  
 Source: RAN1*

**Decision: Noted.**

**R4-2014150 LS on updated Rel-16 RAN1 UE features lists for LTE**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007329, to RAN2, RAN4, cc -  
 Source: RAN1*

**Decision: Noted.**

**R4-2014151 Reply LS on UE capability**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007339, to RAN2, cc RAN4  
 Source: RAN1*

**Decision: Noted.**

**R4-2014152 LS on evaluation methodology for connected mode UE power saving enhancements**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007419, to RAN2, cc RAN4  
 Source: RAN1*

**Decision: Noted.**

**R4-2014153 Reply LS on UE declaring beam failure due to LBT failures during active TCI switching**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007424, to RAN2, cc RAN4  
 Source: RAN1*

**Decision: Noted.**

**R4-2014154 LS on evaluation methodology for UE power saving enhancements**

*Type: LS in For: Information  
 Original outgoing LS: R1-2007425, to RAN2, cc RAN4  
 Source: RAN1*

**Decision: Noted.**

**R4-2014155 Reply LS on Rel-16 UE feature lists for NR DAPS**

*Type: LS in For: Information  
 Original outgoing LS: R2-2008149, to RAN1, cc RAN4  
 Source: RAN2*

**Decision: Noted.**

**R4-2014156 Reply LS on exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI**

*Type: LS in For: Information  
 Original outgoing LS: R2-2008220, to RAN3, cc RAN1, RAN4  
 Source: RAN2*

**Decision: Noted.**

**R4-2014157 LS to RAN4 on measurement requirement for eMTC UE in RRC\_INACTIVE**

*Type: LS in For: Information  
 Original outgoing LS: R2-2008234, to RAN4, cc -  
 Source: RAN2*

**Decision: Noted.**

**R4-2014158 LS on UE capability for V2X**

*Type: LS in For: Information  
 Original outgoing LS: R2-2008350, to RAN1, cc RAN4  
 Source: RAN2*

**Decision: Noted.**

**R4-2014159 LS on simultaneous Rx/Tx for inter-band NR-DC**

*Type: LS in For: Information  
 Original outgoing LS: R2-2008635, to RAN4, cc -  
 Source: RAN2*

**Decision: Noted.**

**R4-2014160 LS on cell-grouping UE capability for synchronous NR-DC**

*Type: LS in For: Information  
 Original outgoing LS: R2-2008662, to RAN1, RAN4, cc -  
 Source: RAN2*

**Decision: Noted.**

**R4-2016598 FREQUENCY ARRANGEMENTS FOR IMT IN THE BAND 470 – 703 MHZ**

*Type: LS in For: Information  
 Original outgoing LS: -, to RAN, RAN4, cc -  
 Source: APT Wireless Group*

**Decision: Noted.**

## 4 Rel-15 New radio access technology

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

**R4-2016603 Email discussion summary for [97e][101] NR\_NewRAT\_SysParameters**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016945.**

**R4-2016945 Email discussion summary for [97e][101] NR\_NewRAT\_SysParameters**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016779 LS to RAN5 on nominal channel spacing calculation for two carriers at band n41 with 40MHz and 80MHz channel bandwidths**

*Type: LS out For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2015176 CR to TS 38.307 Release independence support of new channel bandwidth from Rel-15**

*Type: CR For: Agreement  
 38.307 v15.6.0 CR-0039 Cat: F (Rel-15)  
  
 Source: ZTE Wistron Telecom AB*

**Abstract:**

There is no requirement specified for a new channel bandwidth added to an existing operating band introduced in Rel-15 in a manner of release independent from Rel-15. This is the formal CR for the endorsed draft CR R4-2011685 with additional corrections on the captions of the new tables.

**Decision: Agreed.**

**R4-2016524 On channel space for CA**

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

**Abstract:**

Proposal 1: Agree on the CR[3][4] for revision of CA channel space.

**Decision: Noted.**

**R4-2016525 CR on channel space for CA**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0578 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

In sentence “GBChannel(i) is the minimum guard band for channel bandwidth i according to Table 5.3.3-1 for the said μ value with μ as defined in TS 38.211.”, the “said μ” is not clearly defined.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Not pursued.**

**R4-2016526 CR for 38.101-1 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0579 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**R4-2016527 CR on channel space for CA**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0304 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

In sentence “GBChannel(i) is the minimum guard band for channel bandwidth i according to Table 5.3.3-1 for the said μ value with μ as defined in TS 38.211.”, the “said μ” is not clearly defined.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Not pursued.**

**R4-2016528 CR for 38.101-2 channel space for CA\_Rel16**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0305 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

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

#### 4.2.1 [FR1] Maintenance for 38.101-1 [NR\_newRAT-Core]

**R4-2016604 Email discussion summary for [97e][102] NR\_NewRAT\_UE\_RF\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016946.**

**R4-2016946 Email discussion summary for [97e][102] NR\_NewRAT\_UE\_RF\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016784 Reply LS on structure of NR CA reference sensitivity requirements in 38.101-1**

*Type: LS out For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2015031 CR to TS 38.101-1: Correction on the Aggregated Channel Bandwidth**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0530 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

During the discussion on the Tx RF requirements for intra-band contiguous CA in Rel-16, the parameters such as SCSlow, SCShigh, NRB,low, NRB,high and BWGB,Channel(k) in the equation are fixed to avoid the variable BWChannel\_CA values, and more importantly, it can avoid the cases that the BWChannel\_CA is larger than the sum of the channel bandwidth of the CCs.

In currently Rel-15 spec, there are some intra-band contiguous CA Rx requirements are defined associate with BWChannel\_CA .It is important to guarantee the BWChannel\_CA is not larger than the sum of the channel bandwidth of the CCs. Therefore, the methods agreed in Rel-16 spec shall be also applied to Rel-15 spec.

In addition, it was agreed in RAN4 #95e meeting that μ=1 is selected for some cases without common μ to calculate the CA nominal channel spacing.

**Decision: Return to.**

**R4-2015032 CR to TS 38.101-1: Correction on the Aggregated Channel Bandwidth**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0531 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**R4-2016041 CR Removal of Band 10 protection 38101-1 Rel15**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0555 Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Band 10 protection removal has been agreed for LTE in R4-2011521. This CR applies this correction to relevant NR bands and NR CA combinations.

**Decision: Agreed.**

##### 4.2.1.1 Maintenance for Transmitter characteristics [NR\_newRAT-Core]

**R4-2014254 CR to 38.101-1: UL MIMO EVM and emission requirements update**

*Type: CR For: Endorsement  
 38.101-1 v15.11.0 CR-0494 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

For a UE configured for 2L UL:

Agreement that emissions requirements apply at a UE level are captured in Rel-16, but not in Rel-15

Existing EVM requirement is not consistent with RAN1 design of allowing UE freedom to map logical port to antenna connector. This is also inconsistent with FR2 Tx modulation quality requirements, which are specific per layer

(See

R4-2014256 for further details. See also R4-2011762 and CR433)

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked on the coversheet, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016780.**

**R4-2016780 CR to 38.101-1: UL MIMO EVM and emission requirements update**

*Type: CR For: Endorsement  
 38.101-1 v15.11.0 CR-0494 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

For a UE configured for 2L UL:

Agreement that emissions requirements apply at a UE level are captured in Rel-16, but not in Rel-15

Existing EVM requirement is not consistent with RAN1 design of allowing UE freedom to map logical port to antenna connector. This is also inconsistent with FR2 Tx modulation quality requirements, which are specific per layer

(See

R4-2014256 for further details. See also R4-2011762 and CR433)

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked on the coversheet, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2014255 CR to 38.101-1: UL MIMO EVM and emission requirements update**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0495 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

(Mirror) Insert NS\_203 framework, requirements goes into effect shortly after RAN4#97-e.

**Decision:** The document was **not treated**.

**R4-2014256 FR1 transmitter requirements for 2-layer UL**

*Type: discussion For: Agreement  
 Source: Qualcomm Incorporated*

**Abstract:**

Intent of EVM test, reference plane for EVM test, clarification that emissions requirements are per-UE.

Proposal 1: The 2L UL MIMO RAN4 EVM requirement shall be evaluated per layer.

Proposal 2: Use the linear zero-forcing 2L MIMO equalizer to define and measure the transmit EVM for multi-layer MIMO transmission

Proposal 3: Change the emissions definition in Rel-15 TS 38.101-1 to reflect Rel-16 TS 38.101-1.

**Decision: Noted.**

**R4-2014307 Clarification of additional spurious emission requirements on two bands uplink Inter-band CA(R15)**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0496 Cat: F (Rel-15)  
  
 Source: SoftBank Corp.*

**Abstract:**

As current UE co-ex table for two bands uplink Inter-band CA(Table 6.5A.3.2.3-1) only specifies general spurious emission, applicability of additional requirements (using NS\_XX) has not been clearly specified.

**Decision: Return to.**

**R4-2014308 Clarification of additional spurious emission requirements on two bands uplink Inter-band CA(R16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0497 Cat: A (Rel-16)  
  
 Source: SoftBank Corp.*

**Abstract:**

As current UE co-ex table for two bands uplink Inter-band CA(Table 6.5A.3.2.3-1) only specifies general spurious emission, applicability of additional requirements (using NS\_XX) has not been clearly specified.

**Decision:** The document was **not treated**.

**R4-2014402 CR for TS38.101-1 Rel-15, Correction for definition of P-MPR**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0501 Cat: F (Rel-15)  
  
 Source: CATT*

**Abstract:**

In clause 3.2 and 6.2.4, the definitions of P-MPR are incorrect.

**Decision: Return to.**

**R4-2014403 CR for TS38.101-1 Rel-16, Correction for definition of P-MPR**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0502 Cat: A (Rel-16)  
  
 Source: CATT*

**Decision:** The document was **not treated**.

**R4-2014718 CR to TS38.101-1 on DC location correction**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0511 Cat: F (Rel-15)  
  
 Source: Samsung*

**Abstract:**

txDirectCurrentLocation is a parameter of UplinkTxDirectCurrent IE. But txDirectCurrentLocation is mistakenly used as IE

**Decision: Revised to R4-2016781.**

**R4-2016781 CR to TS38.101-1 on DC location correction**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0511 Cat: F (Rel-15)  
  
 Source: Samsung*

**Abstract:**

txDirectCurrentLocation is a parameter of UplinkTxDirectCurrent IE. But txDirectCurrentLocation is mistakenly used as IE

**Decision: Return to.**

**R4-2014719 CR to TS38.101-1 on DC location correction**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0512 Cat: A (Rel-16)  
  
 Source: Samsung*

**Decision:** The document was **not treated**.

**R4-2014898 Coexistence cleanup for 38.101-1 Rel15**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0517 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Abstract:**

Rel-15 features several band protection requirements which are not technical possible or contains contradicting protection requirements.

**Decision: Agreed.**

**R4-2014905 CR for TS 38.101-1: Correction to FR1 time mask for SRS antenna switching**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0519 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Abstract:**

FR1 time mask for the case when consecutive SRS switching usage is between antenna switching & other sets as shown in Figure 6.3.3.6-5 in TS 38.101-1 includes both usage sets for between antenna switching and between antenna switching and other sets where the former usage set should have a guard symobl allocated between SRS (Ant. “y”, Ant. switch) and SRS (Ant. “x”, Ant. switch) according to RAN1 specifications in TS 38.214 clause 6.2.1.2.

**Decision: Return to.**

**R4-2014906 CR for TS 38.101-1: Correction to FR1 time mask for SRS antenna switching**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0520 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Decision:** The document was **not treated**.

**R4-2015998 Correction to spurious co-existence requirements for n28 and n83**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0554 Cat: F (Rel-15)  
  
 Source: Keysight Technologies UK Ltd*

**Abstract:**

In R4-1910289, some corrections were done in spurious co-existence requirements to align with 36.101 LTE core requirements. As part of those corrections, protection to frequency band n66 from bands n28 and n83 became misleading as NOTE 2 applicability is not clear. This issue was already corrected for Rel-16 in R4-2009939.

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-16 on the coversheet but the CR is allocated for Rel-15.

**Decision: Not pursued.**

**R4-2016470 CR for TS 38.101-3: correction CR for simultaneous Tx/Rx operation (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0564 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Simultaneous Rx/Tx capability for TDD-TDD and TDD-FDD inter-band NR CA, SUL or inter-band EN-DC configurations should be a per band combination per band pair capability rather than a per BC capability. Two-band combination is the basis for reporting such a capability.

**Decision: Return to.**

**R4-2016471 CR for TS 38.101-1: correction CR for simultaneous Tx/Rx operation (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0565 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**R4-2016490 CR for TS 38.101-1: correction of delta Tib for UE supporting multiple band combinations (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0570 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For UE supporting multiple band combinations, ∆TIB,c could be different for these combinations. Unlike ∆RIB,c , how to use ∆TIB,c in this case is not clearly specified.

**Decision: Return to.**

**R4-2016491 CR for TS 38.101-1: correction of delta Tib for UE supporting multiple band combinations (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0571 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**R4-2016494 Update of configured transmitted power to remove ambiguity in TL,C (Rel-15)**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0572 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For the requirements of MOP in Table 6.2.1-1, the lower tolerance limit might be relax by 1.5dB according to NOTE 3:

NOTE 3:Refers to the transmission bandwidths confined within FUL\_low and FUL\_low + 4 MHz or FUL\_high – 4 MHz and FUL\_high, the maximum output power requirement is relaxed by reducing the lower tolerance limit by 1.5 dB.

In 6.2.4 the 1.5dB relaxation is considered as ∆TC,c when calculating PCMAX\_L,f,c. But when deciding T(PCMAX,f,c) the tolerance TL,c refers to Table 6.2.1-1 directly, which is ambiguous whether the 1.5dB relaxation needs to be counted twice.

Same problem also exists in CA and UL-MIMO test cases.

**Decision: Not pursued.**

**R4-2016495 Update of configured transmitted power to remove ambiguity in TL,C (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0573 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For the requirements of MOP in Table 6.2.1-1, the lower tolerance limit might be relax by 1.5dB according to NOTE 3:

NOTE 3:Refers to the transmission bandwidths confined within FUL\_low and FUL\_low + 4 MHz or FUL\_high – 4 MHz and FUL\_high, the maximum output power requirement is relaxed by reducing the lower tolerance limit by 1.5 dB.

In 6.2.4 the 1.5dB relaxation is considered as ∆TC,c when calculating PCMAX\_L,f,c. But when deciding T(PCMAX,f,c) the tolerance TL,c refers to Table 6.2.1-1 directly, which is ambiguous whether the 1.5dB relaxation needs to be counted twice.

Same problem also exists in CA and UL-MIMO test cases.

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-15 on the coversheet but the CR is allocated for Rel-16.

**Decision: Withdrawn.**

**R4-2016521 CR for TS 38.101-1 Pcmax**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0576 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

‘DL-only carrier’ is not aligned with RAN1/RAN2 spec terminology.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Not pursued.**

**R4-2016522 CR on TS 38.101-1 Pcmax**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0577 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**R4-2016531 on 5MHz AMPR for NS\_38**

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

**Abstract:**

Observation 1: UE could transmit power >15dBm in the real network on Band n74 with NS\_38 signaling, but no AMPR is defined for 5MHz CBW.

Observation 2: UE is allowed to transmit power of >15dBm, but there is no AMPR defined for 5MHz.

Observation 3: when AMPR is larger than 8dB, the Pcmax would be lower than 15dBm.

Proposal 1: Revise AMPR and ASE requirement as in Table 1 and Table 2, the corresponding CR is as in [1].

**Decision: Noted.**

**R4-2016534 CR on correction for AMPR NS\_38,NS\_40 and NS\_41**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0580 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

ASE requirement for NS\_38,NS\_40 and NS\_41 requires transmission power of 15dBm, but AMPR for these NS is larger than 8dB for some RB allocations. For NS\_38, there is no 5MHz AMPR definition.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016782.**

**R4-2016782 CR on correction for AMPR NS\_38,NS\_40 and NS\_41**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0580 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

ASE requirement for NS\_38,NS\_40 and NS\_41 requires transmission power of 15dBm, but AMPR for these NS is larger than 8dB for some RB allocations. For NS\_38, there is no 5MHz AMPR definition.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016535 CR for 38.101-1 on corrections for AMPR-Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0581 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**R4-2016569 EVM Measurement for 2-Layer Uplink MIMO**

*Type: discussion For: Agreement  
 Source: Lenovo, Motorola Mobility*

**Decision: Noted.**

**R4-2016578 CR to DMRS position in UL RMC for FR1**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0582 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

DM-RS symbol positions for 11 UL OFDM symbols in UL RMC tables are not consistent with RAN1 spec of TS38.211.

**Decision: Revised to R4-2016783.**

**R4-2016783 CR to DMRS position in UL RMC for FR1**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0582 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

DM-RS symbol positions for 11 UL OFDM symbols in UL RMC tables are not consistent with RAN1 spec of TS38.211.

**Decision: Return to.**

##### 4.2.1.2 Maintenance for Receiver characteristics [NR\_newRAT-Core]

**R4-2015016 CR to TS 38.101-1[R15]: Clarification of non-simultaneous Rx/Tx operation for CA\_n77-n79 and CA\_n78-n79 in TS 38.101-1.**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0526 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

It is unclear whether it is synchronous operation or asynchronous operation when proposing new configuration that include CA\_n77-n79 or CA\_n78-n79. Also, it is not good to have to mention this every time we propose a higher order configurations.

**Decision: Revised to R4-2016789.**

**R4-2016789 CR to TS 38.101-1[R15]: Clarification of non-simultaneous Rx/Tx operation for CA\_n77-n79 and CA\_n78-n79 in TS 38.101-1.**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0526 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

It is unclear whether it is synchronous operation or asynchronous operation when proposing new configuration that include CA\_n77-n79 or CA\_n78-n79. Also, it is not good to have to mention this every time we propose a higher order configurations.

**Decision: Return to.**

**R4-2015017 CR to TS 38.101-1[R16]: Clarification of non-simultaneous Rx/Tx operation for CA\_n77-n79 and CA\_n78-n79 in TS 38.101-1.**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0527 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Decision:** The document was **not treated**.

**R4-2015029 CR to TS 38.101-1: Correction on applicability of 4Rx requirements for CA**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0528 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

For diversity charateristics, requirements for two Rx antenna ports are the baseline, also it applies when the band is used as a standalone band or as part of a band combination, as stated in the spec.

However, some bands such as band n41/n77/n78/n79 supporting four Rx antenna ports, also for some band combination such as CA n3A-n78A and n8A-n78A, MSD values have already considered the four Rx antenna ports.

Therefore, the additional requirements for four Rx ports, same as two Rx antenna ports, shall be applied for supported band combinations for which the UE can operate using up to four Rx ports while configured with carrier aggregation.

**Decision: Return to.**

**R4-2015030 CR to TS 38.101-1: Correction on applicability of 4Rx requirements for CA**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0529 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

**R4-2015558 Discussion and reply draft LS on structure of NR CA reference sensitivity requirements in 38.101-1**

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

**Abstract:**

Proposal 1: It’s proposed to inform RAN5 that the requirement structure in both clause 7.3A.4 and 7.3A.6 listing only aggressor and victim will be retained in future.

Proposal 2: It’s proposed to inform RAN5 that band combination specific manner will be used to specify IMD exception requirements in clause 7.3A.5.

Proposal 3: It’s proposed to move the SDL requirements in 7.3A.2.4 to 7.3. The exceptions for SDL band combinations can be specified in clause 7.3A.4, 7.3A.5 and 7.3A.6.

**Decision: Noted.**

**R4-2015559 CR for 38.101-1 to adjust the structure of NR CA REFSENS**

*Type: CR For: Agreement  
 38.101-1 v15.11.0 CR-0541 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

There are some reasons to move the SDL requirements in 7.3A.2.4 to 7.3.

Firstly, the REFSENS for SDL bands are band combination independent. RAN4 don’t need to list SDL band REFSENS one by one for different inter-band CA combinations.

Secondly, it’s helpful to reduce the coupling between clause 7.3 and clause 7.3A.2.4. It can cause some misalignment between 7.3A.2.4 and 7.3 that the REFSENS other than SDL bands are also listed in clause 7.3A.2.4.

Thirdly, the requirements in clause 7.3A.2.4 are totally same with REFSENS requirements for inter-band CA in clause 7.3A.2.3. For SDL bands, the reference sensitivity requirements can be verified by inter-band CA combinations with SDL band.

IMD exception is the only one that depends on specific DL configuration for all the NR CA requirements. From RF technical perspective, the different configurations of NR CA band combinations have the same IMD exception requirements. Listing all the different configurations not only brings the risks of missing and errors, but also makes spec redundant because of no additional information.

**Decision: Return to.**

**R4-2015560 CR for 38.101-1 to adjust the structure of NR CA REFSENS (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0542 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

#### 4.2.2 [FR2] Maintenance for 38.101-2 [NR\_newRAT-Core]

**R4-2016605 Email discussion summary for [97e][103] NR\_NewRAT\_UE\_RF\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016947.**

**R4-2016947 Email discussion summary for [97e][103] NR\_NewRAT\_UE\_RF\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016053 Frequency separation class alignment**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0294 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Alignment of Frequency Separation classes to TS38.331.

At RAN2#111-e (August 2020) two Rel-16 CRs to TS38.331 (R2-2008463) and TS38.306 (R2-2008462) where agreed.

Those CRs makes the needed uppdates to the specifications according to an RAN4 agreement stated in an LS to RAN2 in (R2-2006174 (R4-2009294)) Titled “LS on Frequency separation class for DL-only spectrum for FR2”

In TS38.331 previously stated:

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FreqSeparationClass ::= ENUMERATED {c1, c2, c3, ...}

Where the values c1, c2, c3 correspond to the values defined in TS38.101-2, Table 5.3A.4-2.

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After the change the I.E now indicates explicit values:

FreqSeparationClass ::= ENUMERATED { mhz800, mhz1200, mhz1400, ...}

And the new I.E for Frequency separation Class DL is added as:

FreqSeparationClassDL-Only-r16 ::= ENUMERATED {mhz200, mhz400, mhz600, mhz800, mhz1000, mhz1200}

----------------------------

In this paper 38.101-2 is aligned with the updated signaling.

**Decision: Not pursued.**

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

**R4-2014054 EESS protection related requirements for FR2 bands**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0262 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of EESS protection based on WRC-19.

**Decision: Revised to R4-2016785.**

**R4-2016785 EESS protection related requirements for FR2 bands**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0262 Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of EESS protection based on WRC-19.

**Decision: Return to.**

**R4-2014055 EESS protection related requirements for FR2 bands**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0263 Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Cat A CR of

R4-2014054.

**Decision:** The document was **not treated**.

**R4-2014257 draft LS to RAN5 on new emissions requirements**

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

**Abstract:**

Editor’s note captures applicability (emissions changeover) date for a new NS flag. The intent is to convey to RAN5 that the recommended date for introduction of requirement in RAN5 spec

**Decision: Noted.**

**R4-2014258 On introduction of new emissions requirements to existing bands**

*Type: discussion For: Agreement  
 Source: Qualcomm Incorporated*

**Abstract:**

We discuss the general problem of keeping 3GPP requirements consistent with regulation changes that become applicable at calendar dates, rather than at the close of a release cycle.

Observation 1: Existing 3GPP processes cause undue reduction in UL performance of legacy UEs when faced with new emissions regulations, despite any exemptions for legacy UE.

Observation 2: There is no RAN2 impact from introducing new NS to existing bands due to available NS slots and existing framework.

Observation 3: To incorporate a new emissions requirement, RAN4 cannot wait to insert NS framework just prior to an emissions requirement applicability date.

Observation 4: A RAN4 solution that allows completion of requirements well in advance of applicability dates is much more practical than one involving long-term calendar-monitoring.

Proposal 1: RAN4 to introduce NS\_203 immediately. Applicability date information is not necessary to be captured.

Proposal 2a: RAN4 to implement new NS per Option 3 described in Table 2.3-1 => introduce new NS into standard immediately with applicability (‘mandatory from’) date as a normative element.

Proposal 2b: RAN4 to implement new NS per Option 4 described in Table 2.3-1 => introduce new NS into standard immediately with applicability (‘mandatory from’) dates in Editor’s Notes.

**Decision: Noted.**

**R4-2014259 CR to 38.101-2: Introduction of NS\_203**

*Type: CR For: Endorsement  
 38.101-2 v15.11.0 CR-0264 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Some WRC19 emissions resolutions become applicable 1/1/2021. For 3GPP to pro-actively incorporate the new requirements, new NS framework is needed in standard.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked on the coversheet, the CR does not change anything and hence the CR is not needed.

**Decision: Not pursued.**

**R4-2014260 CR to 38.101-2: Introduction of NS\_203**

*Type: CR For: Endorsement  
 38.101-2 v16.5.0 CR-0265 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

(Mirror) NS\_203 goes into effect shortly after RAN4#97-e.

**Decision: Withdrawn.**

**R4-2014885 CR for introduction of EESS protection applied after 2021**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0277 Cat: F (Rel-15)  
  
 Source: NTT DOCOMO INC.*

**Abstract:**

1dBm/200MHz EESS protection for n258 and 7dBm/GHz and -13dBm/MHz for n260 will apply from 1 January 2021 according to WRC-19 decision

Reflect the following agreements in R4-2009141:

1dBm/200MHz protection requirements is specified with NS\_203 for n258

7dBm/1GHz and -13dBm/MHz are specified with NS\_205 for n260.

Explicit signaling for a UE to report newly supported NS value(s) for a legacy band to the network (reuse modifiedMPR bits)

A-MPR values proposed in R4-2006788 apply

**Decision: Not pursued.**

**R4-2014886 CR for introduction of EESS protection applied after 2021**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0278 Cat: A (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Decision: Withdrawn.**

**R4-2014925 Further consideration on EESS protection**

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

**Decision: Withdrawn.**

**R4-2014926 Further consideration on EESS protection**

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

**Decision: Noted.**

**R4-2015211 Remaining issues on WRC-19**

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

**Abstract:**

This contribution mainly addresses how to handle the other NS(s) other than NS\_203.

Proposal 1: Make NS\_201/CA\_NS\_201 not applicable in the following ways.

- Add a NOTE such that “the NS(s) is not applicable in the present release of specifications” to NS mapping tables.

- Replace the relevant subclauses on the NS(s) with “void”.

Proposal 2: Introduce NS\_203/CA\_NS\_203 with a bit for modifiedMPR for the NS(s) as mandatory

Observation: Since it is challenging for 3GPP to uniquely define “UE brought into use” as a single 3GPP phrase applicable all over the world, regardless of whatever options RAN4 takes, ambiguity still remains.

Proposal 3: Consider a following possible compromised alternative as one of the options

- Capture the new NS(s), but make them not available by making A-MPR TBD

- Capture an informative NOTE outside the relevant table to explain the situation

- Specific examples are captured in Annex

**Decision: Noted.**

**R4-2015255 on FR2 spurious emission NS handling**

*Type: discussion For: Approval  
 Source: Xiaomi*

**Abstract:**

Observation 1: More stringent requirement after the change-over date apply to UE/chipset who went on the market before the change-over date is the main problem on introducing the EESS protection into specification.

Observation 2: The requirements applicable after 2024/2027 are part of current requirements so UE need to have the capability with these requirements.

Observation 3: We have no clue weather a UE will be used after change-over date, so the capability should be added before the change over date

Proposal: Choose option 2 above for introducing the all foreseen NS values.

**Decision: Noted.**

**R4-2016532 on FR2 EESS protection emission requirement**

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

**Abstract:**

Observation 1: even UE is mandatory to support newly introduced NS after change over date, UE is not mandatory to behave with newly NS.

Observation 2: From “2 stage emission requirement” and “NS signalling”, even we push it as mandatory to support, the tight NS may only a requirement shown up in verification test but never implemented by UE in real network.

Observation 3: Modified MPR solution actually equals to: directly specify UE is mandatory to support 1dBm/200MHz on n258 from Rel-15.

Proposal 1: Do not introduce modified MPR solution for indicating on NS support.

Proposal 2: For 1dBm/200MHz for n258, UE is mandatory to support it from Rel-15, regardless of the “brought into use” date.

Proposal 3: Leave -5dBm/200MHz requirement for the future work of RAN4.

**Decision: Noted.**

##### 4.2.2.2 Maintenance for Transmitter characteristics [NR\_newRAT-Core]

**R4-2014261 CR to 38.101-2: ULCA clarifications**

*Type: CR For: Endorsement  
 38.101-2 v15.11.0 CR-0266 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

During the work phase for the Rel-16 FR2 intra-band non-contiguous UL CA feature, R4-2011511 identified some conflicts, need for clarifications and editorial reoriganization in TS38.101-2. These changes were adopted for Rel-16 in the feature CR for FR2 NC UL CA. This CR is a ‘reverse mirror’ to back-port those changes to Rel-15.

Also included are some editorial changes

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked on the coversheet, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2014262 CR to 38.101-2: ULCA clarifications**

*Type: CR For: Endorsement  
 38.101-2 v16.5.0 CR-0267 Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

(Mirror) Resolve spec conflict, introduce clarifications as identified in Rel-16 NC ULCA feature CR

**Decision:** The document was **not treated**.

**R4-2014684 Transmission gap for relative power tolerance in FR2**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0273 Cat: F (Rel-15)  
  
 Source: Anritsu corporation*

**Abstract:**

In sub-clause 6.3.4.3, definition of transmission gap for relative power tolerance is not aligned with the associated requirement for FR1 nor E-UTRA requirement.

In 6.3A.4.3, expression of transmission gap is not aligned with 6.3.4.3.

**Decision: Agreed.**

**R4-2014685 Transmission gap for relative power tolerance in FR2**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0274 Cat: A (Rel-16)  
  
 Source: Anritsu corporation*

**Decision: Agreed.**

**R4-2014711 PCC SCC prioritization issue solution**

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

**Abstract:**

Proposal: Add a note to the TS 38.101-2 that MPR’s were derived with equal PSD in the analysis

**Decision: Noted.**

**R4-2014720 CR to TS38.101-2 on DC location correction**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0275 Cat: F (Rel-15)  
  
 Source: Samsung*

**Abstract:**

txDirectCurrentLocation is a parameter of UplinkTxDirectCurrent IE. But txDirectCurrentLocation is mistakenly used as IE

**Decision: Revised to R4-2016786.**

**R4-2016786 CR to TS38.101-2 on DC location correction**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0275 Cat: F (Rel-15)  
  
 Source: Samsung*

**Abstract:**

txDirectCurrentLocation is a parameter of UplinkTxDirectCurrent IE. But txDirectCurrentLocation is mistakenly used as IE

**Decision: Return to.**

**R4-2014721 CR to TS38.101-2 on DC location correction**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0276 Cat: A (Rel-16)  
  
 Source: Samsung*

**Decision:** The document was **not treated**.

**R4-2014907 CR for TS 38.101-2: Clarification for NS\_202 emission requirements**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0279 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Abstract:**

NS\_202 contains two emission requirements, one is for additional spurious emission requirement at -10 dBm/100 MHz, the other at 1 dBm/200 MHz is meant for protection of satellite passive services. Since the former requirement is tighter and also covers the frequency range of the latter requirement, without clarification on the purpose of the latter requirement, it would look to be redudant for the latter requirement in NS\_202.

**Decision: Return to.**

**R4-2014908 CR for TS 38.101-2: Clarification for NS\_202**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0280 Cat: A (Rel-16)  
  
 Source: Apple Inc.*

**Decision:** The document was **not treated**.

**R4-2015334 Discussion on FR2 equal PSD in CA and draft LS**

*Type: discussion For: Approval  
 Source: OPPO*

**Abstract:**

Observation 1: Equal PSD restriction was introduced into spec without much explanation why this is needed for Pcmax and the comments are from UE implementation rather than from testing point of view.

Observation 2: No such equal PSD restriction was introduced into other RAN4 specs like FR1 CA or EN-DC.

Observation 3: Usually MPR are derived based on some precondition (the worst case), however, it applies to all the scenarios and there is no need to mention about the precondition in spec.

Proposal 1: It is proposed to remove the equal PSD restriction from Pcmax section.

Observation 4: Requirements related to max power in CA are also impacted and derive of worst case in testing is this is up to RAN5.

Observation 5: RF tests are verifying UE hardware performance, and what matters is the status that is targeted to be verified, therefore there is no need to always follow the UE behaviour in the NW.

Observation 6: Test mode or test commands can be adopted to derive the equal PSD status from testing point of view.

Proposal 2: It is proposed to inform RAN5 about the updates and backgrounds in RAN4 specs to facilitate test case design.

**Decision: Noted.**

**R4-2015335 CR on FR2 equal PSD in UL CA**

*Type: CR For: Endorsement  
 38.101-2 v15.11.0 CR-0285 Cat: F (Rel-15)  
  
 Source: OPPO*

**Abstract:**

As discussed in

R4-2015334, the equal PSD restriction in Pcmax is not needed and it has caused confusions in interpretation of requirements.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Not pursued.**

**R4-2015970 Correction to Pcmax: total radiated power**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0288 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

The total radiated power for CA is undefined. The defintion of the index i of the active serving cells c(i) is missing.

**Decision: Agreed.**

**R4-2015971 Correction to Pcmax: total radiated power**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0289 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to add definition and requirements for total radiated power

**Decision: Agreed.**

**R4-2016056 Correction of transmission gap definition for Relative power tolerance**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0295 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

The defined transmission gap between sub-frames for relative power tolerance is not correctly defined. It is set to 20ms, corrrect definition schould be “less than or equal to 20ms”

**Decision: Withdrawn.**

**R4-2016057 Correction of transmission gap definition for Relative power tolerance**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0296 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

The defined transmission gap between sub-frames for relative power tolerance is not correctly defined. It is set to 20ms, corrrect definition schould be “less than or equal to 20ms”

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-16 on the coversheet but the CR is allocated for Rel-15.

**Decision: Not pursued.**

**R4-2016459 CR for 38.101-2: IBB and ACS corrections**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0298 Cat: F (Rel-15)  
  
 Source: T-Mobile USA*

**Abstract:**

There is an error in the symbols for channel bandwidths of carrier k fpor IBB and ACS

**Decision: Agreed.**

**R4-2016460 Mirror CR for 38.101-2: IBB and ACS corrections**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0299 Cat: A (Rel-16)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

**R4-2016579 CR to DMRS position in UL RMC for FR2**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0306 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

DM-RS symbol positions for 11 UL OFDM symbols in UL RMC tables are not consistent with RAN1 spec of TS38.211.

**Decision: Revised to R4-2016787.**

**R4-2016787 CR to DMRS position in UL RMC for FR2**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0306 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

DM-RS symbol positions for 11 UL OFDM symbols in UL RMC tables are not consistent with RAN1 spec of TS38.211.

**Decision: Return to.**

**R4-2014404 CR for TS38.101-2 Rel-15, Correction for definition of P-MPR**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0268 Cat: F (Rel-15)  
  
 Source: CATT*

**Abstract:**

In clause 6.2.4, the definitions of P-MPR are incorrect.

**Decision: Return to.**

**R4-2014405 CR for TS38.101-2 Rel-16, Correction for definition of P-MPR**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0269 Cat: A (Rel-16)  
  
 Source: CATT*

**Decision:** The document was **not treated**.

##### 4.2.2.3 Maintenance for Receiver characteristics [NR\_newRAT-Core]

**R4-2016031 Correction to EIS definition**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0292 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Abstract:**

The abbreviation for EIS is explained inconsitently in the specification. In chapter 3.3 and throughout chapter 7 it is defined as “effective isotropic sensitivity”, but in chapter 3.1 it is mentioned as “equivalent isotropic sensitivity”. The definition in chapter 3.1 needs to be aligned with the other usages of the term in the specifiation.

**Decision: Revised to R4-2016788.**

**R4-2016788 Correction to EIS definition**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0292 Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Abstract:**

The abbreviation for EIS is explained inconsitently in the specification. In chapter 3.3 and throughout chapter 7 it is defined as “effective isotropic sensitivity”, but in chapter 3.1 it is mentioned as “equivalent isotropic sensitivity”. The definition in chapter 3.1 needs to be aligned with the other usages of the term in the specifiation.

**Decision: Return to.**

**R4-2016032 Correction to EIS definition**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0293 Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Decision:** The document was **not treated**.

**R4-2016499 CR to 38.101-2: Frequency separation class update**

*Type: CR For: Endorsement  
 38.101-2 v15.11.0 CR-0300 Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

During the Rel-16 FR2 RF enhancement work item, two categories of new frequency separation classes were introduced:

Rel-16 enhancement, FS>1400 MHz

Rel-15 compliant FS = 1000 MHz

Unfortunately, both categories were implemented by RAN2 exclusively as a Rel-16 enhancement due to lack of clarity in LS from RAN4 on this aspect.

FS = 1000 MHz is contained inside the range of FS that is supportable by Rel-15 infra hardware (800 to 1400 MHz). Consequently there would be network benefit to enhancing the Rel-15 list of FS class for UEs by introduction of FS = 1000 MHz

Cat A (mirror) CR not required because this is a case of Rel-15 catching up to Rel-16

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Not pursued.**

**R4-2016545 draft LS to RAN2 on Rel-15 frequency separation class update**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Abstract:**

Introduce intermediate value of FS class

**Decision: Noted.**

**R4-2016590 CR for intra-band NC DL CA Rrefsens**

*Type: CR For: Agreement  
 38.101-2 v15.11.0 CR-0307 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For UE supporting CA configuration, ΔRIB is also applied for Single carrier requirement. There is no clarification in the spec.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Not pursued.**

**R4-2016520 CR on FR2 intra-band NC DL CA refsens**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0303 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

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

**R4-2016606 Email discussion summary for [97e][104] NR\_NewRAT\_UE\_RF\_Part\_3**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016948.**

**R4-2016948 Email discussion summary for [97e][104] NR\_NewRAT\_UE\_RF\_Part\_3**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016988 LS to RAN2 on UE simultaneous Rx/Tx capability**

*Type: LS out For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014914 CR for TS 38.101-3: Corrections for intra-band contiguous EN-DC configurations**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0380 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Abstract:**

Intra-band contiguous EN-DC combinations cannot have non-contiguous UL configurations.

**Decision: Return to.**

**R4-2016238 CR 38101-3 R15 Band 10 protection and DC\_42\_n79 correction**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0411 Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Band 10 protection removal has been agreed for LTE in R4-2011521. This CR applies this correction to relevant EN-DC combinations.

DC\_42\_n79 Simultaneous Tx/Rx operation is ambiguous.

**Decision: Revised to R4-2016790.**

**R4-2016790 CR 38101-3 R15 Band 10 protection and DC\_42\_n79 correction**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0411 Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Band 10 protection removal has been agreed for LTE in R4-2011521. This CR applies this correction to relevant EN-DC combinations.

DC\_42\_n79 Simultaneous Tx/Rx operation is ambiguous.

**Decision: Return to.**

**R4-2016241 CR 38101-3 R16 Band 10 protection and DC\_42\_n79 correction**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0412 Cat: A (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Mirror R16 CR to R15 CR0411 in

R4-2016238

**Decision:** The document was **not treated**.

##### 4.2.3.1 [FR1] Maintenance for Transmitter characteristics within FR1 [NR\_newRAT-Core]

**R4-2014309 Clarification of additional spurious emission requirements on Inter-band EN-DC(R15)**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0360 Cat: F (Rel-15)  
  
 Source: SoftBank Corp.*

**Abstract:**

As current UE co-ex table for Inter-band EN-DC(Table 6.5B.3.3.2-1) only specifies general spurious emission, applicability of additional requirements (using NS\_XX) has not been clearly specified.

**Decision: Return to.**

**R4-2014310 Clarification of additional spurious emission requirements on Inter-band EN-DC(R16)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0361 Cat: A (Rel-16)  
  
 Source: SoftBank Corp.*

**Abstract:**

As current UE co-ex table for Inter-band EN-DC(Table 6.5B.3.3.2-1) only specifies general spurious emission, applicability of additional requirements (using NS\_XX) has not been clearly specified.

**Decision:** The document was **not treated**.

**R4-2014900 Coexistence cleanup for 38.101-3 Rel15**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0378 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Abstract:**

Rel-15 features several band protections which are not technical possible due to sometimes TDD bands with overlapping regions are protected or similar issues. The CR focuses on correcting false protections so that a UE will not face technical impossible emission requirements.

**Decision: Not pursued.**

**R4-2015337 CR on simultaneous Tx-Rx for EN-DC**

*Type: CR For: Endorsement  
 38.101-3 v15.11.0 CR-0393 Cat: F (Rel-15)  
  
 Source: OPPO*

**Abstract:**

In RAN4#96e, the discussion of simultaneous Tx/Rx in EN-DC band combination DC\_42\_n79 happens and it was recognoized that it is unclear whether a band combination is mandatory or optional to support simultaneous Tx/Rx.

In current spec, for example in Table 5.5B.4.1-1(Inter-band EN-DC configurations within FR1 (two bands)), following two notes are defined for simultaneous Tx/Rx. In which NOTE3 means non-simultaneous Tx/Rx is only supported for the band combination, and NOTE7 means simultaneous Rx/Tx is only supported for the band combination.

NOTE 3: The minimum requirements apply only when there is non-simultaneous Tx/Rx operation between E-UTRA and NR carriers. This restriction applies also for these carriers when applicable EN-DC configuration is part of a higher order EN-DC configuration.

NOTE 7: Applicable for UE supporting inter-band EN-DC with mandatory simultaneous Rx/Tx capability.

However, it is not clear for band combinations which neither have NOTE3 nor NOTE7 for example in Table 5.5B.4.1-1. For these band combinations it should be interpretated as the simultaneous Rx/Tx is optionally supported. This is also aligned with the UE capability below in 38.306.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2015338 CR on simultaneous Tx-Rx for EN-DC (R16 mirror CR)**

*Type: CR For: Endorsement  
 38.101-3 v16.5.0 CR-0394 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

In RAN4#96e, the discussion of simultaneous Tx/Rx in EN-DC band combination DC\_42\_n79 happens and it was recognoized that it is unclear whether a band combination is mandatory or optional to support simultaneous Tx/Rx.

In current spec, for example in Table 5.5B.4.1-1(Inter-band EN-DC configurations within FR1 (two bands)), following two notes are defined for simultaneous Tx/Rx. In which NOTE3 means non-simultaneous Tx/Rx is only supported for the band combination, and NOTE7 means simultaneous Rx/Tx is only supported for the band combination.

NOTE 3: The minimum requirements apply only when there is non-simultaneous Tx/Rx operation between E-UTRA and NR carriers. This restriction applies also for these carriers when applicable EN-DC configuration is part of a higher order EN-DC configuration.

NOTE 7: Applicable for UE supporting inter-band EN-DC with mandatory simultaneous Rx/Tx capability.

However, it is not clear for band combinations which neither have NOTE3 nor NOTE7 for example in Table 5.5B.4.1-1. For these band combinations it should be interpretated as the simultaneous Rx/Tx is optionally supported. This is also aligned with the UE capability below in 38.306.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2015805 Correction of CR0325 implementation**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0399 Cat: F (Rel-15)  
  
 Source: ETSI MCC*

**Abstract:**

Table 6.5B.3.3.2-1 is missing a correction of -38dB to -36dB in Notes as proposed in approved CR0325.

**Decision: Agreed.**

**R4-2015992 CR to TS 38.101-3 clarifications on indication of Single Uplink allowed for intra-band EN-DC and NE-DC**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0405 Cat: F (Rel-15)  
  
 Source: CHTTL*

**Abstract:**

For the intra-band EN-DC and NE-DC combinations, as the indication of single UL allowed is due to potential emission issues, there is no need to check whether the IM2 or IM3 falls into own primary downlink channel bandwidth or not when determining dual uplink is mandatory support or not.

The description for the equation of the self IM interference includes the intra-band configuration tables in the current specification, which might cause confusion.

**Decision: Return to.**

**R4-2015999 CR to TS 38.101-3 clarifications on indication of Single Uplink allowed for intra-band EN-DC and NE-DC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0406 Cat: A (Rel-16)  
  
 Source: CHTTL*

**Decision:** The document was **not treated**.

**R4-2016054 Correction of p-Max I.E and corresponding references**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0407 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Some references related to the IE p-maxUE-FR1 points wrongly to TS38.331 instead of TS36.331.

The definition/meaning of the I.E is different between TS36.331 and TS38.331. In TS38.331, the p-maxUE-FR1 is a field used for inter-node signaling (CG-ConfigInfo), so does not really belong to 38.101-3

The corresponding parameter to p-maxUE-FR1 for NR-DC in TS38.331 is p-UE-FR1.

**Discussion:**

The secretary wondered what is the correct Category? It reads F on the coversheet but the CR is allocated for A.

**Decision: Revised to R4-2016793.**

**R4-2016793 Correction of p-Max I.E and corresponding references**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0407 Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Some references related to the IE p-maxUE-FR1 points wrongly to TS38.331 instead of TS36.331.

The definition/meaning of the I.E is different between TS36.331 and TS38.331. In TS38.331, the p-maxUE-FR1 is a field used for inter-node signaling (CG-ConfigInfo), so does not really belong to 38.101-3

The corresponding parameter to p-maxUE-FR1 for NR-DC in TS38.331 is p-UE-FR1.

**Discussion:**

The secretary wondered what is the correct Category? It reads F on the coversheet but the CR is allocated for A.

**Decision: Return to.**

**R4-2016055 Correction of p-Max I.E and corresponding references**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0408 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Some references related to the IE p-maxUE-FR1 points wrongly to TS38.331 instead of TS36.331.

The definition/meaning of the I.E is different between TS36.331 and TS38.331. In TS38.331, the p-maxUE-FR1 is a field used for inter-node signaling (CG-ConfigInfo), so does not really belong to 38.101-3

The corresponding parameter to p-maxUE-FR1 for NR-DC in TS38.331 is p-UE-FR1.

There is an incorrect reference to p-maxUE-FR1 in the NE-DC clause, this needs to change to p-UE-FR1.

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-16 on the coversheet but the CR is allocated for Rel-15.

**Decision: Revised to R4-2016792.**

**R4-2016792 Correction of p-Max I.E and corresponding references**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0408 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Some references related to the IE p-maxUE-FR1 points wrongly to TS38.331 instead of TS36.331.

The definition/meaning of the I.E is different between TS36.331 and TS38.331. In TS38.331, the p-maxUE-FR1 is a field used for inter-node signaling (CG-ConfigInfo), so does not really belong to 38.101-3

The corresponding parameter to p-maxUE-FR1 for NR-DC in TS38.331 is p-UE-FR1.

There is an incorrect reference to p-maxUE-FR1 in the NE-DC clause, this needs to change to p-UE-FR1.

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-16 on the coversheet but the CR is allocated for Rel-15.

**Decision: Return to.**

**R4-2016469 On simultaneous Rx/Tx UE capability**

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

**Abstract:**

Proposal 1: If the simultaneous capability of the fallback mode is different from that of the higher order combination, the network shall also refer to the fallback mode capability to decide the UL/DL scheduling for the band combination. Some clarification may be needed in RAN2 specification. Draft LS should be sent to RAN2 for the clarification.

Proposal 2: For FDD-TDD CA/EN-DC band combinations, remove the indication of mandatory simultaneous Rx/Tx operation condition in the spec, instead, only indicate non-simultaneous Rx/Tx for the band combination if identified, and by default UE shall report simultaneous Rx/Tx capability for two-band FDD-TDD band combinations.

Proposal 3: The restriction note similar to non-simultaneous Tx/Rx operation should also be considered for fall back mode to support mandatory simultaneous Tx/Rx operation.

Proposal 4: Revise the Notes in the spec to make the capability consistent for all of the fall back and higher order combinations for TDD-TDD and TDD-FDD CA/EN-DC combinations.

**Decision: Noted.**

**R4-2014917 LS response on simultaneous Rx/Tx for inter-band NR-DC**

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

**Decision: Noted.**

**R4-2016001 Draft reply LS on simultaneous Rx/Tx for inter-band NR-DC**

*Type: LS out For: (not specified)  
 to RAN2  
 Source: ZTE Wistron Telecom AB*

**Decision: Noted.**

**R4-2016472 CR for TS 38.101-3: correction CR for simultaneous Tx/Rx operation (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0415 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Simultaneous Rx/Tx capability for TDD-TDD and TDD-FDD inter-band NR CA, SUL or inter-band EN-DC configurations should be a per band combination per band pair capability rather than a per BC capability. Two-band combination is the basis for reporting such a capability.

**Decision: Return to.**

**R4-2016473 CR for TS 38.101-3: correction CR for simultaneous Tx/Rx operation (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0416 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**R4-2016482 CR for TS 38.101-3: correction of power class for EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0418 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

As clarified in the specifcation if UE indicates IE maxNumberSRS-Ports-PerResource = n2 in NR standalone operation mode, the said UE shall meet the NR requirements for either power class 2 or power class 3 in EN-DC within FR1 if UE indicates IE maxNumberSRS-Ports-PerResource = n1 for EN-DC on this NR band. However, there is no UE capabiliity to indicate the power class if it is different from that of SA mode. Since the requirements should be implementation agnostic, the lower bound of PCMAX\_L,f,c,,NR can only take that for PC3.

**Decision: Return to.**

**R4-2016485 CR for 38.101-3 Correction on EN-DC synchronous carriers (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0419 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The statement (note 10 and note 11) specifies some conditions for UE to meet corresponding EN-DC requirements. However, such conditions can only be met under co-located deployment scenario.

According to agreed WF in R4-1711964, add an additional Note to make it clear that band combination with Note 10 and Note 11 can only work under co-located scenario in this release of the specification.

**Decision: Revised to R4-2016794.**

**R4-2016794 CR for 38.101-3 Correction on EN-DC synchronous carriers (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0419 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The statement (note 10 and note 11) specifies some conditions for UE to meet corresponding EN-DC requirements. However, such conditions can only be met under co-located deployment scenario.

According to agreed WF in R4-1711964, add an additional Note to make it clear that band combination with Note 10 and Note 11 can only work under co-located scenario in this release of the specification.

**Decision: Return to.**

**R4-2016486 CR for 38.101-3 Correction on EN-DC synchronous carriers (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0420 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**R4-2016492 CR for TS 38.101-3: correction of delta Tib for UE supporting multiple band combinations (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0421 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For UE supporting multiple band combinations, ∆TIB,c could be different for these combinations. Unlike ∆RIB,c , how to use ∆TIB,c in this case is not clearly specified.

**Decision: Return to.**

**R4-2016493 CR for TS 38.101-3: correction of delta Tib for UE supporting multiple band combinations (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0422 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**R4-2016496 CR for TS 38.101-3: correction of spurious emission band UE co-existence (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0423 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For Rel-15 EN-DC combos listed in summary of change, the requirements for spurious emission band UE co-existence are incorrect.

**Decision: Revised to R4-2016791.**

**R4-2016791 CR for TS 38.101-3: correction of spurious emission band UE co-existence (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0423 Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For Rel-15 EN-DC combos listed in summary of change, the requirements for spurious emission band UE co-existence are incorrect.

**Decision: Return to.**

**R4-2016497 CR for TS 38.101-3: correction of spurious emission band UE co-existence (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0424 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For Rel-16 DC\_13\_n66, The requirements for spurious emission UE co-existence was incorrect.

Corrections to Rel-15 combos need to be mapped in Rel-16 specification.

**Decision:** The document was **not treated**.

**R4-2016498 Adding delta TIB requirement for DC\_2-7-7-13\_n66**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0425 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The delta TIB requirement for DC\_2-7-7-13\_n66 was missing in 38.101-3.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016844.**

**R4-2016844 Adding delta TIB requirement for DC\_2-7-7-13\_n66**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0425 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The delta TIB requirement for DC\_2-7-7-13\_n66 was missing in 38.101-3.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016595 on UE capability for intra-band ENDC and LS to RAN2**

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

**Decision: Withdrawn.**

##### 4.2.3.2 [FR1+FR2] Maintenance for Transmitter characteristics involving both FR1 and FR2 [NR\_newRAT-Core]

**R4-2015034 CR to TS 38.101-3: Some corrections on the ENDC**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0384 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

First, the requirements clauses with suffix D in TS38.101-2 are defined for UL-MIMO, which means it is no need to be considered for NR CA operation.

Second, for spectrum emission mask requirements for intra-band non-contiguous EN-DC should be defined generally, which is for sub-block, rather than CC.

Last, for intra-band non-contiguous EN-DC, no need to consider TS38.101-2 for ACLR requirements.

**Decision: Revised to R4-2016991.**

**R4-2016991 CR to TS 38.101-3: Some corrections on the ENDC**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0384 Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Abstract:**

First, the requirements clauses with suffix D in TS38.101-2 are defined for UL-MIMO, which means it is no need to be considered for NR CA operation.

Second, for spectrum emission mask requirements for intra-band non-contiguous EN-DC should be defined generally, which is for sub-block, rather than CC.

Last, for intra-band non-contiguous EN-DC, no need to consider TS38.101-2 for ACLR requirements.

**Decision: Return to.**

**R4-2015035 CR to TS 38.101-3: Some corrections on the ENDC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0385 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision:** The document was **not treated**.

##### 4.2.3.3 [FR1] Maintenance for Receiver characteristics within FR1 [NR\_newRAT-Core]

**R4-2014165 CR CatF Cross Band Noise DC\_1\_n40\_highBW**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0356 Cat: F (Rel-15)  
  
 Source: Qualcomm*

**Abstract:**

Missing cross band noise MSD for various interband ENDC band combinations with large NR UL BW

**Decision: Return to.**

**R4-2014166 CR CatA Cross Band Noise DC\_1\_n40\_hignBW**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0357 Cat: A (Rel-16)  
  
 Source: Qualcomm*

**Abstract:**

Missing cross band noise MSD for various interband ENDC band combinations with large NR UL BW

**Decision:** The document was **not treated**.

**R4-2014682 UL output power for spurious response and general Rx**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0369 Cat: F (Rel-15)  
  
 Source: Anritsu corporation, Apple Inc.*

**Abstract:**

Closely associated to the previously agreed CR to OoBB requirements (R4-2011936/2010047), same definitions of UL output power need to be applied also to the following spurious response requirements:

7.7B.3 Inter-band EN-DC within FR1

7.7B.3a Inter-band NE-DC within FR1

Related to above, there is an inconsistency that the current definitions of 7.7B.3a spurious response for inter-band NE-DC within FR1 are not aligned with 7.6B.3.3a (OoBB) Inter-band NE-DC within FR1.

Similar output power setting also needs to be updated for intra-band non-contiguous EN-DC Rx requirements in clause 7.1.

Incorrect clause referencing numbers for inter-band EN-DC/NE-DC combinations.

**Decision: Return to.**

**R4-2014683 UL output power for spurious response and general Rx**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0370 Cat: A (Rel-16)  
  
 Source: Anritsu corporation, Apple Inc.*

**Decision:** The document was **not treated**.

**R4-2015796 CR to correct MSD of DC\_1A-41A\_n77A&n78A**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0397 Cat: F (Rel-15)  
  
 Source: KDDI Corporation*

**Decision: Agreed.**

**R4-2015797 CR to correct MSD of DC\_1A-41A\_n77A&n78A**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0398 Cat: F (Rel-16)  
  
 Source: KDDI Corporation*

**Abstract:**

MSD test points are not correct for the following combinations

DC\_1A-41A\_n77A

DC\_1A-41A\_n78A

**Decision: Agreed.**

**R4-2016085 CR to 38.101-3 DC\_1A-20A\_n28A Missing MSD**

*Type: draftCR For: Endorsement  
 38.101-3 v15.11.0  
 Source: VODAFONE Group Plc*

**Abstract:**

MSD test points for intermodulation interference due to dual uplink operation for PC3 in DC\_1A-20A\_n28A are missing.

**Decision: Withdrawn.**

**R4-2016087 CR to 38.101-3 DC\_1A-20A\_n28A Missing MSD**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: VODAFONE Group Plc*

**Abstract:**

MSD test points for intermodulation interference due to dual uplink operation for PC3 in DC\_1A-20A\_n28A are missing.

**Decision: Withdrawn.**

**R4-2016225 Correction of applicability of 2Rx requirements**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0409 Cat: F (Rel-15)  
  
 Source: vivo*

**Abstract:**

In RAN4#96-e meeting, it’s agreed that UE supporting 4Rx can skip 2Rx requirement testing for Rx cases except for single carrier REFSENS. The corresponding CR R4-2011752 was agreed for SA Rx cases, but NSA Rx cases have not been updated yet.

**Decision: Revised to R4-2016990.**

**R4-2016990 Correction of applicability of 2Rx requirements**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0409 Cat: F (Rel-15)  
  
 Source: vivo*

**Abstract:**

In RAN4#96-e meeting, it’s agreed that UE supporting 4Rx can skip 2Rx requirement testing for Rx cases except for single carrier REFSENS. The corresponding CR R4-2011752 was agreed for SA Rx cases, but NSA Rx cases have not been updated yet.

**Decision: Return to.**

**R4-2016226 CR to TS38.101-3[R16] Applicability of 2Rx requirements**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0410 Cat: A (Rel-16)  
  
 Source: vivo*

**Decision:** The document was **not treated**.

##### 4.2.3.4 [FR1+FR2] Maintenance for Receiver characteristics involving both FR1 and FR2 [NR\_newRAT-Core]

## 5 LTE maintenance (up to Rel15) [WI code or TEI]

### 5.2 UE RF requirements [WI code or TEI]

**R4-2016607 Email discussion summary for [97e][105] LTE\_Maintenance**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016949.**

**R4-2016949 Email discussion summary for [97e][105] LTE\_Maintenance**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014311 Clarifications and corrections on UE co-ex requirements(R15)**

*Type: CR For: Agreement  
 36.101 v15.12.0 CR-5681 Cat: F (Rel-15)  
  
 Source: SoftBank Corp.*

**Abstract:**

UE co-ex table for 2-bands CA(Table 6.6.3.2A-0) includes additional requirements (A-MPR required) and errors remain in UE co-ex tables.

**Decision: Return to.**

**R4-2014312 Clarifications and corrections on UE co-ex requirements(R16)**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5682 Cat: A (Rel-16)  
  
 Source: SoftBank Corp.*

**Abstract:**

UE co-ex table for 2-bands CA(Table 6.6.3.2A-0) includes additional requirements (A-MPR required) and errors remain in UE co-ex tables.

**Decision:** The document was **not treated**.

**R4-2014896 Coexistence cleanup for 36101 Rel15**

*Type: CR For: Agreement  
 36.101 v15.12.0 CR-5685 Cat: F (Rel-15)  
  
 Source: Apple Inc.*

**Abstract:**

Rel-15 features several band protections which are not technical possible due to sometimes TDD bands with overlapping regions are protected or similar issues. The CR focuses on correcting false protections so that a UE will not face technical impossible emission requirements.

**Decision: Agreed.**

**R4-2015549 CR for 36.101 to clarify the SCS supports for LTE MBMS (Rel-14)**

*Type: CR For: Agreement  
 36.101 v14.16.0 CR-5688 Cat: F (Rel-14)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the agreement in R4-2012604, UE doesn’t have to support all of the SCS, if UE support LTE MBMS.

For MBMS feature, there is no need to meet the minimum requirements of transmitter characteristics for UE.

**Decision: Revised to R4-2016796.**

**R4-2016796 CR for 36.101 to clarify the SCS supports for LTE MBMS (Rel-14)**

*Type: CR For: Agreement  
 36.101 v14.16.0 CR-5688 Cat: F (Rel-14)  
  
 Source: Huawei, HiSilicon, ZTE*

**Abstract:**

Based on the agreement in R4-2012604, UE doesn’t have to support all of the SCS, if UE support LTE MBMS.

For MBMS feature, there is no need to meet the minimum requirements of transmitter characteristics for UE.

**Decision: Return to.**

**R4-2015550 CR for 36.101 to clarify the SCS supports for LTE MBMS (Rel-15)**

*Type: CR For: Agreement  
 36.101 v15.12.0 CR-5689 Cat: A (Rel-15)  
  
 Source: Huawei, HiSilicon, ZTE*

**Decision:** The document was **not treated**.

**R4-2015551 CR for 36.101 to clarify the SCS supports for LTE MBMS (Rel-16)**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5690 Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon, ZTE*

**Decision:** The document was **not treated**.

**R4-2015807 Test frequencies for NB-IOT UE in standalone operation**

*Type: other For: Discussion  
 Source: Sony*

**Abstract:**

Observation 1: TS 36.104 test conditions (test frequencies) for both stand-alone and guard-band NB-IoT operation may conflict with FCC band-edge spectrum emission requirements.

Observation 2: 100 kHz offset for NB-IoT network deployments may solve the violation of the FCC regulation.

Proposal 1: Send an LS to RAN5 with proposal to exclude the first and last EARFCNs in TS 36.104 test frequencies for both stand-alone and guard-band IoT operation modes for all frequency bands were FCC regulation applies.

**Decision: Noted.**

**R4-2016035 CR Correction to B72 coex - CA\_NS\_08 - Band 10 protection 36.101 Rel15**

*Type: CR For: Agreement  
 36.101 v15.12.0 CR-5702 Cat: F (Rel-15)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Three combined CR according to meeting guidelines:

- Restore Band 72 list of protected bands, ie B72 and B31,

- Band 10 protection removal has been agreed in R4-2011521. This CR applies this correction to Release 15,

- Allow CA A-MPR for inner region CA\_NS\_08 allocations

**Decision: Return to.**

## 6 Rel-16 Work Items for LTE

### 6.4 R16 LTE maintenance [WI code]

#### 6.4.1 BS RF requirements [WI code]

#### 6.4.2 UE RF requirements [WI code]

**R4-2014045 Correction of B88 UL EARFCN**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5676 Cat: F (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

In LTE, the EARFCN should be unique for each band. However, in the current spec the UL starting EARFCN of band 88 equals to the UL end EARFCN of band 87.

**Decision: Agreed.**

**R4-2014162 LTE CA\_NS\_04 PC2 256QAM AMPR**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5677 Cat: F (Rel-16)  
  
 Source: Qualcomm Inc.*

**Decision: Withdrawn.**

**R4-2014163 LTE CA\_NS\_04 PC2 256QAM AMPR**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5678 Cat: F (Rel-16)  
  
 Source: Qualcomm Inc.*

**Decision: Withdrawn.**

**R4-2014164 CR CatF LTE CA\_NS\_04 PC2 256QAM AMPR**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5679 Cat: F (Rel-16)  
  
 Source: Qualcomm*

**Abstract:**

CA\_NS\_04 256QAM AMPR is missing.

**Decision: Return to.**

**R4-2014510 LTE CA corrections**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5683 Cat: F (Rel-16)  
  
 Source: Nokia*

**Abstract:**

R4-2006725 was not implemented properly.

CA\_13A-48A-48A-66A disappeared from Table 5.6A.1-2a in v16.6.0 with out a CR and is stil in clasue 7 and errors to other configurations emerged.

CA\_2A-48E-66A-66A has wrong aggregated BW. CA\_1A-18A-41C has invalid BCS reference.

**Decision: Agreed.**

**R4-2014511 Band 88 and 87 bracket removal**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5684 Cat: F (Rel-16)  
  
 Source: Nokia*

**Abstract:**

RAN5 is developping test cases for bands 87 and 88 but those these bands have brackets in RAN4 M2 REFSENS requirement which means that the requriement is untestable.

**Decision: Agreed.**

**R4-2014897 Coexistence cleanup for 36101 Rel16**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5686 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

Rel-16 features several band protections which are not technical possible due to sometimes TDD bands with overlapping regions are protected or similar issues. The CR focuses on correcting false protections so that a UE will not face technical impossible emission requirements.

**Decision: Return to.**

**R4-2016008 LTE CA\_NS\_08 A-MPR Correction**

*Type: discussion For: Approval  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this paper we propose a correction to the inner 0dB A-MPR region which is captured in subsequent Change Requests. Since all B42 networks are synchronized, we intend in future meetings to pursue the removal of CA\_NS\_08 requirements [1] in coordination with the relevant regulatory bodies, e.g. CEPT.

**Decision: Noted.**

**R4-2016040 CR Correction to B72 coex - CA\_NS\_08 - Band 10 protection 36.101 Rel16**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5703 Cat: A (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Three combined CR according to meeting guidelines:

- Restore Band 72 list of protected bands, ie B72 and B31,

- Band 10 protection removal has been agreed in R4-2011521. This CR applies this correction to Release 15,

- Allow CA A-MPR for inner region CA\_NS\_08 allocations

**Decision: Return to.**

**R4-2016129 CR to TS 36.101 clarifications on supported SCS for UE supporting LTE MBMS**

*Type: CR For: Agreement  
 36.101 v14.16.0 CR-5704 Cat: F (Rel-14)  
  
 Source: ZTE Corporation*

**Abstract:**

In the existing spec TS36.101, there was some ambiguity existing for UE supporting LTE MBMS that whether all SCS should be supported. Basd on the agreement in R4-2012604, MBMS UE doesn’t have to support all of the SCS, if UE support LTE MBMS.

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-15 on the coversheet but the CR is allocated for Rel-14.

**Decision: Not pursued.**

**R4-2016130 CR to TS 36.101 clarifications on supported SCS for UE supporting LTE MBMS**

*Type: CR For: Agreement  
 36.101 v15.12.0 CR-5705 Cat: A (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

**R4-2016131 CR to TS 36.101 clarifications on supported SCS for UE supporting LTE MBMS**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5706 Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

**R4-2016340 CR for editorial corrections 36.101**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5707 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 36.101

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016795.**

**R4-2016795 CR for editorial corrections 36.101**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5707 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 36.101

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016426 LTE CA\_NS\_04 PC2 256QAM AMPR**

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

**Abstract:**

Observation 1: The LTE 256QAM CA\_NS\_04 back-off should be at least be allowed the same back-off as the single CC NR DFT-s-OFDM 256QAM back-off within the similar RB boundary condition. Both back-off is calculated as max (MPR, AMPR).

Proposal: Modify Power Class 2 LTE CA\_NS\_04 AMPR as in Table 2.1

**Decision: Noted.**

**R4-2016450 CR for 36.101: Corrections for UL CA\_41D**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5708 Cat: F (Rel-16)  
  
 Source: T-Mobile USA*

**Abstract:**

There is an incorrect reference to a void section

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Agreed.**

## 7 Rel-16 non-spectrum related work items for NR

### 7.1 NR-based access to unlicensed spectrum [NR\_unlic]

#### 7.1.1 System Parameters [NR\_unlic-Core]

**R4-2016608 Email discussion summary for [97e][106] NR\_unlic\_SysParameters**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016950.**

**R4-2016950 Email discussion summary for [97e][106] NR\_unlic\_SysParameters**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014496 [NRU] Justification of band n96 channelization**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide justification for the band n96 channelization in order to remove brackets in 38.101-1.

Proposal: Brackets can be removed from 38.101-1 Table 5.4.2.3-3 values.

**Decision: Noted.**

##### 7.1.1.1 60kHz SCS [NR\_unlic-Core]

**R4-2014887 NR-U 60kHz SCS**

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

**Abstract:**

Proposal: For 60kHz SCS, adopt alternative 1 for intra-carrier guard bands (i.e. 5 RBs for in-carrier guard band with 23-5-23 pattern).

**Decision: Noted.**

**R4-2015694 On remaining issues for system parameters**

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

**Abstract:**

Proposal 1: It is proposed to revise channel raster, GSCN and transmission bandwidth configuration as proposed in section 2.

**Decision: Return to.**

##### 7.1.1.2 Wideband operation related [NR\_unlic-Core]

**R4-2014621 Discussion on LS on UE capability on wideband carrier operation for NR-U**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Abstract:**

Proposal 1: UL wide-band transmission mode 1 assumes that LBT is successful in all LBT sub-bands of BWP, irrespective of which sub-bands are scheduled with data.

Proposal 2: For UL WB operation, only Mode 1 is introduced as a basic feature, while Mode 2A and 2B should be removed according to Section 4.2.1.0.4 of TS 37.213.

Proposal 3: For DL WB operation, Mode 1 is introduced as a basic feature, while Mode 2 and 3 are introduced as optional features.

**Decision: Noted.**

**R4-2014888 NR-U wideband capabilities**

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

**Abstract:**

Proposal 1a: DL wide-band mode 1 can be construed as the baseline NR-U functionality.

Proposal 1b: DL wide-band mode 2 and 3 must be differentiated from mode 1.

Proposal 1c: Discuss further whether DL mode 2 and 3 should have separate capabilities or they can be covered by the same "mode 2/3" capability.

Proposal 1c: DL wide-band mode 1 UE performance requirements apply only if sub-bands of the configured channel contain serving gNB transmission.

Proposal 2a: A UE should perform LBT only for those sub-bands where data is scheduled.

Proposal 2b: If Proposal 2a is agreeable, then UL wide-band mode 1 is not needed as the UE behaviour will always correspond to UL mode 2A/2B.

Proposal 2c: It is preferable to have differentiation between 2A and 2B accounting for different UE LBT capabilities.

Proposal 3: Add the corresponding NR-U capabilities into the RAN WG4 feature list and inform other WGs about it.

**Decision: Noted.**

**R4-2015251 NR-U - On wideband operation**

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

**Abstract:**

Proposal 1: Agree that there is no difference in UE capability between DL Cases 2a/2b/3 and DL Case 4.

Proposal 2: No UE capabilities are needed for DL wideband operation.

Observation 1: RAN2 did not reserve any bits for non-agreed UE capabilities based on the RAN1 request.

Proposal 3: Further discus UE capabilities for UL wideband operation.

**Decision: Noted.**

**R4-2015972 Correction to the intra-cell guard band definition for wideband operation**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0550 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

For operations with shared spectrum access, the UE is configured with intra-cell guard bands by the IE intraCellGuardBandsDL-List and intraCellGuardBandsUL-List for the DL and UL, respectively. If these IEs as defined din 38.331 are absent, the guard-band sizes specified in sub-clause 5.3.3 of 38.101-1 applies, from 38.331,

intraCellGuardBandsDL-List, intraCellGuardBandsUL-List

List of intra-cell guard bands in a serving cell for operation with shared spectrum channel access. If not configured, the guard bands are defined according to 38.101-1 [15], see TS 38.214 [19], clause 7. For operation in licensed spectrum, and no UE action is required.

The 38.101-1 defines ‘wideband operation’ as

Wideband operation: For a UE that supports shared spectrum channel access, wideband operation refers to operation within a channel larger than 20 MHz in which intra-cell guard bands may be configured to distinguish individual RB-sets

hence not including operations with the 10 MHz and 20 MHz channel bandwidths. However, it is not obvious from sub-clause 5.3.3 that that there are no intra-cell GB for these bandwidths; the 20 MHz channel bandwidth is nevertheless included in Table 5.3.3-2 defining the nominal GB for wideband operations.

Since 38.331 refers to 38.101-1 for the guard-band sizes when the above IEs are absent, the intra-cell GB configuration must be clearly defined for all channel bandwidths.

**Decision: Revised to R4-2016797.**

**R4-2016797 Correction to the intra-cell guard band definition for wideband operation**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0550 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

For operations with shared spectrum access, the UE is configured with intra-cell guard bands by the IE intraCellGuardBandsDL-List and intraCellGuardBandsUL-List for the DL and UL, respectively. If these IEs as defined din 38.331 are absent, the guard-band sizes specified in sub-clause 5.3.3 of 38.101-1 applies, from 38.331,

intraCellGuardBandsDL-List, intraCellGuardBandsUL-List

List of intra-cell guard bands in a serving cell for operation with shared spectrum channel access. If not configured, the guard bands are defined according to 38.101-1 [15], see TS 38.214 [19], clause 7. For operation in licensed spectrum, and no UE action is required.

The 38.101-1 defines ‘wideband operation’ as

Wideband operation: For a UE that supports shared spectrum channel access, wideband operation refers to operation within a channel larger than 20 MHz in which intra-cell guard bands may be configured to distinguish individual RB-sets

hence not including operations with the 10 MHz and 20 MHz channel bandwidths. However, it is not obvious from sub-clause 5.3.3 that that there are no intra-cell GB for these bandwidths; the 20 MHz channel bandwidth is nevertheless included in Table 5.3.3-2 defining the nominal GB for wideband operations.

Since 38.331 refers to 38.101-1 for the guard-band sizes when the above IEs are absent, the intra-cell GB configuration must be clearly defined for all channel bandwidths.

**Decision: Return to.**

**R4-2016438 Wideband capability for NR-U**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Abstract:**

Proposal: From a RAN4 perspective, none of the feature groups is needed for Rel-16 since requirements are not available or the feature group is already part of the baseline assumption that all UE’s are expected to support.

**Decision: Noted.**

##### 7.1.1.3 Others [NR\_unlic-Core]

**R4-2014889 NR-U CA bandwidth classes**

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

**Abstract:**

Proposal 1: Revise NR CA BW classes definition based on the changes shown in Table 2.1-3 to support NR-U intra-band contiguous CA.

Proposal 2: Merge NR-U CA configurations CA\_n46G, CA\_n46H, and CA\_n46I into CA\_n46M, n46N, and n46O respectively as shown in Table 2.2-2.

Proposal 3: Remove CA BW class “I” from NR-U DL CA Rx requirements for ACS, in-band blocking, and out-of-band blocking as it can be covered by CA BW class “O”.

**Decision: Noted.**

**R4-2015973 Correction to CA bandwidth classes M, N and O**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0551 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

The aggregated bandwidth of CA BW classes M, N and O should support bandwidth combinations down to 10 + 2\*20 MHz, 3\*20 MHz and 4\*20 MHz, respectively. This is not allowed by the strict inequalities in the lower limits for M and N.

The upper limits of the aggregated bandwidths are within square brackets, the tentative limits based on \*60 MHz. Aggregation of up to four carriers with 80 MHz and 100 MHz channel bandwidths is covered by the respective classes B, C, D and E. To that end, the square brackets for M and N can be removed. For 5 CC a new (general) CA BW class applicable for all relevant bands can be defined when needed.

Use of BCS is likely regardless of the value of the upper limit.

**Decision: Not pursued.**

**R4-2016123 Discussion on NR-U channel arrangement for 6GHz**

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

**Abstract:**

Proposal 1: further discuss how to apply the FCC requirements and AFC or non-AFC policy for the carriers across U-NII bands;

Observation: it is very challenging to achieve the required attenuation for lower edge and upper edge of 6GHz assuming -27dBm/MHz emission limit needed out of 6GHz band in FCC report.

Proposal 2: to achieve emission limit -27dBm/MHz required by FCC, either lower the BS output power or reserve more guard band or reserve guard band and put the fitter within the 6GHz band.

**Decision: Noted.**

**R4-2016501 NRU small enhancement and exception sheet leftovers beyond RAN4#97e**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we discuss the options to continue the work next year on some of the Release 16 NRU topics that are leftovers from the last NRU WI exception sheet.

Proposal: Companies views on NRU continuation work in 2021/Release 17 should be collected in order to enable small enhancement steps from Release 16 and devise a strategy for December plenary RAN#90e.

**Decision: Noted.**

#### 7.1.2 UE RF requirements [NR\_unlic-Core]

**R4-2016609 Email discussion summary for [97e][107] NR\_unlic\_UE\_RF**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016951.**

**R4-2016951 Email discussion summary for [97e][107] NR\_unlic\_UE\_RF**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014916 CR for TS 38.101-1: NR-U UE RF open requirements**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0521 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

To finalize the NR-U UE RF open requirements which were left in square brackets in current technical specifications.

**Decision: Not pursued.**

**R4-2015018 Architecture and REFSENS discussion for NR-U 6GHz**

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

**Abstract:**

Observation 1: There’s no agreed FE architecture for NR-U evaluation assumption

Observation 2: FE architecture for NR-U bands would be similar to the existing L/M/H bands

Observation 3: Band switch shall be considered for the NR-U bands that was not mentioned/accounted in LAA FE architecture assumption

**Decision: Noted.**

**R4-2015927 CR to add NR-U EN-DC combinations**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0402 Cat: B (Rel-17)  
  
 Source: Ericsson, Charter Communication, T-Mobile US*

**Abstract:**

CR to add NR-U EN-DC combinations. Same CR as R4-2008431 that was endorsed at RAN4 95-e

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-16 on the coversheet but the CR is allocated for Rel-17. If neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016801.**

**R4-2016801 CR to add NR-U EN-DC combinations**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0402 Cat: B (Rel-16)  
  
 Source: Ericsson, Charter Communication, T-Mobile US*

**Abstract:**

CR to add NR-U EN-DC combinations. Same CR as R4-2008431 that was endorsed at RAN4 95-e

**Discussion:**

The secretary wondered what is the correct Release? It reads Rel-16 on the coversheet but the CR is allocated for Rel-17. If neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

##### 7.1.2.1 Transmitter characteristics [NR\_unlic-Core]

**R4-2014903 PC5 NR-U MPR for NS\_53 and NS\_54**

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

**Abstract:**

Proposal: Remove brackets for all A-MPR found in NS\_53 and NS\_54

**Decision: Noted.**

**R4-2015697 A-MPR evaluation for NR-U**

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

**Abstract:**

Proposal 1: A-MPR for NS\_54 is defined in Table 2-2.

**Decision: Noted.**

**R4-2016436 Removal of square brackets for 38.101-1 NR-U**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0558 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Some requirements were placed in square brackets in the agreed RP-202117 to allow an opportunity for companies to further check.

**Discussion:**

The secretary commented that (on the coversheet) the specification number should read 38.101-1 instead of TS38.101-1.

**Decision: Revised to R4-2016799.**

**R4-2016799 Removal of square brackets for 38.101-1 NR-U**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0558 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Some requirements were placed in square brackets in the agreed RP-202117 to allow an opportunity for companies to further check.

**Discussion:**

The secretary commented that (on the coversheet) the specification number should read 38.101-1 instead of TS38.101-1.

**Decision: Return to.**

##### 7.1.2.2 Receiver characteristics [NR\_unlic-Core]

**R4-2014185 Discussion and TP for NR-U UE ACS**

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

**Abstract:**

Observation 1: First, Interferer to signal ratio could be adopted and calculated, and then converted into NR-U ACS and WiFi ACR.

Observation 2: In terms of NR-U UE and WiFi STA interferer to signal ratio, the performance comparison over channel bandwidths in Table 2 can be adopted to define NR-U UE ACS requirement.

Proposal 1: ACS for NR-U UE is 25dB for 20MHz channel bandwidth

**Decision: Noted.**

**R4-2014497 [NRU] UE REFSENS for NRU Band n96**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide justification for REFSENS values for n96 in order to remove bracket in 38.101-1.

**Decision: Noted.**

**R4-2015799 UE Reference Sensitivity considerations for band n96**

*Type: Work Plan For: Approval  
 Source: Charter Communications, Inc*

**Decision: Noted.**

**R4-2015803 CR to add NR-DC\_n48-n46 combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Charter Communications, Inc*

**Abstract:**

Adding NR-U band combination

**Decision: Revised to R4-2016802.**

**R4-2016802 CR to add NR-DC\_n48-n46 combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Charter Communications, Inc*

**Abstract:**

Adding NR-U band combination

**Decision: Return to.**

**R4-2015974 Correction to receiver requirements for shared spectrum channel access**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0552 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Correct the in-band and out-of-band blocking requirement and add requirements for spurious response.

It has been agreed that the in-band blocking (IBB) requirements should be verified with a 20 MHz interferer bandwidth, the nominal channel bandwidth assumed for the 5 GHz and 6 GHz band in regulatory provisions and that typical for an interferer in these bands for unlicensed operations. For wanted channel bandwidths greater than 20 MHz, the wanted signal level is scaled with the said channel bandwidth.

For intra-band contigous CA IBB requirements, both the wanted signal level and the interferer bandwidth are scaled.

The spurious response requirement in clause 7.7 for licensed bands do not apply for operations with shared spectrum channel access (different blocker interferer range).

**Decision: Revised to R4-2016800.**

**R4-2016800 Correction to receiver requirements for shared spectrum channel access**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0552 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Correct the in-band and out-of-band blocking requirement and add requirements for spurious response.

It has been agreed that the in-band blocking (IBB) requirements should be verified with a 20 MHz interferer bandwidth, the nominal channel bandwidth assumed for the 5 GHz and 6 GHz band in regulatory provisions and that typical for an interferer in these bands for unlicensed operations. For wanted channel bandwidths greater than 20 MHz, the wanted signal level is scaled with the said channel bandwidth.

For intra-band contigous CA IBB requirements, both the wanted signal level and the interferer bandwidth are scaled.

The spurious response requirement in clause 7.7 for licensed bands do not apply for operations with shared spectrum channel access (different blocker interferer range).

**Decision: Return to.**

**R4-2016294 REFSENS for n96**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Abstract:**

Observation 1: The wider bandwidth will lower the Q-factor, which will increase the noise figure of the receiver. Consequentially the increase of the NF will affect directly the REFSENS

Proposal 1: For band n96 a margin of 0.5 dB should be considered compared to band n46 for the REFSENS requirement, as shown in Table 1.

**Decision: Noted.**

**R4-2016437 Reference sensitivity for NR-U band n96**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Discussion:**

s

**Decision: Noted.**

#### 7.1.3 Band combination related (Analysis, TPs, etc.) [NR\_unlic-Core]

**R4-2014954 Discussion on NR-U CA bandwidth classes**

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

**Abstract:**

The notation of NR-U CA BW class is still unclear and need further clarifications.

Observation 1: The fallback group for NR CA bandwidth class “D” and “E” in the current specification does not match the agreement captured in [4].

Proposal 1: Keep the description of FBG 3 for NR CA bandwidth classes D and E unchanged in the current specification as it is.

Proposal 2: It is reasonable for classes M and N to capture sign “=” in the lower limits of aggregated channel bandwidth 50MHz and 80MHz respectively.

Proposal 3: It is suggested not to use notation N for NR CA BW class in FR1.

**Decision: Noted.**

**R4-2014955 CR to TS 38.101-1 on NR CA bandwidth classes for unlicensed spectrum (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0522 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

The NR bandwidth classes in Table 5.3A.5-1 have been extended with fallback group 3 (FBG 3) for shared spectrum operating bands in RP-202117. However, for the lower limits of NR CA bandwidth classes “M”, 50MHz should cover one 10MHz channel bandwidth (10 + 20 + 20 MHz to cover 50 MHz allocation). And for class N, the lower limit 80MHz should be set for supporting (4cc x 20MHz) CA combinations. Furthermore, for the newly introduced CA BW class “N”, since NR band number begins with the letter “n”, CA BW class “N” is absent in FR2 to avoid unnecessary confusion. Therefore, it is suggested not to introduce CA BW class “N” in FR1 simlar to FR2.

**Decision: Revised to R4-2016798.**

**R4-2016798 CR to TS 38.101-1 on NR CA bandwidth classes for unlicensed spectrum (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0522 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

The NR bandwidth classes in Table 5.3A.5-1 have been extended with fallback group 3 (FBG 3) for shared spectrum operating bands in RP-202117. However, for the lower limits of NR CA bandwidth classes “M”, 50MHz should cover one 10MHz channel bandwidth (10 + 20 + 20 MHz to cover 50 MHz allocation). And for class N, the lower limit 80MHz should be set for supporting (4cc x 20MHz) CA combinations. Furthermore, for the newly introduced CA BW class “N”, since NR band number begins with the letter “n”, CA BW class “N” is absent in FR2 to avoid unnecessary confusion. Therefore, it is suggested not to introduce CA BW class “N” in FR1 simlar to FR2.

**Decision: Return to.**

### 7.3 5G V2X with NR sidelink [5G\_V2X\_NRSL]

#### 7.3.1 General [5G\_V2X\_NRSL]

**R4-2016610 Email discussion summary for [97e][108] 5G\_V2X\_NRSL\_UE\_RF**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016952.**

**R4-2016952 Email discussion summary for [97e][108] 5G\_V2X\_NRSL\_UE\_RF**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014972 CR on TS38.101-1 for NR V2X**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0525 Cat: F (Rel-16)  
  
 Source: vivo*

**Abstract:**

Con-current band combinations are introduced in TS 38.101-1, and the definition of con-current operation should also be introduced. PC2 related requirements were removed in the last meeting, and the related description should also be removed. Some other editorial errors need revising.

**Decision: Agreed.**

**R4-2016474 draft CR for 38.101-1 NR V2X FRC**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0566 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Clarification for Alpha value for SCI-2 and sub-channel size of resource pool

**Decision: Return to.**

#### 7.3.2 System parameters maintenance [5G\_V2X\_NRSL-Core]

#### 7.3.3 UE RF requirements maintenance [5G\_V2X\_NRSL-Core]

**R4-2014323 Correction on 5G V2X UE RF requirements in TS38.101-1 in rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0498 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update UE-to-UE coexistence requirmeents for 5G V2X UE in TS38.101-1.

**Decision: Revised to R4-2016803.**

**R4-2016803 Correction on 5G V2X UE RF requirements in TS38.101-1 in rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0498 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update UE-to-UE coexistence requirmeents for 5G V2X UE in TS38.101-1.

**Decision: Return to.**

**R4-2014325 Correction on update 5G V2X UE RF requirements in TR38.886**

*Type: CR For: Agreement  
 38.886 v16.1.0 CR-0004 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update Tx/Rx RF requirmeents for 5G V2X UE in TR38.886.

**Decision: Revised to R4-2016804.**

**R4-2016804 Correction on update 5G V2X UE RF requirements in TR38.886**

*Type: CR For: Agreement  
 38.886 v16.1.0 CR-0004 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update Tx/Rx RF requirmeents for 5G V2X UE in TR38.886.

**Decision: Return to.**

##### 7.3.3.1 Transmitter characteristics [5G\_V2X\_NRSL-Core]

**R4-2014321 UE-to-UE coexistence and other remaining issues for V2X operation**

*Type: other For: Approval  
 Source: LG Electronics France*

**Decision: Noted.**

**R4-2015333 CR on V2X bands reference table**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0535 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

The reference table 5.2E-1for V2X bands does not exist.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016805.**

**R4-2016805 CR on V2X bands reference table**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0535 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

The reference table 5.2E-1for V2X bands does not exist.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016447 Revision of inter-band V2X con-currency table for V2X\_n71A\_n47A**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0561 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

The con-currency table for V2X\_n71A-n47A has to be updated

**Decision: Not pursued.**

##### 7.3.3.2 Receiver characteristics [5G\_V2X\_NRSL-Core]

**R4-2016446 Revised V2X FRC tables**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0560 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Current FRC tables in 38.101-1 sets PSCCH PRBs=10 for all allocated resource block lengths. This leads to cases where the PSCCH is smaller than a sub-channel for sub-channel sizes 12 and 15.

According to RAN1 when the sub-channel size is <20 PRBs and the size of the PSCCH is less than the sub-channel size, a UE is not expected to choose a PSSCH DMRS pattern to be transmitted in the same OFDM symbol with PSCCH.

Such a configurations limits the ability of the UE to use anything except the 2-symbol DMRS pattern with sub-channel sizes of 12 and 15 PRBs, placing signficiant restrictions on the overall system and could lead to performance degradation in moderate and high Doppler scenarios. Therefore, it is best to avoid using such a configuration.

This CR proposes a FRC configuration where the number of PSCCH PRBs is set equal to the subchannel size for sub-channel sizes <20. This allows PSSCH DMRS to be transmitted in the same OFDM symbol with PSSCH.

This permits more DMRS symbols per slot which will gives better performance in moderate and high doppler scenarios.

Additionally, some parameters that are required to calculate the TBS and decode the TB are missing. This CR introduces those parameters.

**Decision: Not pursued.**

#### 7.3.4 Concurrent operation maintenance (scenarios, requirements, etc) [5G\_V2X\_NRSL-Core]

**R4-2016611 Email discussion summary for [97e][109] 5G\_V2X\_NRSL\_UE\_Concurrent**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016953.**

**R4-2016953 Email discussion summary for [97e][109] 5G\_V2X\_NRSL\_UE\_Concurrent**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016806 WF on SL switching period**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016807 LS on SL switching priority**

*Type: LS out For: Approval  
 Source: Xiaomi*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014324 Correction on 5G V2X inter-band con-current UE RF requirements in TS38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0363 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update Tx/Rx RF requirmeents for 5G V2X UE in TS38.101-3.

**Decision: Revised to R4-2016810.**

**R4-2016810 Correction on 5G V2X inter-band con-current UE RF requirements in TS38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0363 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update Tx/Rx RF requirmeents for 5G V2X UE in TS38.101-3.

**Decision: Return to.**

##### 7.3.4.1 Transmitter characteristics [5G\_V2X\_NRSL-Core]

**R4-2014414 Discussion on switching period for NR V2X in ITS band**

*Type: discussion For: Approval  
 Source: CATT*

**Abstract:**

Proposal 1: To eliminate the performance impact, it is proposed to place the switching time including transient periods in one separate slot between LTE subframe and NR slot. The separate slot is dedicated to the switching time with each transient period located at the head part and tail part of the slot. The switching period 120 us is placed within the slot excluding where the transient periods are located.

Proposal 2: To specify the time masks for the switching between LTE SL and NR SL in Figure 1 and Figure 2.

**Decision: Noted.**

**R4-2014416 CR for 38.886, Time mask for TDM between NR V2X and LTE V2X in ITS band**

*Type: CR For: Agreement  
 38.886 v16.1.0 CR-0005 Cat: F (Rel-16)  
  
 Source: CATT*

**Abstract:**

The time mask for TDM operation between NR SL and LTE SL at n47 should be introduced in 38.886.

**Decision: Revised to R4-2016809.**

**R4-2016809 CR for 38.886, Time mask for TDM between NR V2X and LTE V2X in ITS band**

*Type: CR For: Agreement  
 38.886 v16.1.0 CR-0005 Cat: F (Rel-16)  
  
 Source: CATT*

**Abstract:**

The time mask for TDM operation between NR SL and LTE SL at n47 should be introduced in 38.886.

**Decision: Return to.**

**R4-2014596 General corrections for V2X sections in 38.101-3**

*Type: CR For: Endorsement  
 38.101-3 v16.5.0 CR-0368 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Some NR V2X section numbers have been denoted with suffix C. It was agreed that all NR V2X sections numbers will be denoted with suffix E. Also,in some instances the cross-referencing between NR V2X sections in 38.101-3 and 38.101-1 is not correct and needs to be fixed.

**Decision: Revised to R4-2016811.**

**R4-2016811 General corrections for V2X sections in 38.101-3**

*Type: CR For: Endorsement  
 38.101-3 v16.5.0 CR-0368 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Some NR V2X section numbers have been denoted with suffix C. It was agreed that all NR V2X sections numbers will be denoted with suffix E. Also,in some instances the cross-referencing between NR V2X sections in 38.101-3 and 38.101-1 is not correct and needs to be fixed.

**Decision: Return to.**

**R4-2014641 NR V2X inter-RAT Tx switch**

*Type: discussion For: Discussion  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

**R4-2014971 Further discussion on switching period for NR V2X**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2015253 CR for TS 38.101-3 switching period for V2X con-current operation**

*Type: CR For: (not specified)  
 38.101-2 v16.5.0 CR-0284 Cat: F (Rel-16)  
  
 Source: Xiaomi*

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

**R4-2015257 on switching period**

*Type: discussion For: Approval  
 Source: Xiaomi*

**Abstract:**

Proposal: To agree the switching period location with the usage of priority determined by the SCI formats scheduling the transmission as following：

1. If the UE has known the priority of LTE sidelink and NR sidelink before the switching then the switching period can be located in the slot/sub-frame of the lower priority sidelink.

2. If the UE doesn’t know the priority of the two sidelink or the priority is the same, then it is up to UE implementation to chose where to locate the switching period.

**Decision: Noted.**

**R4-2015267 CR for TS 38.101-3 switching period for V2X con-current operation**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0389 Cat: F (Rel-16)  
  
 Source: Beijing Xiaomi Electronics*

**Abstract:**

The switching period of V2X con-current operation has not been added in the specification. This CR is to complete this part.

**Decision: Not pursued.**

**R4-2016475 On NR V2X switching period**

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

**Abstract:**

Observation 1: No clear benefit for a longer switching time under the scheduling restriction condition.

Observation 2: The whole switching period together with transient period should be put on one side on LTE subframe or NR slot to avoid more wasted resource.

Observation 3: It’s not reasonable to put the switching period only at the NR V2X side.

Observation 4: Due to the scheduling restriction, no essential difference for options to put the switching period at either LTE sub-frame or NR slot.

Proposal: It is proposed to agree on the time masks for switching between E-UTRA SL and NR SL in the slot/SF on the RAT UE switches from.

**Decision: Noted.**

**R4-2016476 draft correction CR for TS 38.101-3: NR V2X con-current operation**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0417 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

There are some remaining issues are left to be finished for NR V2X con-current operation.

Tx: switching period requirement

**Decision: Not pursued.**

##### 7.3.4.2 Receiver characteristics [5G\_V2X\_NRSL-Core]

**R4-2014322 MSD Analysis results and harmonic reduction filter for V2X\_20A\_n38A**

*Type: other For: Approval  
 Source: LG Electronics France*

**Abstract:**

Proposal 1: RAN4 need to align the RF architecture for DC\_20\_n38 and V2X\_20\_n38. Based on the aligned RF architecture, RAN4 can decide the same additional ILs for both DC\_20\_n38 UE and V2X\_20\_n38 UE.

Proposal 2: RAN4 specify MSD levels for 10MHz CBW with 10.7dB = (10.3dB + 11.0dB)/2 based on shared antenna RF architecture with HTF for both DC\_20\_n38 UE and V2X\_20\_n38 UE.

**Decision: Noted.**

**R4-2014415 CR for TS 38.101-3, Time mask for TDM operation between NR V2X and LTE V2X in ITS band**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0364 Cat: F (Rel-16)  
  
 Source: CATT*

**Abstract:**

V2X\_47-n47 is operated with TDM mode and should not be considered as con-current operation.

The output power dynamics requirements for NR V2X should be introduced in TS 38.101-3.

**Decision: Revised to R4-2016808.**

**R4-2016808 CR for TS 38.101-3, Time mask for TDM operation between NR V2X and LTE V2X in ITS band**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0364 Cat: F (Rel-16)  
  
 Source: CATT*

**Abstract:**

V2X\_47-n47 is operated with TDM mode and should not be considered as con-current operation.

The output power dynamics requirements for NR V2X should be introduced in TS 38.101-3.

**Decision: Return to.**

### 7.5 Multi-RAT Dual-Connectivity and Carrier Aggregation enhancements [LTE\_NR\_DC\_CA\_enh]

#### 7.5.1 RF requirements maintenance [LTE\_NR\_DC\_CA\_enh-Core]

**R4-2016612 Email discussion summary for [97e][110] LTE\_NR\_DC\_CA\_enh\_RF**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016954.**

**R4-2016954 Email discussion summary for [97e][110] LTE\_NR\_DC\_CA\_enh\_RF**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014958 CR to TS 38.101-3 on intra-band contiguous EN-DC BW class (Rel-16)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0382 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

The intra-band contiguous EN-DC bandwidth class “AB” is missing in Table 5.3B-1 which has already been introduced in the specification.

**Decision:** The document was **not treated**.

**R4-2015036 CR to TS 38.307 on the definition of the duplex-mode for the band configurations**

*Type: CR For: Agreement  
 38.307 v15.6.0 CR-0037 Cat: F (Rel-15)  
  
 Source: ZTE Corporation, CHTTL*

**Abstract:**

In current 38.307 spec, there are no definitions for the ‘duplex-mode’ in the table. Due to there are lots of types of band configurations including ENDC, NR-CA, SUL, etc, it is necessary to add the NOTE in the table to describe the meaning of the ‘duplex-mode’ for a certain type of band configuration, especially more and more types of configurations will be added in future.

Also, several ‘FDD and TDD’ inter-band ENDC for PC3 are defined in Rel-15.

**Decision: Not pursued.**

**R4-2015037 CR to TS 38.307 on the definition of the duplex-mode for the band configurations**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR-0038 Cat: A (Rel-16)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Not pursued.**

**R4-2015556 Discussion on how to support EN-DC band combinations for Roaming UE**

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

**Decision: Noted.**

**R4-2016151 Draft Reply LS to RAN2 on cell-grouping UE capability for synchronous NR-DC**

*Type: LS out For: Approval  
 to RAN2  
 Source: Ericsson GmbH, Eurolab*

**Decision: Noted.**

**R4-2014486 Draft Reply LS on cell-grouping UE capability for synchronous NR-DC**

*Type: LS out For: Approval  
 to RAN2  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2014229 On cell-grouping UE capability for synchronous NR-DC**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2014230 Reply LS on cell-grouping UE capability for synchronous NR-DC**

*Type: LS out For: Approval  
 to RAN1, RAN2  
 Source: Apple*

**Decision: Revised to R4-2016812.**

**R4-2016812 Reply LS on cell-grouping UE capability for synchronous NR-DC**

*Type: LS out For: Approval  
 to RAN1, RAN2  
 Source: Apple*

**Decision: Return to.**

**R4-2016435 Correction to PCMAX for contiguous intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0414 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

An error seems to have been introduced into the specification during the implementation of R4-2000454. The configured maximum output power for E-UTRA cell group is not specified for contiguous intra-band EN-DC. Instead, the PCMAX for NR cell group is specified twice.

**Discussion:**

The secretary commented that (on the coversheet) the specification number should read 38.101-3 instead of TS38.101-3.

**Decision: Revised to R4-2016845.**

**R4-2016845 Correction to PCMAX for contiguous intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0414 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

An error seems to have been introduced into the specification during the implementation of R4-2000454. The configured maximum output power for E-UTRA cell group is not specified for contiguous intra-band EN-DC. Instead, the PCMAX for NR cell group is specified twice.

**Discussion:**

The secretary commented that (on the coversheet) the specification number should read 38.101-3 instead of TS38.101-3.

**Decision: Return to.**

**R4-2016487 On UE capability for distinguishing EN-DC implementation capable for different deployment scenarios**

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

**Decision: Noted.**

### 7.9 Enhancements on MIMO for NR [NR\_eMIMO]

#### 7.9.1 UE RF core requirements maintenance (38.101) [NR\_eMIMO-Core]

**R4-2016613 Email discussion summary for [97e][111] NR\_eMIMO\_UE\_RF**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016955.**

**R4-2016955 Email discussion summary for [97e][111] NR\_eMIMO\_UE\_RF**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

##### 7.9.1.1 DMRS enhancement with PI/2 BPSK [NR\_eMIMO-Core]

**R4-2016481 CR for TS 38.101-1: correction of Pi/2 BPSK**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0568 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

There was no evaluation of Pi/2 BPSK with new DMRS for intra-band CA in Rel-16. And there is no A-MPR table in clause 6.2A.2.1.

**Decision: Revised to R4-2016813.**

**R4-2016813 CR for TS 38.101-1: correction of Pi/2 BPSK**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0568 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

There was no evaluation of Pi/2 BPSK with new DMRS for intra-band CA in Rel-16. And there is no A-MPR table in clause 6.2A.2.1.

**Decision: Return to.**

##### 7.9.1.2 Uplink Tx Full Power transmission [NR\_eMIMO-Core]

**R4-2016480 On MPR for TxD and UL MIMO**

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

**Discussion:**

Chair: It is agreed that one set of MPR requirements should be adopted for both UL MIMO (including ULFPTx) and TxD

**Decision: Noted.**

### 7.11 RF requirements for NR frequency range 1 (FR1) [NR\_RF\_FR1]

#### 7.11.1 RF core requirements maintenance [NR\_RF\_FR1-Core ]

**R4-2016614 Email discussion summary for [97e][112] NR\_RF\_FR1\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016956.**

**R4-2016956 Email discussion summary for [97e][112] NR\_RF\_FR1\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016816 WF on DC location reporting for intra-band UL CA**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016817 LS on DC location reporting for intra-band UL CA**

*Type: LS out For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016042 CR Correction to NS\_27 and Band 10 protection 38101-1 Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0556 Cat: A (Rel-16)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This is a combined CR according to meeting guidelines:

A7 region contours do not match required back-off levels,

Band 10 protection removal has been agreed for LTE in R4-2011521. This CR applies this correction to relevant NR bands and NR CA combinations

**Decision: Agreed.**

##### 7.11.1.1 Intra-band contiguous DL CA for FR1 [NR\_RF\_FR1-Core]

**R4-2014956 CR to TS 38.101-1 on operating bands for intra-band CA (Rel-16)**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0523 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

For brevity, the operating bands for intra-band contiguous and non-contiguous CA in FR2 have been agreed to combine into one table. To be consistent with FR2, it is suggested in FR1 to use the same description of operating bands for intra-band contiguous and non-contiguous CA. In addition, section title for SUL bands should be moved from section 5.2B to 5.2C. NR band combination for SUL CA\_n78\_SUL\_n78-n86 should be corrected accordingly.

**Decision: Agreed.**

##### 7.11.1.2 Intra-band UL CA for FR1 power class 3 [NR\_RF\_FR1-Core]

**R4-2014171 CA\_n7B AMPR REFSENS**

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

**Decision: Noted.**

**R4-2014518 A-MPR definition for CA\_n7B, CA\_n48B, CA\_n41B and CA\_n41C**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0507 Cat: F (Rel-16)  
  
 Source: Nokia*

**Abstract:**

A-MPR is missing from CA configurations CA\_n7B, CA\_n41B, CA\_n41C and CA\_n48B altough these are already listed in specification as valid uplink configurations. CA\_7B needs MSD.

**Decision: Revised to R4-2016814.**

**R4-2016814 A-MPR definition for CA\_n7B, CA\_n48B, CA\_n41B and CA\_n41C**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0507 Cat: F (Rel-16)  
  
 Source: Nokia*

**Abstract:**

A-MPR is missing from CA configurations CA\_n7B, CA\_n41B, CA\_n41C and CA\_n48B altough these are already listed in specification as valid uplink configurations. CA\_7B needs MSD.

**Decision: Return to.**

**R4-2014519 Simulation results for CA\_7B A-MPR.**

*Type: discussion For: Discussion  
 Source: Nokia*

**Decision: Noted.**

**R4-2014909 FR1 intra-band UL NCCA frequency separation and power class**

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

**Decision: Noted.**

**R4-2016009 CA\_n7B 50MHz Measurements for A-MPR and MSD Test Points**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**R4-2016513 CR for intra-band UL CA non-contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0574 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR capture the agreement for intra-band UL non-contiguous CA in RAN4 #95e and 96-e meeting.

Since intra-band UL non-contiguous CA is introduced in Rel-16, the UL RF requirement shall be added.

**Decision: Revised to R4-2016815.**

**R4-2016815 CR for intra-band UL CA non-contiguous CA requirement**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0574 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR capture the agreement for intra-band UL non-contiguous CA in RAN4 #95e and 96-e meeting.

Since intra-band UL non-contiguous CA is introduced in Rel-16, the UL RF requirement shall be added.

**Decision: Return to.**

**R4-2016515 on FR1 intra-band UL CA Pcmax**

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

**Decision: Noted.**

##### 7.11.1.3 DC location for intra-band UL CA [NR\_RF\_FR1-Core]

**R4-2014714 DC location future compatible proposal**

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

**Decision: Noted.**

**R4-2014910 DC location for intra-band UL CA**

*Type: other For: Discussion  
 38.101-1 v..  
 Source: Apple Inc.*

**Decision: Noted.**

**R4-2015212 More on DC location reporting for Intra band UL CA**

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

**Abstract:**

This contribution shares identified issue on the 2nd candidate in R4-2011906 using permutations of all possible simultaneously activated BWPs within configured BWPs whose details were proposed in R4-2011472 and provides an alternative

**Decision: Noted.**

**R4-2015565 Clarification of DC location for intra-band UL CA**

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

**Decision: Noted.**

**R4-2015997 Future proof UE DC location signaling for intra-band UL CA**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

RAN4 should discuss the point further to find a future proof solution for FR1 and FR2 that covers DC location signalling in an UL CA operation and accounting for the BWP configuration for a larger number of CCs.

**Decision: Noted.**

**R4-2016514 on FR1 UL CA DC location**

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

**Decision: Noted.**

##### 7.11.1.4 Switching period between case 1 and case 2 [NR\_RF\_FR1-Core]

**R4-2014464 DL interruption for band combinations supporting carrier switching**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2015195 CR to 38.101-1 Add requirement on the UL CA configurations with no DL interruption**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0533 Cat: F (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

In RAN4 #96e, it was agreed in WF R4-2011731 that DL interruption is not allowed for some inter-band EN-DC and UL CA configurations. The exact EN-DC and UL CA configurations for which DL interruptions are not allowed will be captured in TS 38.101-1 and TS 38.101-3 respectively

**Decision: Revised to R4-2016818.**

**R4-2016818 CR to 38.101-1 Add requirement on the UL CA configurations with no DL interruption**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0533 Cat: F (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

In RAN4 #96e, it was agreed in WF R4-2011731 that DL interruption is not allowed for some inter-band EN-DC and UL CA configurations. The exact EN-DC and UL CA configurations for which DL interruptions are not allowed will be captured in TS 38.101-1 and TS 38.101-3 respectively

**Decision: Return to.**

**R4-2015196 CR to 38.101-3: Add requirement on the inter-band EN-DC with no DL interruption**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0386 Cat: F (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

In RAN4 #96e, it was agreed in WF R4-2011731 that DL interruption is not allowed for some inter-band EN-DC and UL CA configurations. The exact EN-DC and UL CA configurations for which DL interruptions are not allowed will be captured in TS 38.101-1 and TS 38.101-3 respectively

**Decision: Revised to R4-2016819.**

**R4-2016819 CR to 38.101-3: Add requirement on the inter-band EN-DC with no DL interruption**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0386 Cat: F (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

In RAN4 #96e, it was agreed in WF R4-2011731 that DL interruption is not allowed for some inter-band EN-DC and UL CA configurations. The exact EN-DC and UL CA configurations for which DL interruptions are not allowed will be captured in TS 38.101-1 and TS 38.101-3 respectively

**Decision: Return to.**

**R4-2015975 Modification of Pcmax for UL CA with uplink Tx switching capability**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0553 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

For an inter-band UL CA configuration with UL TX switching (switching between carrier 1 and carrier 2), the maximum power on carrier 2 is boosted by 3 dB if the uplinkTxSwitchingPowerBoosting-r16 is enabled and the capability uplinkTxSwitching-PowerBoosting-r16 is supported by the UE. This is currently specified in clause 6.3A.3.3 on the transmit ON/OFF time mask for inter-band CA, but should be specified in the clause on configured power (Pcmax) for CA. However, the Pcmax for UL CA does not allow 3 dB power boosting for the BC, the total power is capped by the default CA power class (PC3); a modification is needed.

The 38.331 specifies the conditions that apply when the uplinkTxSwitchingPowerBoosting-r16 is enabled (CellGroupConfig)

uplinkTxSwitchingPowerBoosting

Indicates whether the UE is allowed to enable 3dB boosting on the maximum output power for transmission on carrier2 under the operation state in which 2-port transmission can be supported on carrier2 for inter-band UL CA case with dynamic UL Tx switching as defined in TS 38.101-1 [15]. Network can only configure this field for dynamic UL Tx switching in inter-band UL CA case with power Class 3 as defined in TS 38.101-1 [15].

The UE behavior with uplinkTxSwitchingPowerBoosting enabled is governed by the 38.331, the 38.101-1 only specifies the associated maximum output power requirement that applies under the conditions cited above

**Decision: Return to.**

### 7.12 NR RF requirement enhancements for frequency range 2 (FR2) [NR\_RF\_FR2\_req\_enh]

#### 7.12.1 RF core requirements maintenance [NR\_RF\_FR2\_req\_enh-Core]

**R4-2016615 Email discussion summary for [97e][113] NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016957.**

**R4-2016957 Email discussion summary for [97e][113] NR\_RF\_FR2\_req\_enh\_Part\_4**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016820 WF on Beam Correspondence based on configured DL RS (SSB or CSI-RS)**

*Type: other For: Approval  
 Source: Apple*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016824 WF on addition of new frequency separation classes**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Return to.**

##### 7.12.1.1 Beam Correspondence based on configured DL RS (SSB or CSI-RS) [NR\_RF\_FR2\_req\_enh-Core]

**R4-2014320 Enhanced beam correspondence test applicability rules in rel-16**

*Type: other For: Approval  
 Source: LG Electronics France*

**Decision: Noted.**

**R4-2014512 REL16 eBC capability alingment with 38.306**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0270 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

RAN4 specifications is aligned with RAN2 specification. There is TBD in applicability clause.

**Decision: Revised to R4-2016821.**

**R4-2016821 REL16 eBC capability alingment with 38.306**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0270 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

RAN4 specifications is aligned with RAN2 specification. There is TBD in applicability clause.

**Decision: Return to.**

**R4-2014584 On CSI-RS based beam correspondence**

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

**Decision: Noted.**

**R4-2014722 Discussion on Rel-16 beam correspondence remaining issues**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2014923 Remaining issues with beam correspondence enhancement**

*Type: discussion For: Discussion  
 Source: Apple Inc.*

**Decision: Noted.**

**R4-2014924 CR to TR 38.831 on beam correspondence corrections**

*Type: CR For: Agreement  
 38.831 v16.0.0 CR-0001 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

The Rel-16 beam correspondence requirement has the following remaining open issues: how to define the PSD difference X between SSB and CSI-RS for FG8-3; and how to define the applicability rule for the case when the UE supports both FG8-2 and FG8-3. This CR resolves the open issues and updates the feature description for beam correspondence.

**Decision: Revised to R4-2016822.**

**R4-2016822 CR to TR 38.831 on beam correspondence corrections**

*Type: CR For: Agreement  
 38.831 v16.0.0 CR-0001 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

The Rel-16 beam correspondence requirement has the following remaining open issues: how to define the PSD difference X between SSB and CSI-RS for FG8-3; and how to define the applicability rule for the case when the UE supports both FG8-2 and FG8-3. This CR resolves the open issues and updates the feature description for beam correspondence.

**Decision: Return to.**

**R4-2015344 Discussion on Rel-16 BC**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2015808 Remaining issues in beam correspondence**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

**R4-2016518 CR on beam correspondence side condition**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0301 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Side condition for CSI-RS based beam correspondence is not defined.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016823.**

**R4-2016823 CR on beam correspondence side condition**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0301 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Side condition for CSI-RS based beam correspondence is not defined.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

##### 7.12.1.2 Others [NR\_RF\_FR2\_req\_enh-Core]

**R4-2014290 Inter-band + intra-band CA FR2 frequency separation class**

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

**Decision: Noted.**

**R4-2014581 CR to 38.101-2 (Rel-16) inter-band DL CA**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0271 Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Abstract:**

For inter-band DL CA, the current REFSENS and EIS spherical coverage requirements have brackets. Our analysis shows the requirements within brackets are achievable.

**Decision: Revised to R4-2016825.**

**R4-2016825 CR to 38.101-2 (Rel-16) inter-band DL CA**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0271 Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Abstract:**

For inter-band DL CA, the current REFSENS and EIS spherical coverage requirements have brackets. Our analysis shows the requirements within brackets are achievable.

**Decision: Return to.**

**R4-2014585 Rel-16 Inter-band DL CA requirements**

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

**Decision: Noted.**

**R4-2014597 Clarification of EIS spherical coverage for inter-band CA**

*Type: CR For: Endorsement  
 38.101-2 v16.5.0 CR-0272 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

EIS spherical coverage requirement for inter-band CA is incomplete. The actual ‘common area’ requirement is missing in the requirement sub-clause.

**Decision: Revised to R4-2016826.**

**R4-2016826 Clarification of EIS spherical coverage for inter-band CA**

*Type: CR For: Endorsement  
 38.101-2 v16.5.0 CR-0272 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

EIS spherical coverage requirement for inter-band CA is incomplete. The actual ‘common area’ requirement is missing in the requirement sub-clause.

**Decision: Return to.**

**R4-2014932 CR for PSD imbalance for FR2 DL inter-band CA**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0281 Cat: F (Rel-16)  
  
 Source: NTT DOCOMO INC.*

**Abstract:**

To ensure the DL performance of IBM UE supporting FR2 inter-band CA under non-colocated deployment

There were contribtuions mentioning that it is needed to take care aobut RF design to handle PSD imbalance for FR2 DL inter-band CA, therefore it is meaningful to ensure the performance in Rx requirements.

It was agreed that IBE UE(s) are assumed to be operated under non-colocated deplyment in R4-2005736.

**Decision: Not pursued.**

**R4-2015088 CR to TR 38.831 to include DL CA agreement**

*Type: CR For: Agreement  
 38.831 v16.0.0 CR-0002 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

The secretary commented that the CR is missing coversheet.

**Decision: Revised to R4-2016827.**

**R4-2016827 CR to TR 38.831 to include DL CA agreement**

*Type: CR For: Agreement  
 38.831 v16.0.0 CR-0002 Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Discussion:**

The secretary commented that the CR is missing coversheet.

**Decision: Return to.**

**R4-2015343 Discussion on Rel-16 FR2 inter-band DL CA**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2016519 CR for inter-band NC DL CA Rrefsens**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0302 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For UE supporting CA configuration, ΔRIB is also applied for Single carrier requirement. There is no clarification in the spec.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016828.**

**R4-2016828 CR for inter-band NC DL CA Rrefsens**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0302 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For UE supporting CA configuration, ΔRIB is also applied for Single carrier requirement. There is no clarification in the spec.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

### 7.19 R16 NR maintenance [WI code or TEI16]

#### 7.19.1 UE transient period capability [TEI16]

**R4-2016616 Email discussion summary for [97e][114] NR\_transient\_period**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016958.**

**R4-2016958 Email discussion summary for [97e][114] NR\_transient\_period**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014489 Short Transient Period Testing**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2014490 Draft CR on introduction of shorter Transient Period Capability**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0505 Cat: B (Rel-16)  
  
 Source: Qualcomm Incorporated, Verizon, Dish Network, Ericsson, CMCC, Keysight Technologies, Nokia, Nokia Shanghai Bell, AT&T, ZTE, Vodafone, Orange, T-Mobile USA, Deutsche Telekom, Telecom Italia, CHTTL, China Telecom, SGS Wireless, Interdigital*

**Abstract:**

Adding the newly defined shorter transient periods.

**Discussion:**

The secretary commented that TS should be removed from the specification number, i.e. TS38.101-1 -> 38.101-1, and CR number should be zero padded, i.e. 505 -> 0505.

**Decision: Return to.**

**R4-2016516 On transient period UE capability**

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

**Decision: Noted.**

**R4-2016517 CR on TS 38.101-1 time mask for shorter transient**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0575 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduce tpstart as the start line of shorter transient, the reason is provided in

R4-2016516.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016829.**

**R4-2016829 CR on TS 38.101-1 time mask for shorter transient**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0575 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduce tpstart as the start line of shorter transient, the reason is provided in

R4-2016516.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

#### 7.19.2 Transmit diversity and power class related to UL MIMO [TEI16]

**R4-2016617 Email discussion summary for [97e][115] NR\_TxD**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016959.**

**R4-2016959 Email discussion summary for [97e][115] NR\_TxD**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016830 WF on NR TxD & Power Class**

*Type: other For: Approval  
 Source: vivo*

**Abstract:**

**Discussion:**

**Decision: Return to.**

##### 7.19.2.1 R16 support of transmit diversity [TEI16]

**R4-2014303 Remaining issues on Tx diversity**

*Type: other For: Approval  
 Source: LG Electronics Polska*

**Decision: Noted.**

**R4-2014583 Remaining Issues on Transparent TxD**

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

**Decision: Noted.**

**R4-2014686 Remaining items on transparent Tx diversity**

*Type: discussion For: Approval  
 Source: Anritsu corporation*

**Decision: Noted.**

**R4-2014712 Tx diversity changes for Rel-16**

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

**Decision: Noted.**

**R4-2014713 Introduction of Tx diversity in tor 38101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0510 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Introduction of TX diversity requirements

**Decision: Return to.**

**R4-2014849 Further discussio on the Support of Transparent Tx Diversity in Rel-16**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2014904 On Tx diversity**

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

**Decision: Noted.**

**R4-2015265 Discussion on Tx diversity open issues**

*Type: other For: Approval  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2015321 Remaining issues in Transparent Tx Diversity**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

**R4-2015340 Discussion on Rel-16 TxD**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2015341 CR on TxD requirements**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0537 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

It is agreed that transparent Tx diversity (TxD) is enabled at least from Rel-16 RAN4 specification.

And TxD is one kind of UE implementaion for single antenna port.

Necessary changes to single antenna port requirements are needed to make this kind of UE implementation be accormmodated.

**Discussion:**

The secretary wondered what is the correct Category? It reads B on the coversheet but the CR is allocated for F.

**Decision: Return to.**

**R4-2015342 Reply LS on Tx diversity testing**

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

**Decision: Noted.**

**R4-2016034 Discussion on remaining open issues for Tx diversity requirements**

*Type: discussion For: Approval  
 Source: Rohde & Schwarz*

**Decision: Noted.**

**R4-2016285 On the EVM Definition for Transmit Diversity**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Motorola Mobility France S.A.S*

**Decision: Withdrawn.**

**R4-2016288 On the EVM Definition for Transmit Diversity**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Lenovo, Motorola Mobility*

**Decision: Noted.**

**R4-2016477 On Tx diversity requirements**

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

**Decision: Noted.**

**R4-2016478 CR for TS 38.101-1 Tx diversity requirements**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0567 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Make necessary changes to eliminate the ambiguity for supporting transparent Tx diversity.

**Decision: Return to.**

##### 7.19.2.2 Power class related to UL MIMO and other related req. (MPR, SEM, etc) [TEI16 or NR\_newRAT-Core]

**R4-2015322 Remaining issues in Power class & UL MIMO related requirments**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

**R4-2015976 PHR and Pcmax verification for NR PC2 devices supporting NR PC3 for EN-DC**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we consider verification of PHR and Pcmax for UL-MIMO PC2 and alignment with Rel-16 power-class verification

**Decision: Noted.**

**R4-2015977 Correction of Pcmax for an NR PC2 UE supporting NR PC3 for EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.11.0 CR-0403 Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

For a UE advertising NR PC2 for SA but only supporting NR PC3 when configured with EN-DC, the Pcmax for NR should by modified according to the declared (for conformance) NR power capability for NSA so that the PHR becomes correct.

**Discussion:**

The secretary commented that the CR number should be zero padded, i.e. 403 -> 0403.

**Decision: Return to.**

**R4-2016465 Discussion on Single Carrier MPR versus Architecture**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

We provide here our input on how to distinguish the different MPRs vs power class and transmit chain architecture and still limit the amount of tables.

**Decision: Noted.**

**R4-2016479 Discussion and draft reply LS on EN-DC power class**

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

**Decision: Noted.**

#### 7.19.3 Other UE RF [WI code or TEI16]

**R4-2016618 Email discussion summary for [97e][116] NR\_R16\_Maintenance**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016960.**

**R4-2016960 Email discussion summary for [97e][116] NR\_R16\_Maintenance**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016831 WF on unsynchronized NW between n40 and n41**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016839 WF on handling of interference caused by larger CBWs**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016840 WF on DC\_20A\_n38A RF architecture**

*Type: other For: Approval  
 Source: LGE*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016841 WF on simultaneous Rx/Tx for DC\_42\_n79**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014167 CR CatF n7 NS\_46 AMPR and coexistence**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0492 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Missing the additional spurious requirement for NS\_46 large channel BWs > 20MHz.

**Decision: Return to.**

**R4-2014168 CR CatF CA\_n39-n41\_and CA\_n40-n41 Sync**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0493 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

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

**R4-2014169 CR CatF Cross Band Noise DC\_3\_n1\_highBW**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0358 Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Missing cross band noise MSD for various interband ENDC band combinations with large NR UL BW

**Decision: Return to.**

**R4-2014170 ENDC Cross Band Noise with high NR BW**

*Type: other For: Approval  
 38.101-3 v..  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2014317 Consideration on additional ILs and MSD levels for DC\_20\_n38 UE or V2X\_20\_n38 UE based on RF architecture**

*Type: other For: Approval  
 Source: LG Electronics France*

**Decision:** The document was **not treated**.

**R4-2014318 Correction on Additional ILs and MSD levels for DC\_20\_n38 UE**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0362 Cat: F (Rel-16)  
  
 Source: LG Electronics France, Huawei*

**Abstract:**

This CR is to update additional ILs and MSD levels by 3rd harmonic problem for DC\_20\_n38 UE 5G V2X UE in TS38.101-3.

**Decision: Return to.**

**R4-2014319 Discussion on MFBI for NR system**

*Type: discussion For: Action  
 Source: LG Electronics France*

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

**R4-2014517 n53 bracket removal**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0506 Cat: F (Rel-16)  
  
 Source: Nokia*

**Abstract:**

RAN5 is developping test cases for n53 but this band has A-MPR values and OOB table note 6 still in brackets which means that these requriements are untestable. Furthermore some references and numbering is corrected.

**Decision: Agreed.**

**R4-2014520 TS 38.101-3: Addition of missing lower order fallbacks**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0508 Cat: B (Rel-16)  
  
 Source: Nokia, AT&T*

**Abstract:**

These configurations have relating higher order configurations already in REL16 specs. It is important to add these as a correction inorder to retain specification intergity.

DC\_2A-30A\_n2A

DC\_2A-66A\_n2A

DC\_29A-30A\_n2A

DC\_29A-30A\_n66A

DC\_30A-66A\_n66A

**Decision: Revised to R4-2016832.**

**R4-2016832 TS 38.101-3: Addition of missing lower order fallbacks**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0508 Cat: B (Rel-16)  
  
 Source: Nokia, AT&T*

**Abstract:**

These configurations have relating higher order configurations already in REL16 specs. It is important to add these as a correction inorder to retain specification intergity.

DC\_2A-30A\_n2A

DC\_2A-66A\_n2A

DC\_29A-30A\_n2A

DC\_29A-30A\_n66A

DC\_30A-66A\_n66A

**Decision: Return to.**

**R4-2014521 TR 37.716-21-11: Addition of missing lower order fallbacks**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0509 Cat: B (Rel-16)  
  
 Source: Nokia, AT&T*

**Abstract:**

These configurations have relating higher order configurations already in REL16 specs. This CR captures necessary analysis into the TR.

DC\_2A-66A\_n2A

DC\_30A-66A\_n66A

DC\_2A-30A\_n2A

DC\_29A-30A\_n2A

DC\_30A-66A\_n66A

**Decision: Revised to R4-2016833.**

**R4-2016833 TR 37.716-21-11: Addition of missing lower order fallbacks**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0509 Cat: B (Rel-16)  
  
 Source: Nokia, AT&T*

**Abstract:**

These configurations have relating higher order configurations already in REL16 specs. This CR captures necessary analysis into the TR.

DC\_2A-66A\_n2A

DC\_30A-66A\_n66A

DC\_2A-30A\_n2A

DC\_29A-30A\_n2A

DC\_30A-66A\_n66A

**Decision: Return to.**

**R4-2014582 CR to 38.101-3 (Rel-16) error correntions to configurations for CA and DC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0367 Cat: F (Rel-16)  
  
 Source: Intel Corporation*

**Abstract:**

There are errors in CA and DC configurations in Clause 5.5A and 5.5B

**Decision: Agreed.**

**R4-2014600 CR on adding NR ovelapping bands list in TS38.307 in Rel-15**

*Type: CR For: Agreement  
 38.307 v15.6.0 CR-0031 Cat: F (Rel-15)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update NR overlapping bands list in TS38.307.

**Decision: Revised to R4-2016846.**

**R4-2016846 CR on adding NR ovelapping bands list in TS38.307 in Rel-15**

*Type: CR For: Agreement  
 38.307 v15.6.0 CR-0031 Cat: F (Rel-15)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update NR overlapping bands list in TS38.307.

**Decision: Return to.**

**R4-2014620 CR on adding NR ovelapping bands list in TS38.307 in Rel-16**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR-0032 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update NR overlapping bands list in TS38.307.

**Decision: Revised to R4-2016847.**

**R4-2016847 CR on adding NR ovelapping bands list in TS38.307 in Rel-16**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR-0032 Cat: F (Rel-16)  
  
 Source: LG Electronics France*

**Abstract:**

This CR is to update NR overlapping bands list in TS38.307.

**Decision: Return to.**

**R4-2014883 Clarification on RF assumption for B42\_n77 and B42\_n78**

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

**Decision: Noted.**

**R4-2014899 Coexistence cleanup for 38.101-1 Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0518 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

Rel-16 features several band protection requirements which are not technical possible or contain contradicting protection requirements.

**Decision: Agreed.**

**R4-2014901 Coexistence cleanup for 38.101-3 Rel16**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0379 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

Rel-16 features several band protections which are not technical possible due to sometimes TDD bands with overlapping regions are protected or similar issues. The CR focuses on correcting false protections so that a UE will not face technical impossible emission requirements.

**Decision: Not pursued.**

**R4-2014915 CR for TS 38.101-3: Corrections for intra-band contiguous EN-DC configurations**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0381 Cat: F (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

Intra-band contiguous EN-DC configuration DC\_(n)41AB was introduced in RAN4 #94bis-e meeting through a CR (R4-2003169) which was intended for introducing new BCS for the existing EN-DC combinations, but not for brand new EN-DC configuration. This combination in principle should not be approved as it did not go through the normal TP process. In addition, the EN-DC bandwidth class “AB” has never been defined which would render DC\_(n)41AB as an invalid EN-DC configuration. Since the CR had been agreed, to avoid the iterative process of removing and reintroducing the combination, we can accept to add EN-DC BW class “AB” in Rel-16 specifications to validate this configuration. We also strongly encourage proponent companies to follow the regular process when proposing any new band combinations to avoid any potential errors being overlooked.

A few intra-band contiguous EN-DC combinations were specified with non-contigous UL configurations which should not be allowed.

**Decision:** The document was **not treated**.

**R4-2014957 CR to TS 38.101-2 on fallback group for intra-band contiguous CA (Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0282 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

The fallback groups for intra-band contiguous CA classes CA\_n259G and CA\_n261D in the configuration table are incorrect groups.

**Decision: Revised to R4-2016837.**

**R4-2016837 CR to TS 38.101-2 on fallback group for intra-band contiguous CA (Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0282 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

The fallback groups for intra-band contiguous CA classes CA\_n259G and CA\_n261D in the configuration table are incorrect groups.

**Decision: Return to.**

**R4-2015033 CR to TS38.101-1: Correction on the general requirement and configured transmitted power requirement for inter-band DC**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0532 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

For the general requirement (subclause 4.3)

The sentence agreed in R4-2006997 was not implemented in the latest spec.

For Pcmax: (subclause 6.2B.4.1)

According to the configured transmitted power single carrier, the total power reduction is (MPR+ ∆MPR) dB.

The feature of PC2 inter-band NR-DC combination is not supported in Rel-16, therefore it is no need to consider ΔPPowerClass in the formulas.

The explanation for some inter-band DC specfied terms in the formulas are missing.

**Decision: Return to.**

**R4-2015042 Discussion on the MSD of the new channel BW for EN-DC and NR CA band combinations**

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

**Decision: Noted.**

**R4-2015264 CR to TS 38.101-3: corrections on ACS for intra-band contiguous EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0388 Cat: F (Rel-16)  
  
 Source: Xiaomi*

**Abstract:**

In release 16, the transmitter is set to 4 dB below PCMAX\_L,f,c for ACS case 2 which is not aligned with the requirement in release 15. The reason is that the agreed Cat A CR (R4-2000452) was not implemented accordingly when Cat F CR (R4-2000451) was implemented after RAN4 #94-e meeting.

**Decision: Agreed.**

**R4-2015299 Editorial correction on section 5.2C to 38.101-1 R16**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0534 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR corrects title for 5.2C.

**Decision: Agreed.**

**R4-2015323 Alignment of descritpion of the power class restriction for inter-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0390 Cat: F (Rel-16)  
  
 Source: vivo*

**Abstract:**

The clarification for FDD-TDD ENDC HPUE has been agreed in Note 6 in Table 6.2B.1.3-1 with improved wording which is more clear. This can be also used for Note 5 to improve the consistency and better reflect the result for TDD-TDD ENDC HPUE.

**Decision: Return to.**

**R4-2015324 Correction of delta Powerclass for Inter-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0391 Cat: F (Rel-16)  
  
 Source: vivo, CMCC, China Unicom*

**Abstract:**

This is resubmission of CR R4-2010855 (CRNum: 0344). The original CR which was agreed in RAN4#96-e and also approved in RP-201504 in RAN#89, was mistakenly implemented into clause 6.2B.4.1.3a which is used for NE-DC in 38.101-3 v16.5.0. The correction for 6.2B.4.1.3 for EN-DC has to be done, and current revision to 6.2B.4.1.3a can also be kept.

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Power class 2 had been introduced for TDD-TDD ENDC and the fallback scheme had been defined in 6.2B.1.3. It has been clarified that under different conditions, the requirements for default or the supported power class would be applied and would “set the configured transmitted power as specified sub-clause 6.2B.4”

However, no revisions had been done for section 6.2B.4.1.3 which is for inter-band EN-DC for FR1. The ∆PPowerClass,EN-DC which is used to adjust this was not updated as for other cases, thus make the specification incomplete.

**Decision: Agreed.**

**R4-2015331 CR on NR power class under EN-DC**

*Type: CR For: Endorsement  
 38.101-3 v16.5.0 CR-0392 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

The capability signaling for NR part under EN-DC has been defined in RAN2 38.331, thus RAN4 spec shall be aligned.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016842.**

**R4-2016842 CR on NR power class under EN-DC**

*Type: CR For: Endorsement  
 38.101-3 v16.5.0 CR-0392 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

The capability signaling for NR part under EN-DC has been defined in RAN2 38.331, thus RAN4 spec shall be aligned.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2015332 Discussion on WRC-19 requirements**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2015336 CR on FR2 equal PSD in UL CA (R16)**

*Type: CR For: Endorsement  
 38.101-2 v16.5.0 CR-0286 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

As discussed in

R4-2015334, the equal PSD restriction in Pcmax is not needed and it has caused confusions in interpretation of requirements.

**Decision: Not pursued.**

**R4-2015339 CR on sum of power for multiple transmit connectors**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0536 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

In R4-2011768, below agreements have been reached in changing the description of how to sum powers from multiple connectors. The agreement is reproduced below. Even the agreements are made for UL MIMO/TxD, it is also applicable to other cases which require summing of powers from multiple connectors.

RAN4 agree to define requirements for MOP and emission so that power is measured correctly for all implementations, including UE with transparent TxD:

Use “requirements are defined as the sum of powers from both connectors”.

This shall be interpreted as: Measure the power and emissions per connector and then sum them up afterwards.

RAN4 will clean-up all requirements related to summing the powers and emissions, including UL MIMO, UL full power transmission requirement.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016834.**

**R4-2016834 CR on sum of power for multiple transmit connectors**

*Type: CR For: Endorsement  
 38.101-1 v16.5.0 CR-0536 Cat: F (Rel-16)  
  
 Source: OPPO*

**Abstract:**

In R4-2011768, below agreements have been reached in changing the description of how to sum powers from multiple connectors. The agreement is reproduced below. Even the agreements are made for UL MIMO/TxD, it is also applicable to other cases which require summing of powers from multiple connectors.

RAN4 agree to define requirements for MOP and emission so that power is measured correctly for all implementations, including UE with transparent TxD:

Use “requirements are defined as the sum of powers from both connectors”.

This shall be interpreted as: Measure the power and emissions per connector and then sum them up afterwards.

RAN4 will clean-up all requirements related to summing the powers and emissions, including UL MIMO, UL full power transmission requirement.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2015552 Consideration on Cross band isolation impact with larger BW**

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

**Decision: Noted.**

**R4-2015553 Discussion on spurious emission about UE co-existence between band n40 and n41**

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

**Decision: Noted.**

**R4-2015554 CR on spurious emission about UE co-existence between band n40 and n41**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0539 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon, CMCC*

**Abstract:**

The operators in China has a plan to use the asynchronized deployment between band n40 and n41. It’s necessary to specify the spurious emission about UE co-existence between band n40 and n41.

**Decision: Return to.**

**R4-2015555 Discussion on asynchronous for DC\_42\_n79**

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

**Decision:** The document was **not treated**.

**R4-2015557 CR for 38.101-1 to correct the notation of SUL band combinations in order to be aligned with 38.101-3**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0540 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on agreed CR R4-2006997, the sentence “5.2COperating band combination for SUL” should be removed from subclause 5.2B. The headline of sub-clause 5.2C is missing.

Based on the agreed CR R4-2009948, the notation of DC\_66A\_n78(2A)\_SUL\_n78A-n86A is changed into DC\_66A\_ SUL\_n78(2A)-n86A. The notation of SUL\_n78(2A)-n86A can be aligned with 38.101-3. It’s helpfut to avoid the confusion.

Based on agreed CR R4-2009178, the sentence “6.3COutput power dynamics for SUL” should be removed from subclause 6.3B. The headline of sub-clause 6.3C is missing.

**Decision: Agreed.**

**R4-2015699 Reference measurement channels for 70 MHz CBW**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0544 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

70 MHz CBW is introduced in Rel-16 for band n77/n78, but the reference measurement channels for 70 MHz CBW are not defined.

**Decision: Agreed.**

**R4-2015729 CR to TS 38.101-3 corrections on inter-band EN-DC configurations including FR1 and FR2**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0396 Cat: F (Rel-16)  
  
 Source: CHTTL*

**Abstract:**

Few configurations in the spec are not aligned with the agreed CR, R4-2006728, “Introducing CR on new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-16”.

**Decision: Agreed.**

**R4-2015795 Discussion on handling the cross band isolation requirement for larger channel BW in Rel.16**

*Type: discussion For: Discussion  
 Source: CHTTL*

**Decision: Noted.**

**R4-2015856 CR to TS 38.307 on release independent update for the Rel.16 EN-DC and NR CA/DC**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR-0040 Cat: B (Rel-16)  
  
 Source: CHTTL, ZTE Corporation, Dish, SGS Wireless*

**Abstract:**

More Rel.16 EN-DC and NR CA/DC configurations have been introduced in latest TS 38.101-1, 38.101-2, 38.101-3, an update is needed for the release independent specification.

Note that the draft CR with same content was endorsed in RAN#96-e, R4-2011781.

**Decision: Revised to R4-2016848.**

**R4-2016848 CR to TS 38.307 on release independent update for the Rel.16 EN-DC and NR CA/DC**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR-0040 Cat: B (Rel-16)  
  
 Source: CHTTL, ZTE Corporation, Dish, SGS Wireless*

**Abstract:**

More Rel.16 EN-DC and NR CA/DC configurations have been introduced in latest TS 38.101-1, 38.101-2, 38.101-3, an update is needed for the release independent specification.

Note that the draft CR with same content was endorsed in RAN#96-e, R4-2011781.

**Decision: Return to.**

**R4-2015914 Correction to supported channel bandwidths per SUL\_n41A-n81A**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0547 Cat: F (Rel-16)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

**R4-2015978 Modification of FR2 MOP verification with account of the 38.213 scaling rule**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this conctribution we consider the verification of the CA MOP subject to the 38.213 power prioritization

**Decision: Noted.**

**R4-2015979 Correction to Pcmax: account of power prioritization rules for secondary cells**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0290 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Correct the specification of Pcmax for CA in view of the power prioritization rules of 38.213. Add a test case for verification of the maximum output power when the SCell power is scaled or the SCell(s) is/are dropped. Modify the definition of the (calculated) PCMAX.

The scaling rules for LTE are different when the UE configured with UL CA is power limited. For NR, an assumption that the MPR for each serving cell is the same as the MPR of the total signal could also be the baseline for intra-band CA despite different power prioritization rules; for PUSCH transmissions the SCell power levels may be reduced or SCells dropped at maximum output power. This determination of MPR would be similar to the “total A-MPR” adopted for intra-band contiguous EN-DC still recognising that the CG powers could be different. However, this should be a prerequisite for the MPR determination for intra-band CA, not the calculation of the PCMAX

**Decision: Not pursued.**

**R4-2015980 Correction to modified MPR behaviour**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0291 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Incorrect conditions for the bits in the field modifiedMPRbehavior (all defined in Rel-15).

Modified MPR behaviour introduced in an earlier release is mandatory in a later release.

**Decision: Return to.**

**R4-2015981 Verification of the P-MPR method for EN-DC FDD-TDD power class 2**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0404 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Introduce a test case for the P-MPR solution. The (UE-based) P-MPR solution is the default for EN-DC FDD-TDD PC2 in the absence of duty-cycle capabilities. Moreover, fallback to a lower EN-DC power class is not defined for the P-MPR solution.

The total EN-DC power is always 26 dBm for the P-MPR solution, there is not fallback behaviour (unclear if this is the case under all circumstances e.g. when the combined UL duty cycle exceeds 50% or for TDD U/D configurations up to 50% UL duty cycle ).

The P-MPR method is not verified. The solution is proprietary, but it should at least make sure that the maximum power of 26 dBm can be achieved for both non-simultaneos and simultaneous (overlapping) CG transmissions when the combined duty cycle is up to 50% resulting in a 23 dBm average total EN-DC power.

**Decision: Return to.**

**R4-2016341 CR for editorial corrections 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0557 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 38.101-1

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016989.**

**R4-2016989 CR for editorial corrections 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0557 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 38.101-1

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016342 CR for editorial corrections 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0297 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 38.101-2

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016838.**

**R4-2016838 CR for editorial corrections 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0297 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 38.101-2

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016343 CR for editorial corrections 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0413 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 38.101-3

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Revised to R4-2016843.**

**R4-2016843 CR for editorial corrections 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0413 Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Editorial corrections 38.101-3

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016442 Replacement of void sub-clauses**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0559 Cat: D (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Sub-clauses were incorrect marked as “Void” when the intention was to reserve them for future usage.

**Discussion:**

The secretary commented that (on the coversheet) the specification number should read 38.101-1 instead of TS38.101-1.

**Decision: Revised to R4-2016835.**

**R4-2016835 Replacement of void sub-clauses**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0559 Cat: D (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Sub-clauses were incorrect marked as “Void” when the intention was to reserve them for future usage.

**Discussion:**

The secretary commented that (on the coversheet) the specification number should read 38.101-1 instead of TS38.101-1.

**Decision: Return to.**

**R4-2016451 CR to for 38.101-1: CA uplink power clarification**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0562 Cat: F (Rel-16)  
  
 Source: T-Mobile USA*

**Abstract:**

Some of the wording on UE maximum output power for carrier aggregation is unclear.

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Return to.**

**R4-2016458 CR for 38.101-1: Editorial corrections**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0563 Cat: D (Rel-16)  
  
 Source: T-Mobile USA*

**Abstract:**

Many editorial errors exist in 38.101-1

**Discussion:**

The secretary commented if neither UICC, ME, Radio Access Network or Core Network boxes are checked, the CR does not change anything and hence the CR is not needed.

**Decision: Agreed.**

**R4-2016483 CR for TS 38.101-1: harmonic MSD for CA\_n41-n79**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0569 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For CA\_n41-n79, the frequency range below 2506 MHz for Band n41 is not used, it is assumed before that there is no 2nd order harmonic issue due to the applicable frequency range. However, since n41 supports larger CBW, considering the spectrum regrowth for the harmonics, the interference would still cause REFSENS degradation for n79 especially for the DL channel close to 5000MHz.

**Decision: Revised to R4-2016836.**

**R4-2016836 CR for TS 38.101-1: harmonic MSD for CA\_n41-n79**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0569 Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

For CA\_n41-n79, the frequency range below 2506 MHz for Band n41 is not used, it is assumed before that there is no 2nd order harmonic issue due to the applicable frequency range. However, since n41 supports larger CBW, considering the spectrum regrowth for the harmonics, the interference would still cause REFSENS degradation for n79 especially for the DL channel close to 5000MHz.

**Decision: Return to.**

**R4-2016592 Editorial CR to change 'Void" section to reserved**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0583 Cat: D (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

**R4-2016593 Editorial CR to change 'Void" section to reserved**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0308 Cat: D (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision:** The document was **not treated**.

## 8 Rel-16 UE feature list

**R4-2016619 Email discussion summary for [97e][117] R16\_UE\_ feature**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016961.**

**R4-2016961 Email discussion summary for [97e][117] R16\_UE\_ feature**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016849 LS on updated Rel-16 RAN4 UE features lists for NR and LTE**

*Type: LS out For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016850 Updated RAN4 UE features list for Rel-16**

*Type: other For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014234 On R16 UE feature list**

*Type: discussion For: Agreement  
 Source: Apple*

**Decision: Noted.**

**R4-2014483 On the Optionality of RAN4 Requirements**

*Type: other For: Approval  
 Source: Qualcomm Incorporated, CMCC, KDDI, AT&T, Ericsson, Nokia, T-Mobile USA, China Telecom*

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

**R4-2014488 Overloading of the Per-FR gap capability**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2014627 Discussion on UE feature list**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2015089 Clarification of intra-bandENDC-Support**

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

**Decision: Noted.**

**R4-2015566 Views on Rel-16 NR UE feature list**

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

**Decision: Noted.**

**R4-2015798 On NRU operation modes and capabilities**

*Type: discussion For: Approval  
 Source: LG Electronics Finland*

**Abstract:**

During the RAN1#101 meeting and RAN4#96 meeting NRU UE capabilities have been discussed.

This contribution further discusses this topic and proposes a way forward.

**Decision: Noted.**

**R4-2015982 On the FG "co-location" (2-22) and remaining FGs for NR-U**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we consider the tentative FG 2-22 and the remaining FG for NR-U (including RAN1 placeholders)

**Decision: Noted.**

**R4-2016030 On the Optionality of RAN4 Requirements**

*Type: other For: Approval  
 Source: Qualcomm Incorporated, CMCC, KDDI, AT&T, Ericsson, Nokia, T-Mobile USA, China Telecom, Vodafone, Verizon, Softbank*

**Decision: Noted.**

## 9 Rel-16 spectrum related Work Items for NR

### 9.1 LTE/NR spectrum sharing in band 48/n48 frequency range [NR\_n48\_LTE\_48\_coex-Core]

**R4-2016620 Email discussion summary for [97e][118] NR\_n48\_LTE\_48\_coex**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016962.**

**R4-2016962 Email discussion summary for [97e][118] NR\_n48\_LTE\_48\_coex**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 9.1.1 General [NR\_n48\_LTE\_48\_coex-Core]

#### 9.1.2 Channel raster, sync raster, and UL shift [NR\_n48\_LTE\_48\_coex-Core]

**R4-2014174 B48/n48 Allocation shift emission containment**

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

**Decision: Noted.**

**R4-2014890 LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: discussion For: Decision  
 Source: Apple Inc., Comcast*

**Decision: Noted.**

**R4-2014891 Introduction of LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0516 Cat: B (Rel-16)  
  
 Source: Apple Inc.*

**Abstract:**

To enable dynamic spectrum sharing between LTE and NR in band 48/n48 frequency range, DL and UL sub-carrier grids have to be aligned, which in some deployment and configurations case will require shifting the NR center frequency by -/+100kHz shift. A new NS value is added so that the UE is aware of the fact that the guard band is smaller.

**Decision: Return to.**

**R4-2015086 n48 DSS operation with 100 kHz channel raster shift**

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

**Decision: Noted.**

**R4-2015350 Views on DSS in band 48/n48**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2016140 LTE/NR spectrum sharing in band 48/n48 frequency range**

*Type: other For: Approval  
 Source: Ericsson GmbH, Eurolab*

**Decision: Noted.**

**R4-2016372 The remaining issue on n48 DSS**

*Type: discussion For: (not specified)  
 Source: Google Inc.*

**Decision: Noted.**

## 10 Rel-17 spectrum related Work Items for NR

### 10.1 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y) [NR\_CA\_R17\_intra]

**R4-2016621 Email discussion summary for [97e][119] NR\_Baskets\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Noted.**

#### 10.1.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_intra-Core /Perf]

**R4-2015916 Revised WID NR Intra-band Rel-17**

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

**Abstract:**

Revised WID NR Intra-band Rel-17

**Decision:** To be email approved.

**R4-2015919 CR introduction completed band combinations Rel-17 NR Intra-band -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0548 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations Rel-17 NR Intra-band -> 38.101-1

**Decision:** To be email approved.

**R4-2015920 CR introduction completed band combinations Rel-17 NR Intra-band -> 38.101-2**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0287 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations Rel-17 NR Intra-band -> 38.101-2

**Decision:** To be email approved.

**R4-2015924 TR 38.717-01-01 v0.2.0 Rel-17 NR Intra-band**

*Type: draft TR For: Agreement  
 38.717-01-01 v0.1.0  
 Source: Ericsson*

**Abstract:**

TR 38.717-01-01 v0.2.0 Rel-17 NR Intra-band

**Decision:** To be email approved.

#### 10.1.2 UE RF for FR1 [NR\_CA\_R17\_intra-Core]

**R4-2014493 UE Architecture and DL MIMO Aspects for Supporting n77(3A) DL CA**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc. SoftBank Corp.*

**Abstract:**

for n77(3A) DL CA, some companies raised a concern about the impact on the RF front end and RF transceiver architectureand the fact the 4x4 DL MIMO has mandatory support for band n77. In this contribution, we discuss these aspects to reach a common unders

**Decision: Noted.**

**R4-2015069 MSD for CA\_n71(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: MediaTek Inc.*

**Decision: Revised to R4-2016666.**

**R4-2016666 MSD for CA\_n71(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: MediaTek Inc.*

**Decision: Noted.**

**R4-2015431 DraftCR for 38.101-1 to add BCS1 for CA\_n77(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for CA\_n77(2A).

**Decision: Endorsed.**

**R4-2016329 TP to TR 38.717-01-01 to include CA\_n2(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n2(2A)

**Decision: Approved.**

**R4-2016330 TP to TR 38.717-01-01 to include CA\_n5(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: Ericsson, Verizon, MediaTek*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n5(2A)

**Decision: Revised to R4-2016679.**

**R4-2016679 TP to TR 38.717-01-01 to include CA\_n5(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: Ericsson, Verizon, MediaTek*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n5(2A)

**Decision: Approved.**

**R4-2016331 TP to TR 38.717-01-01 to include CA\_n77(3A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n77(3A)

**Decision: Revised to R4-2016913.**

**R4-2016913 TP to TR 38.717-01-01 to include CA\_n77(3A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n77(3A)

**Decision: Return to.**

**R4-2016332 TP to TR 38.717-01-01 to include CA\_n77(4A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP to TR 38.717-01-01 to include CA\_n77(4A)

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

**R4-2016339 TP to TR 38.717-01-01 to update MSD values CA\_n71(2A)**

*Type: pCR For: Approval  
 38.717-01-01 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to TR 38.717-01-01 to update MSD values CA\_n71(2A)

**Decision: Approved.**

#### 10.1.3 UE RF for FR2 [NR\_CA\_R17\_intra-Core]

### 10.2 NR inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R17\_2BDL\_xBUL]

**R4-2016622 Email discussion summary for [97e][120] NR\_Baskets\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Noted.**

#### 10.2.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_2BDL\_xBUL-Core/Perf]

**R4-2015057 Revised WID on Rel-17 NR Inter-band CA\_DC xUL\_2DL (x=1,2)**

*Type: WID revised For: Approval  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015058 Draft CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015059 Draft CR to reflect the completed NR inter band CA DC combinations for 2 bands DL with up to 2 bands UL into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015184 TR 38.717-02-01 v0.2.0**

*Type: draft TR For: Agreement  
 38.717-02-01 v0.2.0  
 Source: ZTE Wistron Telecom AB*

**Decision:** To be email approved.

#### 10.2.2 NR inter band CA without any FR2 band(s) [NR\_CADC\_R17\_2BDL\_xBUL-Core]

**R4-2014110 TP for TR 38.717-02-01 CA\_n41-n77**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Noted.**

**R4-2014111 TP for TR 38.717-02-01 CA\_n41-n78**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016680.**

**R4-2016680 TP for TR 38.717-02-01 CA\_n41-n78**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014131 TP for TR 38.717-02-01 CA\_n2-n66**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014141 Draft CR for 38.101-1 to introduce new inter-band CA for 2bands DL with x bands UL(x=1, 2) within FR1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Endorsed.**

**R4-2014522 draft CR for NR inter-band CA for 2 bands DL**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Nokia, T-Mobile USA*

**Abstract:**

Addition of higher order configurations.

**Decision: Revised to R4-2016681.**

**R4-2016681 draft CR for NR inter-band CA for 2 bands DL**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Nokia, T-Mobile USA*

**Abstract:**

Addition of higher order configurations.

**Decision: Endorsed.**

**R4-2014524 TP for TR 38.717-02-01: CA\_n41-n77**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, T-Mobile USA*

**Decision: Revised to R4-2016682.**

**R4-2016682 TP for TR 38.717-02-01: CA\_n41-n77**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, T-Mobile USA*

**Decision: Approved.**

**R4-2014525 TP for TR 38.717-02-01: CA\_n71A-n77A**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, T-Mobile USA*

**Decision: Revised to R4-2016683.**

**R4-2016683 TP for TR 38.717-02-01: CA\_n71A-n77A**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, T-Mobile USA*

**Decision: Approved.**

**R4-2014842 DraftCR to 38.101-1: Introduce NR CA configurations for CA\_n2A-n48 and CA\_n48-n66A combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Verizon Denmark*

**Abstract:**

Additional inter-band CA and DC configurations are missing in the spec for CA\_n2A-n48 and CA\_n48-n66A combinations

**Decision: Endorsed.**

**R4-2014876 TP for TR 37.717-02-01: CA\_n5-n48**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Revised to R4-2016684.**

**R4-2016684 TP for TR 37.717-02-01: CA\_n5-n48**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2015045 Draft CR to TS38.101-1: Add missing OOB blocking exception combination**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: ZTE Corporation*

**Abstract:**

For CA\_n5-n78 and CA\_n28-n78, it needs to define OOB blocking exception requirements

**Decision: Endorsed.**

**R4-2015046 TP for TR38.717-02-01\_ CA\_n34A-n79A**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2015075 draftCR for CA\_n66(2A)-n77A, CA\_n66A-n77(2A) and CA\_n66(2A)-n77(2A) BCS1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of CA\_n66(2A)-n77A, CA\_n66A-n77(2A) and CA\_n66(2A)-n77(2A)

**Decision: Revised to R4-2016685.**

**R4-2016685 draftCR for CA\_n66(2A)-n77A, CA\_n66A-n77(2A) and CA\_n66(2A)-n77(2A) BCS1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of CA\_n66(2A)-n77A, CA\_n66A-n77(2A) and CA\_n66(2A)-n77(2A)

**Decision: Endorsed.**

**R4-2015076 TP to TR 38.717-02-01: CA\_n5-n25**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2016686.**

**R4-2016686 TP to TR 38.717-02-01: CA\_n5-n25**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2015077 TP to TR 38.717-02-01: CA\_n25-n77**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2016687.**

**R4-2016687 TP to TR 38.717-02-01: CA\_n25-n77**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2015082 TP to TR 38.717-02-01 to correct CA\_n7(2A)-n66 BCS**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2015425 DraftCR for 38.101-1 to add BCS1 for CA\_n20A-n28A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for CA\_n20A-n28A.

**Decision: Not pursued.**

**R4-2016688 DraftCR for 38.101-1 to add BCS1 for CA\_n20A-n28A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for CA\_n20A-n28A.

**Decision: Withdrawn.**

**R4-2015426 DraftCR for 38.101-1 to add BCS1 for CA\_n1A-n78A CA\_n1A-n78(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for CA\_n1A-n78A CA\_n1A-n78(2A).

**Decision: Endorsed.**

**R4-2015427 DraftCR for 38.101-1 to add BCS1 for CA\_n8A-n78A and CA\_n8A-n78(2A)\_BCS0**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for CA\_n8A-n78A and CA\_n8A-n78(2A)\_BCS0.

**Decision: Endorsed.**

**R4-2015428 TP for TR 38.717-02-01: to add UL configuration for CA\_n78A-n79A and CA\_n78(2A)-n79A\_BCS0**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016689.**

**R4-2016689 TP for TR 38.717-02-01: to add UL configuration for CA\_n78A-n79A and CA\_n78(2A)-n79A\_BCS0**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015429 TP for TR 38.717-02-01: CA\_n8A-n28A**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016690.**

**R4-2016690 TP for TR 38.717-02-01: CA\_n8A-n28A**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015430 TP for TR 38.717-02-01: CA\_n3A-n7A**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016691.**

**R4-2016691 TP for TR 38.717-02-01: CA\_n3A-n7A**

*Type: pCR For: Approval  
 38.717-02-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

#### 10.2.3 NR inter band CA with at least one FR2 band [NR\_CADC\_R17\_2BDL\_xBUL-Core]

**R4-2014813 draft CR 38.101-3 to add DC\_n1-n257 and DC\_n79-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: NTT DOCOMO, INC.*

**Abstract:**

Adding configurations to existing DC combinations. The following NR DC configurations are specified by draft CR according to the agreement described in R4-2005647 since corresponding NR CA configurations have been already aprroved.

**Decision: Endorsed.**

**R4-2014843 DraftCR to 38.101-3: Introduce inter-band CA and DC configurations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Verizon Denmark*

**Abstract:**

Introduce NR CA configurations for CA\_n48-n260 and CA\_n66-261

**Decision: Revised to R4-2016692.**

**R4-2016692 DraftCR to 38.101-3: Introduce inter-band CA and DC configurations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Verizon Denmark*

**Abstract:**

Introduce NR CA configurations for CA\_n48-n260 and CA\_n66-261

**Decision: Endorsed.**

**R4-2015131 Draft CR for 38.101-3 to add n78C in DC\_n78-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SK Telecom, Samsung, Ericsson, Nokia, LGE*

**Abstract:**

DC combos of n78-n257 are updated to add DL n78C.

**Decision: Not pursued.**

**R4-2016693 Draft CR for 38.101-3 to add n78C in DC\_n78-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SK Telecom, Samsung, Ericsson, Nokia, LGE*

**Abstract:**

DC combos of n78-n257 are updated to add DL n78C.

**Decision: Withdrawn.**

**R4-2015217 draftCR to introduce CADC\_n1-n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2015218 draftCR to introduce CADC\_n40-n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2015219 draftCR to introduce CADC\_n78-n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2016308 CR to add CBW 25, 30 and 70 MHz for n78 in n78-n258 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson, Telstra*

**Abstract:**

Adding CBW 25, 30 and 70 MHz for n78 in n78-n258 configurations

**Decision: Endorsed.**

### 10.3 DC of 1 LTE band and 1 NR band [DC\_R17\_1BLTE\_1BNR\_2DL2UL]

#### 10.3.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core/Perf]

**R4-2014786 TR 37.717-11-11 v0.2.0 Rel-17 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: draft TR For: Agreement  
 37.717-11-11 v0.1.0  
 Source: CHTTL*

**Decision:** To be email approved.

**R4-2014787 Revised WID for Rel-17 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Endorsement  
 Source: CHTTL*

**Decision:** To be email approved.

**R4-2014788 Big CR for Rel-17 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0376 Cat: B (Rel-17)  
  
 Source: CHTTL*

**Decision:** To be email approved.

#### 10.3.2 EN-DC without FR2 band [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core]

**R4-2014030 TP for 37.717-11-11 for DC\_8\_n2**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2016655.**

**R4-2016655 TP for 37.717-11-11 for DC\_8\_n2**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014070 TP to TR 37.717-11-11: DC\_18A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: KDDI Corporation*

**Abstract:**

This contribution is a text proposal for TR 37.717-11-11 to include DC\_18A\_28A.

**Decision: Revised to R4-2016658.**

**R4-2016658 TP to TR 37.717-11-11: DC\_18A\_n28A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: KDDI Corporation*

**Abstract:**

This contribution is a text proposal for TR 37.717-11-11 to include DC\_18A\_28A.

**Decision: Approved.**

**R4-2014142 Draft CR for 38.101-3 to introduce new inter-band EN-DC (1NR band +1LTE band) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Samsung, SK Telecom, KT, KDDI, TELUS, Bell mobility*

**Decision: Endorsed.**

**R4-2014172 DC\_XXA\_71A\_n71A REFSENS relaxation**

*Type: other For: Approval  
 38.101-3 v..  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2016661.**

**R4-2016661 DC\_XXA\_71A\_n71A REFSENS relaxation**

*Type: other For: Approval  
 38.101-3 v..  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2014810 TP to TR 37.717-11-11: DC\_18A\_n41A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016663.**

**R4-2016663 TP to TR 37.717-11-11: DC\_18A\_n41A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014850 TP for TR 38.717-11-11: DC\_48\_n77**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

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

**R4-2015071 draftCR for DC\_1A-1A\_n28A and DC\_1A-1A\_n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of DC\_1A-1A\_n28A and DC\_1A-1A\_n78A

**Decision: Endorsed.**

**R4-2015221 TP for 37.717-11-11 to introduce DC\_7\_n2A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Nokia*

**Decision: Revised to R4-2016667.**

**R4-2016667 TP for 37.717-11-11 to introduce DC\_7\_n2A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015245 TP for 37.717-11-11 to introduce DC\_71A\_n71A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Nokia, T-Mobile*

**Decision: Revised to R4-2016670.**

**R4-2016670 TP for 37.717-11-11 to introduce DC\_71A\_n71A**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Nokia, T-Mobile*

**Decision: Approved.**

**R4-2015403 TP for TR 37.717-11-11: DC\_12\_n71**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2016676 TP for TR 37.717-11-11: DC\_12\_n71**

*Type: pCR For: Approval  
 37.717-11-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**R4-2015928 CR to add configurations for 1\_n40 and 3\_n40**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson*

**Abstract:**

Adding configurations for 1\_n40 and 3\_n40

**Decision: Endorsed.**

**R4-2016304 CR to add DC\_1\_n258 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson, Telstra*

**Abstract:**

Adding DC\_1\_n258 configurations

**Decision: Endorsed.**

**R4-2016309 CR to add CA\_n7B UL configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson, Telstra*

**Abstract:**

Adding CA\_n7B UL configurations

**Decision: Not pursued.**

#### 10.3.3 EN-DC with FR2 band [DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core]

**R4-2014607 Draft CR for TS 38.101-3: Support of Uplink n257D/G/H/I for DC\_8\_n257 and DC\_11\_n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SoftBank Corp.*

**Abstract:**

DC combos of 8\_n257 and 11\_n257 are updated to add UL n257D/G/H/I.

**Decision: Endorsed.**

**R4-2014844 DraftCR to 38.101-3: Introduce configurations for inter-band EN-DC including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Verizon Denmark*

**Abstract:**

Some uplink configuratoins are missing from the privious approved proposals, inlcuding configuraitons,

DC\_2A\_n260I

DC\_5A\_n260I

DC\_13A\_n260I

DC\_48A\_n260G

DC\_48A\_n260H

DC\_48A\_n260I

DC\_66A\_n260I

In addition, following two downlink configurations are missing,

DC\_48A\_n261(A-G-H)

DC\_48A\_n261(A-G-I)

**Decision: Endorsed.**

**R4-2014877 TP for TR 37.717-11-11 for DC\_2\_n261**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2015132 Draft CR for 38.101-3 to add UL EN-DC configurations for DC\_5\_n257, DC\_7\_n257 and DC\_7-7\_n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SK Telecom, Samsung, Ericsson, Nokia, LGE*

**Abstract:**

DC combos of 5\_n257, 7\_n257, and 7-7\_n257 are updated to add UL CA.

**Decision: Endorsed.**

**R4-2015220 draftCR to introduce DC\_8A\_n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

### 10.4 DC of 2 LTE band and 1 NR band [DC\_R17\_2BLTE\_1BNR\_3DL2UL]

**R4-2014056 TP for TR 37.717-21-11: DC\_7-32\_n78**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to update the reference sensitivity exceptions for DC\_7-32\_n78. Test points are proposed for B32 to account for the IMD3 and IMD4 impact of a DC\_7\_n78 UL configuration.

**Decision: Approved.**

**R4-2014057 TP for TR 37.717-21-11: DC\_7-32\_n1**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_7-32\_n1.

**Decision: Approved.**

**R4-2014058 TP for TR 37.717-21-11: DC\_20-32\_n1**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-21-11 to include DC\_20-32\_n1.

**Decision: Noted.**

#### 10.4.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core/Perf]

**R4-2015704 TR 37.717-21-11 V0.2.0 for DC of 2 LTE band and 1 NR band**

*Type: draft TR For: Agreement  
 37.717-21-11 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

**R4-2015705 Revised WID: Dual Connectivity (DC) of 2 bands LTE inter-band CA (2DL/1UL) and 1 NR band (1DL/1UL)**

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

**Decision:** To be email approved.

**R4-2015706 CR on introduction of completed EN-DC of 2 bands LTE and 1 band NR from RAN4#96e and RAN4#97e into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0395 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

#### 10.4.2 EN-DC without FR2 band [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2014031 TP for 37.717-21-11 for DC\_2-66\_n7**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014032 TP for 37.717-21-11 for DC\_2-5\_n7**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014033 TP for 37.717-21-11 for DC\_2-8\_n2**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014034 TP for 37.717-21-11 for DC\_5-66\_n7**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014035 TP for 37.717-21-11 for DC\_20-32\_n1**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2016656.**

**R4-2016656 TP for 37.717-21-11 for DC\_20-32\_n1**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014036 TP for 37.717-21-11 for DC\_20-32\_n3**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014103 TP for TR 37.717-21-11 DC\_1-3\_n3**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014104 TP for TR 37.717-21-11 DC\_1-41\_n3**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014105 TP for TR 37.717-21-11 DC\_3-18\_n3**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014106 TP for TR 37.717-21-11 DC\_3-41\_n3**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014128 TP for TR 37.717-21-11 DC\_5A-7A\_n66A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014129 TP for TR 37.717-21-11 DC\_7-66\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014132 TP for TR 37.717-21-11 DC\_2-5\_n48**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014133 TP for TR 37.717-21-11 DC\_2-13\_n48**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014135 TP for TR 37.717-21-11 DC\_2-48\_n5**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014136 TP for TR 37.717-21-11 DC\_5-46\_n66**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014137 TP for TR 37.717-21-11 DC\_5-66\_n48**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014138 TP for TR 37.717-21-11 DC\_5-66\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014139 TP for TR 37.717-21-11 DC\_13-48\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Noted.**

**R4-2016659 TP for TR 37.717-21-11 DC\_13-48\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Withdrawn.**

**R4-2014144 Draft CR for 38.101-3 to introduce new inter-band EN-DC (2LTE band+1NR band) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Samsung, SK Telecom, KT, KDDI, Verizon*

**Decision: Endorsed.**

**R4-2014612 TP for TR 37.717-21-11: EN-DC\_1-42\_n3**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014613 TP for TR 37.717-21-11: EN-DC\_8-42\_n3**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014614 TP update for TR 37.717-21-11: EN-DC\_1-11\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: SoftBank Corp., LG Electronics*

**Decision: Revised to R4-2016662.**

**R4-2016662 TP update for TR 37.717-21-11: EN-DC\_1-11\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: SoftBank Corp., LG Electronics*

**Decision: Approved.**

**R4-2014811 TP for DC\_3-18\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014831 Draft CR to 38.101-3: Error correction of EN-DC configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Verizon Denmark*

**Abstract:**

The LTE\_48B is not defined, and it is incorrectly applied in the following confirgurations,

DC\_13A-48B\_n2A

DC\_13A-48B\_n66A

DC\_48B-66A\_n5A

**Decision: Endorsed.**

**R4-2014852 TP for TR 37.717-21-11: CA\_2-66\_n77**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2014854 TP for TR 37.717-21-11: CA\_2-48\_n77**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2014856 TP for TR 37.717-21-11: CA\_2-13\_n77**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2014857 TP for TR 37.717-21-11: CA\_2-5\_n77**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2014858 TP for TR 37.717-21-11: CA\_5-13\_n66**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2014860 TP for TR 37.717-21-11: CA\_13-66\_n77**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2014862 TP for TR 37.717-21-11: CA\_13-66\_n5**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Approved.**

**R4-2014864 TP for TR 37.717-21-11: CA\_48-66\_n77**

*Type: discussion For: Approval  
 Source: Verizon Denmark*

**Decision: Withdrawn.**

**R4-2014952 TP for DC\_1-18\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016664.**

**R4-2016664 TP for DC\_1-18\_n28**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014953 TP for DC\_1-18\_n41**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016665.**

**R4-2016665 TP for DC\_1-18\_n41**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014982 TP for DC\_3-42\_n1 for TR 37.717-21-11**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2015072 draftCR for DC\_1A-1A-3A\_n28A, DC\_1A-1A-3C\_n28A, DC\_1A-1A-3A\_n78A, DC\_1A-1A-3C\_n78A, DC\_1A-1A-5A\_n78A, DC\_1A-1A-7A\_n28A, DC\_1A-1A-28A\_n78A, and DC\_3C-5A\_n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of DC\_1A-1A-3A\_n28A, DC\_1A-1A-3C\_n28A, DC\_1A-1A-3A\_n78A, DC\_1A-1A-3C\_n78A, DC\_1A-1A-5A\_n78A, DC\_1A-1A-7A\_n28A, DC\_1A-1A-28A\_n78A, and DC\_3C-5A\_n78A

**Decision: Endorsed.**

**R4-2015225 TP for 37.717-21-11 to introduce DC\_5A-7A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia*

**Decision: Revised to R4-2016668.**

**R4-2016668 TP for 37.717-21-11 to introduce DC\_5A-7A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015226 TP for 37.717-21-11 to introduce DC\_2A-28A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia, ZTE*

**Decision: Approved.**

**R4-2015227 TP for 37.717-21-11 to introduce DC\_28A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia, ZTE*

**Decision: Revised to R4-2016669.**

**R4-2016669 TP for 37.717-21-11 to introduce DC\_28A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia, ZTE*

**Decision: Approved.**

**R4-2015228 TP for 37.717-21-11 to introduce DC\_7A-28A\_n2A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia, ZTE*

**Decision: Approved.**

**R4-2015229 TP for 37.717-21-11 to introduce DC\_2A-7A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015246 TP for 37.717-21-11 to introduce DC\_2A-71A\_n71A and DC\_66A-71A\_n71A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia, T-Mobile*

**Decision: Approved.**

**R4-2016671 TP for 37.717-21-11 to introduce DC\_2A-71A\_n71A and DC\_66A-71A\_n71A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia, T-Mobile*

**Decision: Withdrawn.**

**R4-2015268 TP to TR 37.717-21-11 DC\_1A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei, HiSilicon, Ericsson*

**Decision: Approved.**

**R4-2015269 TP to TR 37.717-21-11 DC\_3A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei, HiSilicon, Ericsson*

**Decision: Approved.**

**R4-2015270 TP to TR 37.717-21-11 DC\_7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei, HiSilicon, Ericsson*

**Decision: Approved.**

**R4-2015271 TP to TR 37.717-21-11 DC\_8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015404 TP for TR 37.717-21-11: DC\_7A-66A\_n7A/DC\_7A-66A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015710 TP for TR 37.717-21-11: DC\_2-7\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.2.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Decision: Approved.**

**R4-2015711 TP for TR 37.717-21-11: DC\_7-66\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.2.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Decision: Approved.**

**R4-2016678 TP for TR 37.717-21-11: DC\_7-66\_n77**

*Type: pCR For: Approval  
 37.717-21-11 v0.2.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Decision: Withdrawn.**

**R4-2015929 TP for TR 37.717-21-11 to include DC\_1A-40A\_n78A, DC\_1A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_1A-40A\_n78A, DC\_1A-40C\_n78A

**Decision: Noted.**

**R4-2015930 TP for TR 37.717-21-11 to include DC\_3A-40A\_n78A, DC\_3A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_3A-40A\_n78A, DC\_3A-40C\_n78A

**Decision: Noted.**

**R4-2015931 TP for TR 37.717-21-11 to include DC\_7A-40A\_n78A, DC\_7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-21-11 to include DC\_7A-40A\_n78A, DC\_7A-40C\_n78A

**Decision: Noted.**

**R4-2016310 CR to add CA\_n7B UL configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson, Telstra*

**Abstract:**

Adding CA\_n7B UL configurations

**Decision: Not pursued.**

#### 10.4.3 DMEN-DC with FR2 band [DC\_R17\_2BLTE\_1BNR\_3DL2UL-Core]

**R4-2014134 TP for TR 37.717-21-11 DC\_2-46\_n261**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014140 TP for TR 37.717-21-11 DC\_13-46\_n261**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Revised to R4-2016660.**

**R4-2016660 TP for TR 37.717-21-11 DC\_13-46\_n261**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Samsung, Verizon*

**Decision: Approved.**

**R4-2014143 Draft CR for 38.101-3 to introduce new inter-band EN-DC (2LTE band+1NR band) including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Samsung, Verizon*

**Decision: Endorsed.**

**R4-2014609 Draft CR for TS 38.101-3: Support of Uplink n257D/G/H/I for DC\_1-8\_n257, DC\_1-11\_n257, DC\_3-8\_n257 and DC\_8-11\_n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SoftBank Corp.*

**Abstract:**

DC combos of 1-8\_n257, 1-11\_n257, 3-8\_n257 and 8-11\_n257 are updated to add UL n257D/G/H/I.

**Decision: Endorsed.**

**R4-2015133 Draft CR for 38.101-3 to add UL EN-DC configurations including FR2 with 3DL and 2UL**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SK Telecom, Samsung, Ericsson, Nokia, LGE*

**Abstract:**

DC combos supporting UL CA are updated.

**Decision: Endorsed.**

**R4-2015222 draftCR to introduce DC\_3A-8A\_n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2015223 draftCR to introduce DC\_7A-8A\_n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2015224 draftCR to introduce DC\_3A-7A\_n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

### 10.5 DC of 3 LTE band and 1 NR band [DC\_R17\_3BLTE\_1BNR\_4DL2UL]

**R4-2014059 TP for TR 37.717-31-11: DC\_1-7-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to update the reference sensitivity exceptions for DC\_1-7-32\_n78.

**Decision: Approved.**

**R4-2014060 TP for TR 37.717-31-11: DC\_1-20-32\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to update the reference sensitivity exceptions for DC\_1-20-32\_n28.

**Decision: Approved.**

**R4-2014061 TP for TR 37.717-31-11: DC\_1-20-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to update the reference sensitivity exceptions for DC\_1-20-32\_n78.

**Decision: Approved.**

**R4-2014062 TP for TR 37.717-31-11: DC\_3-7-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to update the reference sensitivity exceptions for DC\_3-7-32\_n78.

**Decision: Approved.**

**R4-2014063 TP for TR 37.717-31-11: DC\_3-20-32\_n78**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to update the reference sensitivity exceptions for DC\_3-20-32\_n78.

**Decision: Approved.**

**R4-2014064 TP for TR 37.717-31-11: DC\_7-20-32\_n1**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution is a text proposal for TR 37.717-31-11 to update the reference sensitivity exceptions for DC\_7-20-32\_n1.

**Decision: Approved.**

#### 10.5.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core/Perf]

**R4-2015917 Revised WID LTE 3DL and one NR band Rel-17**

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

**Abstract:**

Revised WID LTE 3DL and one NR band Rel-17

**Decision:** To be email approved.

**R4-2015921 CR introduction completed band combinations LTE 3DL and one NR band -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0400 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations LTE 3DL and one NR band -> 38.101-3

**Decision:** To be email approved.

**R4-2015925 TR 37.717-31-11 v0.2.0 Rel-17 DC combinations LTE 3DL and one NR band**

*Type: draft TR For: Agreement  
 37.717-31-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TR 37.717-31-11 v0.2.0 Rel-17 DC combinations LTE 3DL and one NR band

**Decision:** To be email approved.

#### 10.5.2 EN-DC without FR2 band [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core]

**R4-2014037 TP for 37.717-31-11 for DC\_1-20-32\_n3**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014038 TP for 37.717-31-11 for DC\_2-4-7\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014039 TP for 37.717-31-11 for DC\_2-5-7\_n66**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014040 TP for 37.717-31-11 for DC\_2-5-66\_n7**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014041 TP for 37.717-31-11 for DC\_2-5-66\_n66**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014042 TP for 37.717-31-11 for DC\_2-7-66\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014043 TP for 37.717-31-11 for DC\_3-20-32\_n1**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014107 TP for TR 37.717-31-11 DC\_1-3-18\_n3**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014108 TP for TR 37.717-31-11 DC\_1-3-41\_n3**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014109 TP for TR 37.717-31-11 DC\_1-3-41\_n41**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014130 TP for TR 37.717-31-11 DC\_2-5-7\_n66**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014145 Draft CR for 38.101-3 to introduce new inter-band EN-DC (3LTE band+1NR band) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Samsung, SK Telecom, KT, KDDI*

**Decision: Endorsed.**

**R4-2014615 TP for TR 37.717-31-11: EN-DC\_1-3-11\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014616 TP for TR 37.717-31-11: EN-DC\_1-3-11\_n77**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014617 TP for TR 37.717-31-11: EN-DC\_3-8-11\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014618 TP for TR 37.717-31-11: EN-DC\_3-8-11\_n77**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014619 TP for TR 37.717-31-11: EN-DC\_1-8-11\_n28**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014807 TP for TR 37.717-31-11: DC\_1A-3A-18A\_n28A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014845 TP for TR 37.717-31-11: DC\_1A-3A-18A\_n41A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2015073 draftCR for DC\_1A-3C-5A\_n78A, DC\_1A-1A-3A-5A\_n78A, DC\_1A-1A-3C-5A\_n78A, DC\_1A-1A-3A-7A\_n78A, DC\_1A-1A-3C-7A\_n78A, DC\_1A-1A-3C-7A\_n28A, DC\_1A-1A-3A-28A\_n78A, DC\_1A-1A-3C-28A\_n78A and DC\_3C-5A-7A\_n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of DC\_1A-3C-5A\_n78A, DC\_1A-1A-3A-5A\_n78A, DC\_1A-1A-3C-5A\_n78A, DC\_1A-1A-3A-7A\_n78A, DC\_1A-1A-3C-7A\_n78A, DC\_1A-1A-3C-7A\_n28A, DC\_1A-1A-3A-28A\_n78A, DC\_1A-1A-3C-28A\_n78A and DC\_3C-5A-7A\_n78A

**Decision: Endorsed.**

**R4-2015231 TP for 37.717-31-11 to introduce DC\_2A-7A-28A\_n7A**

*Type: pCR For: Approval  
 37.717-21-11 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015247 TP for 37.717-31-11 to introduce DC\_2A-66A-71A\_n71A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Nokia, T-Mobile*

**Decision: Approved.**

**R4-2015248 TP for 37.717-31-11 to introduce DC\_2-5-66\_n77A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Nokia, Verizon*

**Decision: Approved.**

**R4-2015249 TP for 37.717-31-11 to introduce DC\_2-13-66\_n77A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Nokia, Verizon*

**Decision: Approved.**

**R4-2015250 TP for 37.717-31-11 to introduce DC\_2-48-66\_n77A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Nokia, Verizon*

**Decision: Approved.**

**R4-2015272 TP to TR 37.717-31-11 DC\_1A-3A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon, Nokia, Ericsson*

**Decision: Approved.**

**R4-2015273 TP to TR 37.717-31-11 DC\_1A-7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon, Ericsson*

**Decision: Approved.**

**R4-2015274 TP to TR 37.717-31-11 DC\_1A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon, Nokia*

**Decision: Approved.**

**R4-2015275 TP to TR 37.717-31-11 DC\_3A-7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon, Ericsson*

**Decision: Approved.**

**R4-2015276 TP to TR 37.717-31-11 DC\_3A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon, Nokia*

**Decision: Approved.**

**R4-2015277 TP to TR 37.717-31-11 DC\_7A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015405 TP for TR 37.717-31-11: DC\_1A-7A-8A\_n28A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015406 TP for TR 37.717-31-11: DC\_3A-7A-8A\_n28A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015407 TP for TR 37.717-31-11: DC\_1A-7A-28A\_n3A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015408 TP for TR 37.717-31-11: DC\_3A-8A-40A\_n1A/DC\_3A-8A-40C\_n1A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015409 TP for TR 37.717-31-11: DC\_7A-8A-40A\_n1A/DC\_7A-8A-40C\_n1A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015410 DraftCR for 38.101-3 to add configuration DC\_3A-7A-40C\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add ENDC configuration DC\_3A-7A-40C\_n1A.

**Decision: Endorsed.**

**R4-2015411 TP for TR 37.717-31-11: DC\_2A-28A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015412 TP for TR 37.717-31-11: DC\_2A-5A-7A\_n7A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015413 TP for TR 37.717-31-11: DC\_2A-7A-66A\_n7A/DC\_2A-7A-66A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015414 TP for TR 37.717-31-11: DC\_5A-7A-66A\_n7A/DC\_5A-7A-66A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015415 TP for TR 37.717-31-11: DC\_7A-28A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015712 TP for TR 37.717-31-11: DC\_2-7-66\_n77**

*Type: pCR For: Approval  
 37.717-31-11 v0.2.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Decision: Approved.**

**R4-2015932 TP for TR 37.717-31-11 to include DC\_1A-3A-40A\_n78A, DC\_1A-3A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-31-11 to include DC\_1A-3A-40A\_n78A, DC\_1A-3A-40C\_n78A

**Decision: Noted.**

**R4-2015933 TP for TR 37.717-31-11 to include DC\_1A-7A-40A\_n78A, DC\_1A-7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-31-11 to include DC\_1A-7A-40A\_n78A, DC\_1A-7A-40C\_n78A

**Decision: Noted.**

**R4-2015934 TP for TR 37.717-31-11 to include DC\_3A-7A-40A\_n78A, DC\_3A-7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-31-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-31-11 to include DC\_3A-7A-40A\_n78A, DC\_3A-7A-40C\_n78A

**Decision: Noted.**

**R4-2015944 draft CR 38.101-3 to add DC\_2A-2A-5A-66A\_n66A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson, Bell*

**Abstract:**

Adding configuration to existing DC combination

**Decision: Endorsed.**

**R4-2016311 CR to add CA\_n7B UL configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson, Telstra*

**Abstract:**

Adding CA\_n7B UL configurations

**Decision: Not pursued.**

#### 10.5.3 EN-DC with FR2 band [DC\_R17\_3BLTE\_1BNR\_4DL2UL-Core]

**R4-2014611 Draft CR for TS 38.101-3: Support of Uplink n257D/G/H/I for DC\_1-3-8\_n257 and DC\_1A-8-11\_n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SoftBank Corp.*

**Abstract:**

DC combos of 1-3-8\_n257 and 1-8-11\_n257 are updated to add UL n257D/G/H/I.

**Decision: Endorsed.**

**R4-2015134 Draft CR for 38.101-3 to add EN-DC configurations including FR2 with 4DL and 2UL**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SK Telecom, Samsung, Ericsson, Nokia, LGE*

**Abstract:**

DC combos supporting UL CA and DL CA are updated.

**Decision: Endorsed.**

**R4-2015230 draftCR to introduce DC\_3A-7A-8A\_n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

### 10.6 DC of 4 LTE band and 1 NR band [DC\_R17\_4BLTE\_1BNR\_5DL2UL]

#### 10.6.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core/Perf]

**R4-2015214 Revised Rel-17 WID on DC of 4 bands LTE inter-band CA (4DL1UL) and 1 NR band (1DL1UL)**

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

**Abstract:**

Inclusion of requests provided at RAN4#97

**Decision:** To be email approved.

**R4-2015215 CR to introduce new combinations of LTE 4band + NR 1band for TS 38.101-3**

*Type: CR For: Endorsement  
 38.101-3 v16.5.0 CR-0387 Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Inclusion of approved combinations provided at RAN4#97

**Decision:** To be email approved.

**R4-2015216 draftTR 37.717-41-11 v0.2.0**

*Type: draft TR For: Agreement  
 37.717-41-11 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Inclusion of TPs provided at RAN4#97

**Decision:** To be email approved.

#### 10.6.2 EN-DC without FR2 band [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core]

**R4-2014044 TP for 37.717-41-11 for DC\_2-5-7-66\_n66**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2016657.**

**R4-2016657 TP for 37.717-41-11 for DC\_2-5-7-66\_n66**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei,HiSilicon*

**Decision: Approved.**

**R4-2014146 Draft CR for 38.101-3 to introduce new inter-band EN-DC (4LTE band+1NR band) within FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Samsung, SK Telecom*

**Decision: Endorsed.**

**R4-2015074 draft CR for DC\_1A-1A-3A-5A-7A\_n78A, DC\_1A-3C-5A-7A\_n78A, and DC\_1A-1A-3A-7A-28A\_n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction of DC\_1A-1A-3A-5A-7A\_n78A, DC\_1A-3C-5A-7A\_n78A, and DC\_1A-1A-3A-7A-28A\_n78A

**Decision: Endorsed.**

**R4-2015278 TP to TR 37.717-41-11 DC\_1A-3A-7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016672.**

**R4-2016672 TP to TR 37.717-41-11 DC\_1A-3A-7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015279 TP to TR 37.717-41-11 DC\_1A-3A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon, Nokia*

**Decision: Revised to R4-2016673.**

**R4-2016673 TP to TR 37.717-41-11 DC\_1A-3A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon, Nokia*

**Decision: Approved.**

**R4-2015280 TP to TR 37.717-41-11 DC\_1A-7A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016674.**

**R4-2016674 TP to TR 37.717-41-11 DC\_1A-7A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015281 TP to TR 37.717-41-11 DC\_3A-7A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016675.**

**R4-2016675 TP to TR 37.717-41-11 DC\_3A-7A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015416 TP for TR 37.717-41-11: DC\_2A-7A-28A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015417 TP for TR 37.717-41-11:DC\_2A-5A-7A-66A\_n7A/DC\_2A-5A-7A-66A-66A\_n7A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015418 TP for TR 37.717-41-11:DC\_1A-3A-7A-8A\_n28A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015419 TP for TR 37.717-41-11:DC\_3A-7A-8A-40A\_n1A/DC\_3A-7A-8A-40C\_n1A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016677.**

**R4-2016677 TP for TR 37.717-41-11:DC\_3A-7A-8A-40A\_n1A/DC\_3A-7A-8A-40C\_n1A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015935 TP for TR 37.717-41-11 to include DC\_1A-3A-7A-40A\_n78A, DC\_1A-3A-7A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-41-11 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-41-11 to include DC\_1A-3A-7A-40A\_n78A, DC\_1A-3A-7A-40C\_n78A

**Decision: Noted.**

#### 10.6.3 EN-DC with FR2 band [DC\_R17\_4BLTE\_1BNR\_5DL2UL-Core]

**R4-2015135 Draft CR for 38.101-3 to add UL EN-DC configurations including FR2 with 5DL and 2UL**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: SK Telecom, Samsung, Ericsson, Nokia, LGE*

**Abstract:**

DC combos supporting UL CA are updated.

**Decision: Endorsed.**

### 10.7 DC of x bands (x=1,2, 3, 4) LTE inter-band CA and 2 bands NR inter-band CA [DC\_R17\_xBLTE\_2BNR\_yDL2UL]

#### 10.7.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core/Per]

**R4-2014304 TR 37.717-11-21 v0.2.0 TR update: LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-17**

*Type: draft TR For: Agreement  
 37.717-11-21 v0.2.0  
 Source: LG Electronics Polska*

**Decision:** To be email approved.

**R4-2014305 Revised WID on LTE (xDL/UL x=1.2,3,4) with NR 2 bands (2DL/1UL) EN DC in Rel-17**

*Type: WID revised For: (not specified)  
 Source: LG Electronics Polska*

**Decision:** To be email approved.

**R4-2014306 Introducing CR on new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-17**

*Type: CR For: (not specified)  
 38.101-3 v16.5.0 CR-0359 Cat: B (Rel-17)  
  
 Source: LG Electronics Polska*

**Decision:** To be email approved.

#### 10.7.2 EN-DC including NR inter CA without FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2014071 TP for TR 37.717-11-21 DC\_1\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014072 TP for TR 37.717-11-21 DC\_1\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014073 TP for TR 37.717-11-21 DC\_1\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014074 TP for TR 37.717-11-21 DC\_1-3\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016694.**

**R4-2016694 TP for TR 37.717-11-21 DC\_1-3\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014075 TP for TR 37.717-11-21 DC\_1-3\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016695.**

**R4-2016695 TP for TR 37.717-11-21 DC\_1-3\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014076 TP for TR 37.717-11-21 DC\_1-3\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016696.**

**R4-2016696 TP for TR 37.717-11-21 DC\_1-3\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014077 TP for TR 37.717-11-21 DC\_1-3\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014078 TP for TR 37.717-11-21 DC\_1-3-18\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016697.**

**R4-2016697 TP for TR 37.717-11-21 DC\_1-3-18\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014079 TP for TR 37.717-11-21 DC\_1-3-18\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014080 TP for TR 37.717-11-21 DC\_1-3-41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016698.**

**R4-2016698 TP for TR 37.717-11-21 DC\_1-3-41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014081 TP for TR 37.717-11-21 DC\_1-3-41\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016699.**

**R4-2016699 TP for TR 37.717-11-21 DC\_1-3-41\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014082 TP for TR 37.717-11-21 DC\_1-3-41\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016700.**

**R4-2016700 TP for TR 37.717-11-21 DC\_1-3-41\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014083 TP for TR 37.717-11-21 DC\_1-3-41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016701 TP for TR 37.717-11-21 DC\_1-3-41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014084 TP for TR 37.717-11-21 DC\_1-3-41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016702 TP for TR 37.717-11-21 DC\_1-3-41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014085 TP for TR 37.717-11-21 DC\_1-18\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014086 TP for TR 37.717-11-21 DC\_1-41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016703 TP for TR 37.717-11-21 DC\_1-41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014087 TP for TR 37.717-11-21 DC\_1-41\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014088 TP for TR 37.717-11-21 DC\_1-41\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014089 TP for TR 37.717-11-21 DC\_1-41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016704 TP for TR 37.717-11-21 DC\_1-41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014090 TP for TR 37.717-11-21 DC\_1-41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016705 TP for TR 37.717-11-21 DC\_1-41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014091 TP for TR 37.717-11-21 DC\_3\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016706.**

**R4-2016706 TP for TR 37.717-11-21 DC\_3\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014092 TP for TR 37.717-11-21 DC\_3\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014093 TP for TR 37.717-11-21 DC\_3-18\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016707.**

**R4-2016707 TP for TR 37.717-11-21 DC\_3-18\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014094 TP for TR 37.717-11-21 DC\_3-18\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014095 TP for TR 37.717-11-21 DC\_3-41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016708.**

**R4-2016708 TP for TR 37.717-11-21 DC\_3-41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014096 TP for TR 37.717-11-21 DC\_3-41\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016709.**

**R4-2016709 TP for TR 37.717-11-21 DC\_3-41\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014097 TP for TR 37.717-11-21 DC\_3-41\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016710.**

**R4-2016710 TP for TR 37.717-11-21 DC\_3-41\_n3-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014098 TP for TR 37.717-11-21 DC\_3-41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016711 TP for TR 37.717-11-21 DC\_3-41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014099 TP for TR 37.717-11-21 DC\_3-41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016712 TP for TR 37.717-11-21 DC\_3-41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014100 TP for TR 37.717-11-21 DC\_41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2016713 TP for TR 37.717-11-21 DC\_41\_n3-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Withdrawn.**

**R4-2014101 TP for TR 37.717-11-21 DC\_41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016714.**

**R4-2016714 TP for TR 37.717-11-21 DC\_41\_n41-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014102 TP for TR 37.717-11-21 DC\_41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016715.**

**R4-2016715 TP for TR 37.717-11-21 DC\_41\_n41-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014121 TP for TR 37.717-11-21 DC\_2\_n7-n66**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014122 TP for TR 37.717-11-21 DC\_2\_n38-n66**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014123 TP for TR 37.717-11-21 DC\_2\_n66-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014124 TP for TR 37.717-11-21 DC\_2-7\_n38-n66**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014125 TP for TR 37.717-11-21 DC\_7-66\_n38-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014126 TP for TR 37.717-11-21 DC\_12\_n7-n66**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014127 TP for TR 37.717-11-21 DC\_66\_n38-n66**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Revised to R4-2016716.**

**R4-2016716 TP for TR 37.717-11-21 DC\_66\_n38-n66**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Samsung, TELUS, Bell mobility*

**Decision: Approved.**

**R4-2014187 Discussion of MSD for 3DL2UL DC\_42\_n1-n79 and DC\_19\_n1-n77 due to UL IMD issues**

*Type: discussion For: Approval  
 38.717-03-02 v..  
 Source: MediaTek Inc.*

**Decision: Noted.**

**R4-2014315 TP on summary of self-interference analysis for new EN-DC LTE(xDL/1UL)+ NR(2DL/1UL) DC in Rel-17**

*Type: pCR For: Approval  
 37.717-11-21 v0.2.0  
 Source: LG Electronics France*

**Decision: Approved.**

**R4-2014316 MSD anlaysis results for new DC band combinations**

*Type: pCR For: Approval  
 37.717-11-21 v0.2.0  
 Source: LG Electronics France*

**Decision: Approved.**

**R4-2014608 TP for DC\_19\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc.*

**Decision: Revised to R4-2016717.**

**R4-2016717 TP for DC\_19\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc.*

**Decision: Approved.**

**R4-2014610 TP for DC\_19\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc.*

**Decision: Revised to R4-2016718.**

**R4-2016718 TP for DC\_19\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc.*

**Decision: Approved.**

**R4-2014647 TP for TR 37.717-11-21: EN-DC\_11\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Revised to R4-2016719.**

**R4-2016719 TP for TR 37.717-11-21: EN-DC\_11\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014648 TP for TR 37.717-11-21: EN-DC\_11\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014650 TP for TR 37.717-11-21: EN-DC\_42\_n3-n28**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014651 TP for TR 37.717-11-21: EN-DC\_42\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014653 TP for TR 37.717-11-21: EN-DC\_1-8\_n3-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014667 TP for TR 37.717-11-21: EN-DC\_1-11\_n3-n28**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014681 TP for TR 37.717-11-21: EN-DC\_8-11\_n3-n28**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014689 TP for TR 37.717-11-21: EN-DC\_1-8-42\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014808 TP for TR 37.717-11-21: EN-DC\_1-3-18\_n28-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014809 TP for TR 37.717-11-21: EN-DC\_1-3-18\_n28-n78**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014812 TP for TR 37.717-11-21: DC\_41A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016720.**

**R4-2016720 TP for TR 37.717-11-21: DC\_41A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014825 TP for TR 37.717-11-21: DC\_1A-18A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014828 TP for TR 37.717-11-21: DC\_1A-18A\_n28A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014830 TP for TR 37.717-11-21: DC\_1A-18A\_n28A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014833 TP for TR 37.717-11-21: DC\_1A-18A\_n3A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014840 TP for TR 37.717-11-21: DC\_1A-18A\_n41A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014841 TP for TR 37.717-11-21: DC\_1A-18A\_n41A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014851 TP for TR 37.717-11-21: EN-DC\_1-3-41\_n28-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016721.**

**R4-2016721 TP for TR 37.717-11-21: EN-DC\_1-3-41\_n28-n41**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014853 TP for TR 37.717-11-21: DC\_1A-41A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016722.**

**R4-2016722 TP for TR 37.717-11-21: DC\_1A-41A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014855 TP for TR 37.717-11-21: DC\_3A-18A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014859 TP for TR 37.717-11-21: DC\_3A-18A\_n28A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014863 TP for TR 37.717-11-21: DC\_3A-18A\_n28A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014878 TP for TR 37.717-11-21: DC\_3A-18A\_n3A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016723.**

**R4-2016723 TP for TR 37.717-11-21: DC\_3A-18A\_n3A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014879 TP for TR 37.717-11-21: DC\_3A-18A\_n41A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014881 TP for TR 37.717-11-21: DC\_3A-18A\_n41A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014882 TP for TR 37.717-11-21: DC\_3A-41A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016724.**

**R4-2016724 TP for TR 37.717-11-21: DC\_3A-41A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014884 TP for TR 37.717-11-21: DC\_3A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016725.**

**R4-2016725 TP for TR 37.717-11-21: DC\_3A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014927 TP for TR 37.717-11-21: DC\_18A\_n28A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014929 TP for TR 37.717-11-21: DC\_18A\_n28A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014930 TP for TR 37.717-11-21: DC\_18A\_n28A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014931 TP for TR 37.717-11-21: DC\_18A\_n3A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Revised to R4-2016726.**

**R4-2016726 TP for TR 37.717-11-21: DC\_18A\_n3A-n41A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014950 TP for TR 37.717-11-21: DC\_18A\_n41A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014951 TP for TR 37.717-11-21: DC\_18A\_n41A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: KDDI Corporation*

**Decision: Approved.**

**R4-2014983 TP for DC\_19\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014984 TP for DC\_21\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014985 TP for DC\_21\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014986 TP for DC\_21\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014987 TP for DC\_42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016727 TP for DC\_42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2014988 TP for DC\_42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016728 TP for DC\_42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2014989 TP for DC\_3-19\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014990 TP for DC\_3-19\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014991 TP for DC\_3-19\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014992 TP for DC\_3-21\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014993 TP for DC\_3-21\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014994 TP for DC\_3-21\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014995 TP for DC\_3-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016729 TP for DC\_3-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2014996 TP for DC\_3-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016730 TP for DC\_3-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2014997 TP for DC\_3-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016731 TP for DC\_3-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2014998 TP for DC\_19-21\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014999 TP for DC\_19-21\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2015000 TP for DC\_19-21\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2015001 TP for DC\_19-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016732 TP for DC\_19-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015002 TP for DC\_19-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016733 TP for DC\_19-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015003 TP for DC\_19-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016734 TP for DC\_19-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015004 TP for DC\_21-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016735 TP for DC\_21-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015005 TP for DC\_21-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016736 TP for DC\_21-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015006 TP for DC\_21-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016737 TP for DC\_21-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015007 TP for DC\_3-19-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016738 TP for DC\_3-19-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015008 TP for DC\_3-19-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016739 TP for DC\_3-19-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015009 TP for DC\_3-19-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016740 TP for DC\_3-19-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015010 TP for DC\_3-21-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016741 TP for DC\_3-21-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015011 TP for DC\_3-21-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016742 TP for DC\_3-21-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015012 TP for DC\_3-21-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016743 TP for DC\_3-21-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015013 TP for DC\_19-21-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016744 TP for DC\_19-21-42\_n1-n77 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015014 TP for DC\_19-21-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016745 TP for DC\_19-21-42\_n1-n78 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015015 TP for DC\_19-21-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016746 TP for DC\_19-21-42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015259 TP for DC\_42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016747 TP for DC\_42\_n1-n79 for TR 37.717-11-21**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Withdrawn.**

**R4-2015420 DraftCR for 38.101-3 to add UL configuration DC\_3C\_n1A-n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add ENDC UL configuration DC\_3C\_n1A-n78A.

**Decision: Approved.**

**R4-2015421 TP for TR 37.717-11-21:DC\_3A-20A\_n1A-n78A/DC\_3C-20A\_n1A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015422 TP for TR 37.717-11-21:DC\_7A-20A\_n1A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015423 DraftCR for 38.101-3 to add UL configuration DC\_3C\_n1A and DC\_3C\_n78A for DC\_3C-7A\_n1A-n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add ENDC UL configuration for DC\_3C-7A\_n1A-n78A.

**Decision: Approved.**

**R4-2015424 TP for TR 37.717-11-21:DC\_3A-7A-20A\_n1A-n78A/DC\_3C-7A-20A\_n1A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015936 TP for TR 37.717-11-21 to include DC\_28A\_n1A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_28A\_n1A-n78A

**Decision: Approved.**

**R4-2015937 TP for TR 37.717-11-21 to include DC\_3A-7A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_3A-7A\_n40A-n78A

**Decision: Approved.**

**R4-2015938 TP for TR 37.717-11-21 to include DC\_1A-7A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_1A-7A\_n40A-n78A

**Decision: Approved.**

**R4-2015939 TP for TR 37.717-11-21 to include DC\_7A-28A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_7A-28A\_n40A-n78A

**Decision: Approved.**

**R4-2015940 TP for TR 37.717-11-21 to include DC\_3A-7A-28A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_3A-7A-28A\_n40A-n78A

**Decision: Approved.**

**R4-2015941 TP for TR 37.717-11-21 to include DC\_1A-3A-7A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_1A-3A-7A\_n40A-n78A

**Decision: Approved.**

**R4-2015942 TP for TR 37.717-11-21 to include DC\_1A-7A-28A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_1A-7A-28A\_n40A-n78A

**Decision: Approved.**

**R4-2015943 TP for TR 37.717-11-21 to include DC\_1A-3A-7A-28A\_n40A-n78A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_1A-3A-7A-28A\_n40A-n78A

**Decision: Approved.**

**R4-2016312 CR to add CA\_n7B UL configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Ericsson, Telstra*

**Abstract:**

Adding CA\_n7B UL configurations

**Decision: Not pursued.**

**R4-2016313 TP for TR 37.717-11-21 to include DC\_2A\_n5A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon, LG Electronics*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_2A\_n5A-n77A

**Decision: Approved.**

**R4-2016314 TP for TR 37.717-11-21 to include DC\_2A-13A\_n66A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_2A-13A\_n66A-n77A

**Decision: Approved.**

**R4-2016315 TP for TR 37.717-11-21 to include DC\_2A\_n66A-n77A, DC\_2A-2A\_n66A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon, LG Electronics*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_2A\_n66A-n77A, DC\_2A-2A\_n66A-n77A

**Decision: Approved.**

**R4-2016316 TP for TR 37.717-11-21 to include DC\_2A-66A\_n66A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_2A-66A\_n66A-n77A

**Decision: Approved.**

**R4-2016317 TP for TR 37.717-11-21 to include DC\_2A-66A\_n5A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_2A-66A\_n5A-n77A

**Decision: Approved.**

**R4-2016318 TP for TR 37.717-11-21 to include DC\_13A\_n2A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon, LG Electronics*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_13A\_n2A-n77A

**Decision: Approved.**

**R4-2016319 TP for TR 37.717-11-21 to include DC\_13A\_n5A-n48A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_13A\_n5A-n48A

**Decision: Approved.**

**R4-2016320 TP for TR 37.717-11-21 to include DC\_13A\_n48A-n66A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_13A\_n48A-n66A

**Decision: Approved.**

**R4-2016321 TP for TR 37.717-11-21 to include DC\_13A\_n66A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon, LG Electronics*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_13A\_n66A-n77A

**Decision: Approved.**

**R4-2016322 TP for TR 37.717-11-21 to include DC\_13A-66A\_n66A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_13A-66A\_n66A-n77A

**Decision: Approved.**

**R4-2016323 TP for TR 37.717-11-21 to include DC\_13A-66A\_n2A-n77A**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_13A-66A\_n2A-n77A

**Decision: Approved.**

**R4-2016324 TP for TR 37.717-11-21 to include DC\_13-66\_n5-n48**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_13-66\_n5-n48

**Decision: Approved.**

**R4-2016325 TP for TR 37.717-11-21 to include DC\_66\_n2-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_66\_n2-n77

**Decision: Approved.**

**R4-2016326 TP for TR 37.717-11-21 to include DC\_66\_n5-n48**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_66\_n5-n48

**Decision: Approved.**

**R4-2016327 TP for TR 37.717-11-21 to include DC\_66\_n5-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon, LG Electronics*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_66\_n5-n77

**Decision: Approved.**

**R4-2016328 TP for TR 37.717-11-21 to include DC\_66\_n66-n77**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Verizon*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_66\_n66-n77

**Decision: Approved.**

#### 10.7.3 EN-DC including NR inter CA with FR2 band [DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core]

**R4-2015047 TP for 37.717-11-21\_ DC\_40\_n41-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2015048 TP for 37.717-11-21\_ DC\_40\_n79-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2015049 TP for 37.717-11-21\_ DC\_41\_n79-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2015232 TP for 37.717-11-21 to introduce DC\_8A\_n78A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015233 TP for 37.717-11-21 to introduce DC\_8A\_n40A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015234 TP for 37.717-11-21 to introduce DC\_1A-8A\_n78A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015235 TP for 37.717-11-21 to introduce DC\_3A-8A\_n78A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015236 TP for 37.717-11-21 to introduce DC\_7A-8A\_n78A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015237 TP for 37.717-11-21 to introduce DC\_1A-8A\_n40A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015238 TP for 37.717-11-21 to introduce DC\_3A-8A\_n40A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015239 TP for 37.717-11-21 to introduce DC\_7A-8A\_n40A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015240 TP for 37.717-11-21 to introduce DC\_3A-7A-8A\_n78A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2015241 TP for 37.717-11-21 to introduce DC\_3A-7A-8A\_n40A-n258**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Nokia*

**Decision: Approved.**

**R4-2016301 TP for TR 37.717-11-21 to include DC\_7A\_n78A-n258A to M, DC\_7C\_n78A-n258A to M**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_7A\_n78A-n258A to M, DC\_7C\_n78A-n258A to M

**Decision: Approved.**

**R4-2016302 TP for TR 37.717-11-21 to include DC\_3A\_n78A-n258A to M**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_3A\_n78A-n258A to M

**Decision: Approved.**

**R4-2016303 TP for TR 37.717-11-21 to include DC\_28A\_n78A-n258A to M**

*Type: pCR For: Approval  
 37.717-11-21 v0.1.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP for TR 37.717-11-21 to include DC\_28A\_n78A-n258A to M

**Decision: Approved.**

### 10.8 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\_R17]

#### 10.8.1 Rapporteur Input (WID/TR/CR) [NR\_SUL\_combos\_R17-Core/Per]

**R4-2014800 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: Endorsement  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

**R4-2014801 TR 37.717-00-00 v0.2.0**

*Type: draft TR For: Agreement  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To capture the approved TPs in this meeting

**Decision:** To be email approved.

**R4-2014802 CR on Introduction of completed SUL band combinations into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0514 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

**R4-2014803 CR on Introduction of completed SUL band combinations into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0377 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

#### 10.8.2 UE RF [NR\_SUL\_combos\_R17-Core]

**R4-2015535 DraftCR for 38.101-1 to add BCS1 for SUL\_n78A-n80A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for SUL\_n78A-n80A.

**Decision: Endorsed.**

**R4-2015536 DraftCR for 38.101-1 to add BCS1 for SUL\_n78A-n83A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for SUL\_n78A-n83A.

**Decision: Endorsed.**

**R4-2015537 DraftCR for 38.101-1 to add BCS1 for SUL\_n78A-n84A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for SUL\_n78A-n84A.

**Decision: Endorsed.**

**R4-2015538 DraftCR for 38.101-1 to add BCS1 for SUL\_n41A-n80A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for SUL\_n41A-n80A.

**Decision: Endorsed.**

**R4-2015539 DraftCR for 38.101-1 to add BCS1 for SUL\_n79A-n80A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add BCS1 for SUL\_n79A-n80A.

**Decision: Endorsed.**

**R4-2015540 TP for TR 37.717-00-00 to correct the notation of SUL band combinations**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015541 TP for TR 37.717-00-00 for CA\_n1A\_SUL\_n78A-n80A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016748.**

**R4-2016748 TP for TR 37.717-00-00 for CA\_n1A\_SUL\_n78A-n80A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015542 TP for TR 37.717-00-00 for CA\_n1A\_SUL\_n78A-n84A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016749.**

**R4-2016749 TP for TR 37.717-00-00 for CA\_n1A\_SUL\_n78A-n84A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015543 TP for TR 37.717-00-00 for CA\_n41A\_SUL\_n79A-n80A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016750.**

**R4-2016750 TP for TR 37.717-00-00 for CA\_n41A\_SUL\_n79A-n80A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015544 TP for TR 37.717-00-00 for CA\_n79A\_SUL\_n41A-n80A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016751.**

**R4-2016751 TP for TR 37.717-00-00 for CA\_n79A\_SUL\_n41A-n80A**

*Type: pCR For: Approval  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015545 DraftCR for 38.101-1 to add configuration for SUL\_n41C-n80A / SUL\_n41C-n83A / SUL\_n78C-n80A / SUL\_n78C-n84A / SUL\_n79C-n80A / SUL\_n79C-n83A**

*Type: draftCR For: Endorsement  
 37.717-00-00 v0.1.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add configuration for SUL\_n41C-n80A / SUL\_n41C-n83A / SUL\_n78C-n80A / SUL\_n78C-n84A / SUL\_n79C-n80A / SUL\_n79C-n83A.

**Decision: Endorsed.**

### 10.9 NR Inter-band Carrier Aggregation for 3 bands DL with 1 band UL [NR\_CA\_R17\_3BDL\_1BUL]

#### 10.9.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_3BDL\_1BUL-Core/Per]

**R4-2014460 TR 38.717-03-01 on Rel-17 NR inter-band Carrier Aggregation (CA) for 3 Down Link (DL) / 1 Up Link (UL)**

*Type: draft TR For: Agreement  
 38.717-03-01 v0.1.0  
 Source: CATT*

**Decision:** To be email approved.

**R4-2014461 Revised WID on Rel-17 NR inter-band CA of 3DL bands and 1UL band**

*Type: WID revised For: Approval  
 Source: CATT*

**Decision:** To be email approved.

#### 10.9.2 UE RF [NR\_CA\_R17\_3BDL\_1BUL-Core]

**R4-2014112 TP for TR 38.717-03-01 CA\_n3-n41-n77**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016752.**

**R4-2016752 TP for TR 38.717-03-01 CA\_n3-n41-n77**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014113 TP for TR 38.717-03-01 CA\_n3-n41-n78**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016753.**

**R4-2016753 TP for TR 38.717-03-01 CA\_n3-n41-n78**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014114 TP for TR 38.717-03-01 CA\_n28-n41-n77**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014115 TP for TR 38.717-03-01 CA\_n28-n41-n78**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014462 CR on Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0504 Cat: B (Rel-17)  
  
 Source: CATT*

**Decision:** To be email approved.

**R4-2014463 CR on Introducing NR inter-band CA for 3DL Bands and 1UL band for 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0366 Cat: B (Rel-17)  
  
 Source: CATT*

**Decision:** To be email approved.

**R4-2014523 draft CR for NR inter-band CA for 3 bands DL**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Nokia, T-Mobile USA*

**Abstract:**

Addition of higher order configurations.

**Decision: Endorsed.**

**R4-2014526 TP for TR 38.717-03-01: CA\_n1A-n8A-n78(2A)**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.0  
 Source: Nokia, Telefonica*

**Decision: Revised to R4-2016754.**

**R4-2016754 TP for TR 38.717-03-01: CA\_n1A-n8A-n78(2A)**

*Type: pCR For: Approval  
 38.717-03-01 v0.0.0  
 Source: Nokia, Telefonica*

**Decision: Approved.**

**R4-2015051 TP for TR38.717-03-01\_ CA\_n8A-n40A-n41A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2015078 TP to TR 38.717-03-01: CA\_n5-n66-n77**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2015079 TP to TR 38.717-03-01: CA\_n2-n66-n77**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2015242 draftCR to introduce CA\_n1A-n40A-n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2015243 draftCR to introduce CA\_n1A-n78A-n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2015244 draftCR to introduce CA\_n40A-n78A-n258 to 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: Nokia*

**Abstract:**

Introduction of new combinations due to operator request.

**Decision: Endorsed.**

**R4-2015707 TP for TR 38.717-03-01: CA\_n66-n71-n78**

*Type: pCR For: Approval  
 38.717-03-01 v0.2.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Decision: Approved.**

**R4-2015708 TP for TR 38.717-03-01: CA\_n38-n66-n78**

*Type: pCR For: Approval  
 38.717-03-01 v0.2.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Decision: Approved.**

**R4-2015709 TP for TR 38.717-03-01: CA\_n25-n38-n78**

*Type: pCR For: Approval  
 38.717-03-01 v0.2.0  
 Source: Huawei, HiSilicon, Bell Mobility, Telus*

**Decision: Approved.**

**R4-2016305 TP to add CA\_n3A-n5A-n7A, CA\_n3A-n5A-n7B**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP to add CA\_n3A-n5A-n7A, CA\_n3A-n5A-n7B

**Decision: Approved.**

**R4-2016306 TP to add CA\_n5A-n7A-n78A, CA\_n5A-n7B-n78A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP to add CA\_n5A-n7A-n78A, CA\_n5A-n7B-n78A

**Decision: Approved.**

**R4-2016649 TP to add 3DL/1UL CA\_n25A-n41A-n77A, CA\_n25A-n41(2A)-n77A, CA\_n25A-n41C-n77A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2016650 TP to add 3DL/1UL CA\_n25A-n66A-n77A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2016651 TP to add 3DL/1UL CA\_n25A-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2016652 TP to add 3DL/1UL CA\_n41A-n66A-n77A, CA\_n41(2A)-n66A-n77A, CA\_n41C-n66A-n77A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2016653 TP to add 3DL/1UL CA\_n41A-n71A-n77A, CA\_n41(2A)-n71A-n77A, CA\_n41C-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2016654 TP to add 3DL/1UL CA\_n66A-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-01 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

**Discussion:**

**Decision: Approved.**

### 10.10 NR Inter-band Carrier Aggregation for 4 bands DL with 1 band UL [NR\_CA\_R17\_4BDL\_1BUL]

#### 10.10.1 Rapporteur Input (WID/TR/CR) [NR\_CA\_R17\_4BDL\_1BUL-Core/Per]

**R4-2015918 Revised WID 4 bands NR CA Rel-17**

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

**Abstract:**

Revised WID 4 bands NR CA Rel-17

**Decision:** To be email approved.

**R4-2015922 CR introduction completed band combinations NR Inter-band 4 bands CA -> 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0549 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations NR Inter-band 4 bands CA -> 38.101-1

**Decision:** To be email approved.

**R4-2015923 CR introduction completed band combinations NR Inter-band 4 bands CA -> 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0401 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR introduction completed band combinations NR Inter-band 4 bands CA -> 38.101-3

**Decision:** To be email approved.

**R4-2015926 TR 38.717-04-01 v0.2.0 Rel-17 NR Inter-band 4 bands CA**

*Type: draft TR For: Agreement  
 38.717-04-01 v0.1.0  
 Source: Ericsson*

**Abstract:**

TR 38.717-04-01 v0.2.0 Rel-17 NR Inter-band 4 bands CA

**Decision:** To be email approved.

#### 10.10.2 UE RF [NR\_CA\_R17\_4BDL\_1BUL-Core]

**R4-2014118 TP for TR 38.717-04-01 CA\_n3-n28-n41-n77**

*Type: pCR For: Approval  
 38.717-04-01 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014816 TP for CA\_n1-n77-n79-n257 4DL/1UL for TR38.717-04-01**

*Type: pCR For: Approval  
 38.717-04-01 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014817 TP for CA\_n1-n78-n79-n257 4DL/1UL for TR38.717-04-01**

*Type: pCR For: Approval  
 38.717-04-01 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2016307 TP to add CA\_n3A-n5A-n7A-n78A, CA\_n3A-n5A-n7B-n78A**

*Type: pCR For: Approval  
 38.717-04-01 v0.1.0  
 Source: Ericsson, Telstra*

**Abstract:**

TP to add CA\_n3A-n5A-n7A-n78A, CA\_n3A-n5A-n7B-n78A

**Decision: Approved.**

### 10.11 NR Inter-band Carrier Aggregation/Dual connectivity for 3 bands DL with 2 bands UL [NR\_CADC\_R17\_3BDL\_2BUL]

#### 10.11.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_3BDL\_2BUL-Core/Per]

**R4-2015060 Revised WID on Rel-17 NR Inter-band Carrier AggregationDual Connectivity for 3 bands DL with 2 bands UL**

*Type: WID revised For: Approval  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015061 Draft CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015062 Draft CR to reflect the completed NR inter band CA DC combinations for 3 bands DL with 2 bands UL into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015185 TR 38.717-03-02 v0.2.0**

*Type: draft TR For: Agreement  
 38.717-03-02 v0.2.0  
 Source: ZTE Wistron Telecom AB*

**Decision:** To be email approved.

#### 10.11.2 UE RF [NR\_CADC\_R17\_3BDL\_2BUL-Core]

**R4-2014116 TP for TR 38.717-03-02 CA\_n3-n28-n41**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016755.**

**R4-2016755 TP for TR 38.717-03-02 CA\_n3-n28-n41**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014117 TP for TR 38.717-03-02 CA\_n3-n28-n78**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Revised to R4-2016756.**

**R4-2016756 TP for TR 38.717-03-02 CA\_n3-n28-n78**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014595 TP for CA 3DL2UL n1-n77-n79 for TR 38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc., LG Electronics*

**Decision: Revised to R4-2016757.**

**R4-2016757 TP for CA 3DL2UL n1-n77-n79 for TR 38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc., LG Electronics*

**Decision: Approved.**

**R4-2014599 TP for CA 3DL2UL n1-n78-n79 for TR 38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc., LG Electronics*

**Decision: Revised to R4-2016758.**

**R4-2016758 TP for CA 3DL2UL n1-n78-n79 for TR 38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: NTT DOCOMO, INC., MediaTek Inc., LG Electronics*

**Decision: Approved.**

**R4-2014814 draft CR 38.101-3 to add DC\_n1-n77-n257, DC\_n1-n78-n257, DC\_n1-n79-n257, DC\_n77-n79-n257 and DC\_n78-n79-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: NTT DOCOMO, INC.*

**Abstract:**

Adding configurations to existing DC combinations. The following NR DC configurations are specified by draft CR according to the agreement described in R4-2005647 since corresponding NR CA configurations have been already aprroved.

**Decision: Approved.**

**R4-2015052 TP for TR38.717-03-02\_ CA\_n8A-n40A-n41A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2015068 MSD evaluation for CA 3DL2UL n1-n77-n79 for TR 38.717-03-02**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: MediaTek Inc.*

**Decision: Noted.**

**R4-2015080 TP to TR 38.717-03-02: CA\_n5-n66-n77**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2015081 TP to TR 38.717-03-02: CA\_n2-n66-n77**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2016333 TP to add CA\_n25A-n41A-n77A, CA\_n25A-n41(2A)-n77A, CA\_n25A-n41C-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n41A-n77A, CA\_n25A-n41(2A)-n77A, CA\_n25A-n41C-n77A

**Decision: Revised to R4-2016759.**

**R4-2016759 TP to add CA\_n25A-n41A-n77A, CA\_n25A-n41(2A)-n77A, CA\_n25A-n41C-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n41A-n77A, CA\_n25A-n41(2A)-n77A, CA\_n25A-n41C-n77A

**Decision: Approved.**

**R4-2016334 TP to add CA\_n25A-n66A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n66A-n77A

**Decision: Revised to R4-2016760.**

**R4-2016760 TP to add CA\_n25A-n66A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n66A-n77A

**Decision: Approved.**

**R4-2016335 TP to add CA\_n25A-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n71A-n77A

**Decision: Revised to R4-2016761.**

**R4-2016761 TP to add CA\_n25A-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n25A-n71A-n77A

**Decision: Approved.**

**R4-2016336 TP to add CA\_n41A-n66A-n77A, CA\_n41(2A)-n66A-n77A, CA\_n41C-n66A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n41A-n66A-n77A, CA\_n41(2A)-n66A-n77A, CA\_n41C-n66A-n77A

**Decision: Revised to R4-2016762.**

**R4-2016762 TP to add CA\_n41A-n66A-n77A, CA\_n41(2A)-n66A-n77A, CA\_n41C-n66A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n41A-n66A-n77A, CA\_n41(2A)-n66A-n77A, CA\_n41C-n66A-n77A

**Decision: Approved.**

**R4-2016337 TP to add CA\_n41A-n71A-n77A, CA\_n41(2A)-n71A-n77A, CA\_n41C-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n41A-n71A-n77A, CA\_n41(2A)-n71A-n77A, CA\_n41C-n71A-n77A

**Decision: Revised to R4-2016763.**

**R4-2016763 TP to add CA\_n41A-n71A-n77A, CA\_n41(2A)-n71A-n77A, CA\_n41C-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n41A-n71A-n77A, CA\_n41(2A)-n71A-n77A, CA\_n41C-n71A-n77A

**Decision: Approved.**

**R4-2016338 TP to add CA\_n66A-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n66A-n71A-n77A

**Decision: Revised to R4-2016764.**

**R4-2016764 TP to add CA\_n66A-n71A-n77A**

*Type: pCR For: Approval  
 38.717-03-02 v0.1.0  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP to add CA\_n66A-n71A-n77A

**Decision: Approved.**

### 10.12 DC of x bands (x=1,2) LTE inter-band CA (xDL/xUL) and y bands (y=3-x) NR inter-band CA [DC\_R17\_xBLTE\_yBNR\_3DL3UL]

#### 10.12.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_yBNR\_3DL3UL-Core/Per]

**R4-2015063 Revised WID on Rel-17 Dual Connectivity (DC) x bands (x=1,2) LTE inter-band CA (xDL/xUL) and y bands (y=3-x) NR inter-band CA**

*Type: WID revised For: Approval  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015064 Draft CR to reflect the completed DC combinations for 3 bands DL with 3 bands UL into TS 38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015065 TR 37.717-33 v0.2.0**

*Type: draft TR For: Agreement  
 37.717-33 v0.1.0  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

#### 10.12.2 UE RF [DC\_R17\_xBLTE\_yBNR\_3DL3UL-Core]

### 10.13 DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL) [DC\_R17\_xBLTE\_3BNR\_yDL2UL]

#### 10.13.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_3BNR\_yDL2UL -Core/Per]

**R4-2015066 Revised WID on Rel-17 Dual Connectivity (DC) of x bands (x=1,2,3) LTE inter-band CA (xDL1UL) and 3 bands NR inter-band CA (3DL1UL)**

*Type: WID revised For: Approval  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015067 TR 37.717-11-31\_v0.2.0**

*Type: draft TR For: Agreement  
 37.717-11-31 v0.1.0  
 Source: ZTE Corporation*

**Decision:** To be email approved.

**R4-2015588 Draft CR to reflect the completed Dual Connectivity (DC) of x bands (x=1,2,3) LTE inter-band CA (xDL1UL) and 3 bands NR inter-band CA (3DL1UL)**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: ZTE Corporation*

**Decision:** To be email approved.

#### 10.13.2 UE RF [DC\_R17\_xBLTE\_3BNR\_yDL2UL-Core]

**R4-2014706 TP for TR 37.716-11-31: EN-DC\_1\_n3-n28-n77**

*Type: pCR For: Approval  
 37.717-11-31 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Revised to R4-2016765.**

**R4-2016765 TP for TR 37.716-11-31: EN-DC\_1\_n3-n28-n77**

*Type: pCR For: Approval  
 37.717-11-31 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2014707 TP for TR 37.717-11-31: EN-DC\_8\_n3-n28-n77**

*Type: pCR For: Approval  
 37.717-11-31 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Revised to R4-2016766.**

**R4-2016766 TP for TR 37.717-11-31: EN-DC\_8\_n3-n28-n77**

*Type: pCR For: Approval  
 37.717-11-31 v0.1.0  
 Source: SoftBank Corp.*

**Decision: Approved.**

**R4-2015050 TP for 37.717-11-31\_ DC\_8A\_n40A-n41A-n79A**

*Type: pCR For: Approval  
 37.717-11-31 v0.1.0  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2015802 TP for TR 37.717-11-31: support of DC\_3\_n1-n78-n257, DC\_3-3\_n1-n78-n257, DC\_7\_n1-n78-n257, DC\_7-7\_n1-n78-n257**

*Type: pCR For: Approval  
 37.717-11-31 v0.1.0  
 Source: CHTTL*

**Decision: Approved.**

**R4-2015806 TP for TR 37.717-11-31: support of DC\_3-7\_n1-n78-n257, DC\_3-3-7\_n1-n78-n257, DC\_3-7-7\_n1-n78-n257, DC\_3-3-7-7\_n1-n78-n257**

*Type: pCR For: Approval  
 37.717-11-31 v0.1.0  
 Source: CHTTL*

**Decision: Approved.**

### 10.14 NR inter-band Carrier Aggregation and Dual connectivity for DL 4 bands and 2UL bands [NR\_CADC\_R17\_4BDL\_2BUL]

#### 10.14.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_4BDL\_2BUL -Core/Per]

**R4-2014380 TR38.717-04-02 update version 0.2.0**

*Type: draft TR For: Agreement  
 38.717-04-02 v0.1.0  
 Source: Samsung Electronics GmbH*

**Decision:** To be email approved.

**R4-2014753 Revised WID on NR CA/DC with 4DL/2UL**

*Type: WID revised For: Decision  
 Source: Samsung*

**Decision:** To be email approved.

**R4-2014754 CR on introduction of completed NR CA/DC combs with 4DL/2UL within FR1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0513 Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision:** To be email approved.

**R4-2014755 CR on introduction of completed NR CA/DC combs with 4DL/2UL including FR2**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0373 Cat: B (Rel-17)  
  
 Source: Samsung*

**Abstract:**

Both resubmission of combs endorsed in CR R4-2010145 and combs approved in RAN4#97e will be included in this CR.

**Decision:** To be email approved.

#### 10.14.2 UE RF [NR\_CADC\_R17\_4BDL\_2BUL -Core]

**R4-2014119 TP for TR 38.717-04-02 CA\_n3-n28-n41-n77**

*Type: pCR For: Approval  
 38.717-04-02 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014120 TP for TR 38.717-04-02 CA\_n3-n28-n41-n78**

*Type: pCR For: Approval  
 38.717-04-02 v0.1.0  
 Source: Samsung, KDDI*

**Decision: Approved.**

**R4-2014815 draft CR 38.101-3 to add DC\_n1-n77-n79-n257 and DC\_n1-n78-n79-n257**

*Type: draftCR For: Endorsement  
 38.101-3 v16.5.0  
 Source: NTT DOCOMO, INC.*

**Abstract:**

Adding configurations to existing DC combinations. The following NR DC configurations are specified by draft CR according to the agreement described in R4-2005647 since corresponding NR CA configurations are to be aprroved in RAN4#97.

**Decision: Endorsed.**

**R4-2014818 TP for CA\_n1-n77-n79-n257 4DL/2UL for TR38.717-04-02**

*Type: pCR For: Approval  
 38.717-04-02 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

**R4-2014819 TP for CA\_n1-n78-n79-n257 4DL/2UL for TR38.717-04-02**

*Type: pCR For: Approval  
 38.717-04-02 v0.1.0  
 Source: NTT DOCOMO, INC.*

**Decision: Approved.**

### 10.15 NR inter-band CA for 5 bands DL with x bands UL (x=1, 2) [NR\_CADC\_R17\_5BDL\_xBUL\_3DL3UL]

#### 10.15.1 Rapporteur Input (WID/TR/CR) [NR\_CADC\_R17\_5BDL\_xBUL -Core/Per]

**R4-2014804 Revised WID on NR inter-band CA for 5 bands DL with x bands UL (x=1, 2)**

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

**Decision:** To be email approved.

**R4-2014805 TR 38.717-05-01 v0.2.0**

*Type: draft TR For: Agreement  
 38.717-05-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To capture the approved TPs in this meeting

**Decision: Withdrawn.**

**R4-2014806 CR on Introduction of completed 5 bands inter-band CA into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0515 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

#### 10.15.2 UE RF [NR\_CADC\_R17\_5BDL\_xBUL -Core]

### 10.16 DC of 5 bands LTE inter-band CA (5DL/1L) and 1 NR band (1DL/1UL) [DC\_R17\_5BLTE\_1BNR\_6DL2UL]

#### 10.16.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_5BLTE\_1BNR\_6DL2UL-Core/Per]

**R4-2014781 Revised WID on Dual Connectivity (DC) of 5 bands LTE inter-band CA (5DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Information  
 Source: Samsung*

**Decision:** To be email approved.

**R4-2014782 CR introduction completed band combinations for Dual Connectivity (DC) of 5 bands LTE inter-band CA (5DL/1UL) and 1 NR band (1DL/1UL)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0374 Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision:** To be email approved.

**R4-2014967 Skeleton on TR 37.717-51-11\_0.0.1**

*Type: draft TR For: Agreement  
 37.717-51-11 v0.0.1  
 Source: Samsung*

**Decision: Agreed.**

**R4-2014968 TR 37.717-51-11\_0.1.0**

*Type: draft TR For: Agreement  
 37.717-51-11 v0.1.0  
 Source: Samsung*

**Decision:** To be email approved.

#### 10.16.2 UE RF [DC\_R17\_5BLTE\_1BNR\_6DL2UL-Core]

**R4-2015282 TP to TR 37.717-51-11 DC\_1A-3A-7A-8A-40C\_n78A**

*Type: pCR For: Approval  
 37.717-51-11 v0.0.1  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

### 10.17 DC of x bands (x=2,3,4) LTE inter-band CA (xDL/1UL) and 1 NR FR1 band (1DL/1UL) and 1 NR FR2 band (1DL/1UL) [DC\_R17\_xBLTE\_2BNR\_yDL3UL]

#### 10.17.1 Rapporteur Input (WID/TR/CR) [DC\_R17\_xBLTE\_2BNR\_yDL3UL-Core/Per]

**R4-2014783 CR introduction completed band combinations for Dual Connectivity (DC) of x bands (x=2,3,4) LTE inter-band CA (xDL/1UL) and 1 NR FR1 band (1DL/1UL) and 1 NR FR2 band (1DL/1UL)**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0375 Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision:** To be email approved.

**R4-2014784 Revised WID on Dual Connectivity (DC) of x bands (x=2,3,4) LTE inter-band CA (xDL/1UL) and 1 NR FR1 band (1DL/1UL) and 1 NR FR2 band (1DL/1UL)**

*Type: WID revised For: Information  
 Source: Samsung*

**Decision:** To be email approved.

**R4-2014969 Skeleton on TR 37.717-21-22\_0.0.1**

*Type: draft TR For: Agreement  
 37.717-21-22 v0.0.1  
 Source: Samsung*

**Decision: Agreed.**

**R4-2014970 TR 37.717-21-22\_0.1.0**

*Type: draft TR For: Agreement  
 37.717-21-22 v0.1.0  
 Source: Samsung*

**Decision:** To be email approved.

#### 10.17.2 UE RF [DC\_R17\_xBLTE\_2BNR\_yDL3UL-Core]

**R4-2015136 TP for TR 37.717-21-22: DC\_1-3\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015137 TP for TR 37.717-21-22: DC\_1-5\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015138 TP for TR 37.717-21-22: DC\_1-7\_n78-n257 and DC\_1-7-7\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015139 TP for TR 37.717-21-22: DC\_3-5\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015140 TP for TR 37.717-21-22: DC\_3-7\_n78-n257 and DC\_3-7-7\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015141 TP for TR 37.717-21-22: DC\_5-7\_n78-n257 and DC\_5-7-7\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015142 TP for TR 37.717-21-22: DC\_1-3-5\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015143 TP for TR 37.717-21-22: DC\_1-3-7\_n78-n257 and DC\_1-3-7-7\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015144 TP for TR 37.717-21-22: DC\_1-5-7\_n78-n257 and DC\_1-5-7-7\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015145 TP for TR 37.717-21-22: DC\_3-5-7\_n78-n257 and DC\_3-5-7-7\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

**R4-2015146 TP for TR 37.717-21-22: DC\_1-3-5-7\_n78-n257 and DC\_1-3-5-7-7\_n78-n257**

*Type: discussion For: Approval  
 37.717-21-22 v..  
 Source: SK Telecom, Samsung*

**Decision: Approved.**

### 10.18 SAR schemes for UE power class 2 (PC2) for NR inter-band Carrier Aggregation and supplemental uplink (SUL) configurations with 2 bands UL [NR\_SAR\_PC2\_interB\_SUL\_2BUL]

**R4-2016623 Email discussion summary for [97e][121] NR\_SAR\_PC2\_interB\_SUL\_2BUL**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016963.**

**R4-2016963 Email discussion summary for [97e][121] NR\_SAR\_PC2\_interB\_SUL\_2BUL**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016851 WF on SAR solutions for PC2 NR inter-band CA and SUL configurations**

*Type: other For: Approval  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016852 WF on power configuration for PC2 NR inter-band CA**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 10.18.1 General and Rapporteur Input (WID/TR/CR) [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core/Per]

**R4-2014383 Discussion on SAR issues for inter-band and SUL 2UL CA PC2**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2015039 On MSD for PC2 n41-n79 NR inter-band CA**

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

**Decision: Noted.**

**R4-2015266 MSD analysis on high power UE for CA\_n41-n79**

*Type: discussion For: Approval  
 Source: Xiaomi*

**Decision: Noted.**

#### 10.18.2 PC2 for inter-band CA [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core]

**R4-2015040 Discussion on SAR solution for NR PC2 inter-band CA**

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

**Decision: Noted.**

**R4-2015190 Discussion on SAR schemes for UE power class 2 NR inter-band CA with 2UL**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Noted.**

**R4-2015192 draft CR to 38.101-1 Introduce SAR solution for UE power class 2 NR inter-band CA with 2UL**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: China Telecom*

**Abstract:**

Introduce SAR solution for UE power class 2 NR inter-band CA with 2UL

**Decision: Not pursued.**

**R4-2015193 draft CR to 38.101-1 Introduce band combination requirements for PC2 CA\_n1A-n78A**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: China Telecom*

**Abstract:**

Introduce band combination requirements for PC2 CA\_n1A-n78A

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

**R4-2015260 Discussion on SAR issue for HP UE inter-band UL CA**

*Type: other For: Approval  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2015287 Discussion on the SAR solutions for UL CA band combinations**

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

**Decision: Noted.**

**R4-2015329 Discussion on SAR solution for PC2 inter-band NR CA**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

**R4-2015346 Discussion on inter-band CA HPUE SAR**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2015889 CR to 38.101-1 Introduce band combination requirements for PC2 CA\_n1A-n78A**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0545 Cat: B (Rel-17)  
  
 Source: China Telecom, ZTE, Huawei, HiSilicon, CATT*

**Abstract:**

Introduce band combination requirements for PC2 CA\_n1A-n78A

**Decision: Agreed.**

**R4-2015983 Facilitating SAR compliance for UL inter-band CA PC2**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we discuss and propose methods for facilitating SAR compliance for UL CA PC2 (also applicable for SUL)

**Decision: Noted.**

**R4-2016439 Upper limits on output power for dual PA**

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

**Decision: Noted.**

#### 10.18.3 PC2 for SUL [NR\_SAR\_PC2\_interB\_SUL\_2BUL-Core]

**R4-2015041 Discussion on SAR solution for NR PC2 SUL**

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

**Decision: Noted.**

**R4-2015191 Discussion on SAR schemes for UE power class 2 NR SUL configurations**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Noted.**

**R4-2015194 draft CR to 38.101-1 Introduce SAR solution for UE power class 2 NR SUL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: China Telecom*

**Abstract:**

Introduce SAR solution for UE power class 2 NR SUL configurations

**Decision: Not pursued.**

**R4-2015286 Discussion on the SAR solutions for SUL band combinations**

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

**Decision: Noted.**

**R4-2015330 Discussion on SAR solution for PC2 UE with SUL**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

**R4-2015345 Discussion on SUL HPUE SAR**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

### 10.19 High power UE (power class 2) for NR inter-band Carrier Aggregation with 2 bands downlink and 2 bands uplink [NR\_PC2\_CA\_R17\_2BDL\_2BUL]

**R4-2016624 Email discussion summary for [97e][122] NR\_PC2\_CA\_R17\_2BDL\_2BUL**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016964.**

**R4-2016964 Email discussion summary for [97e][122] NR\_PC2\_CA\_R17\_2BDL\_2BUL**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016854 WF on MSD assumptions improvement for UE PC2 combinations**

*Type: other For: Approval  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 10.19.1 Rapporteur Input (WID/TR/CR) [NR\_PC2\_CA\_R17\_2BDL\_2BUL-Core/Per]

**R4-2015186 Work plan and procedure for basket WI on high power UE for NR inter-band CA with 2 bands DL and 2 bands UL**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Approved.**

**R4-2015187 TR skeleton for TR 38.xxx 0.0.1: High power UE (power class 2) for NR inter-band Carrier Aggregation with 2 bands downlink and 2 bands uplink**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Agreed.**

**R4-2015188 Draft TR 38.xxx v0.1.0: High power UE (power class 2) for NR inter-band Carrier Aggregation with 2 bands downlink and 2 bands uplink**

*Type: other For: Approval  
 Source: China Telecom*

**Decision:** To be email approved

**R4-2015189 Revised WID: High power UE (power class 2) for NR inter-band Carrier Aggregation with 2 bands downlink and 2 bands uplink**

*Type: WID revised For: Approval  
 Source: China Telecom*

**Decision: Revised to R4-2016853.**

**R4-2016853 Revised WID: High power UE (power class 2) for NR inter-band Carrier Aggregation with 2 bands downlink and 2 bands uplink**

*Type: WID revised For: Approval  
 Source: China Telecom*

**Decision: Return to.**

#### 10.19.2 UE RF [NR\_PC2\_CA\_R17\_2BDL\_2BUL-Core]

**R4-2015053 TP for TR38.xxx\_ PC2 CA\_n3A-n41A**

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

**Decision: Revised to R4-2016855.**

**R4-2016855 TP for TR38.xxx\_ PC2 CA\_n3A-n41A**

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

**Decision: Return to.**

**R4-2015054 TP for TR38.xxx\_ PC2 CA\_n28A-n41A**

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

**Decision: Approved.**

**R4-2015055 TP for TR38.xxx\_ PC2 CA\_n28A-n79A**

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

**Decision: Approved.**

**R4-2015056 TP for TR38.xxx\_ PC2 CA\_n40A-n41A**

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

**Decision: Approved.**

**R4-2016441 MSD for Band n77 PC2 combinations**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

### 10.20 High power UE (power class 2) for EN-DC with 1 LTE band + 1 NR TDD band [ENDC\_UE\_PC2\_R17\_NR\_TDD]

**R4-2016625 Email discussion summary for [97e][123] ENDC\_UE\_PC2\_R17\_NR\_TDD**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016965.**

**R4-2016965 Email discussion summary for [97e][123] ENDC\_UE\_PC2\_R17\_NR\_TDD**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 10.20.1 Rapporteur Input (WID/TR/CR) [ENDC\_UE\_PC2\_R17\_NR\_TDD -Core/Per]

**R4-2014649 TR Skeleton for TR 37.826 v0.0.1 ENDC\_UE\_PC2\_R17\_NR\_TDD**

*Type: draft TR For: Agreement  
 37.826 v0.0.1  
 Source: China Unicom*

**Decision: Agreed.**

**R4-2014708 Big CR on introduction of completed PC2 for EN-DC with 1 LTE band + 1 NR TDD band**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0371 Cat: B (Rel-17)  
  
 Source: China Unicom*

**Decision:** The document was **not treated**.

**R4-2014709 Big CR on introduction of completed PC2 for EN-DC with 1 LTE band + 1 NR TDD band**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0372 Cat: B (Rel-17)  
  
 Source: China Unicom*

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

#### 10.20.2 UE RF [ENDC\_UE\_PC2\_R17\_NR\_TDD -Core]

**R4-2014679 TP for TR 37.826 to introduce PC2 for DC\_1A\_n78A**

*Type: pCR For: Approval  
 37.826 v0.0.1  
 Source: China Unicom*

**Decision: Revised to R4-2016856.**

**R4-2016856 TP for TR 37.826 to introduce PC2 for DC\_1A\_n78A**

*Type: pCR For: Approval  
 37.826 v0.0.1  
 Source: China Unicom*

**Decision: Return to.**

**R4-2014680 TP for TR 37.826 to introduce PC2 for DC\_8A\_n78A**

*Type: pCR For: Approval  
 37.826 v0.0.1  
 Source: China Unicom*

**Decision: Revised to R4-2016857.**

**R4-2016857 TP for TR 37.826 to introduce PC2 for DC\_8A\_n78A**

*Type: pCR For: Approval  
 37.826 v0.0.1  
 Source: China Unicom*

**Decision: Return to.**

**R4-2015793 Discussion on release independent of FDD-TDD EN-DC High Power UE**

*Type: discussion For: Approval  
 Source: CHTTL*

**Decision: Noted.**

**R4-2016440 Improving PC2 MSD for EN-DC and UL CA**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2016987 CR to TS 38.307 on Release independence of FDD-TDD EN-DC High Power UE**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR- Cat: B (Rel-16)  
  
 Source: CHTTL, China Unicom*

**Abstract:** Introduction of release independence of FDD-TDD EN-DC High Power UE

**Discussion:**

**Decision: Return to.**

### 10.21 Adding channel bandwidth support to existing NR bands [NR\_bands\_R17\_BWs]

**R4-2016626 Email discussion summary for [97e][124] NR\_bands\_R17\_BWs**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016966.**

**R4-2016966 Email discussion summary for [97e][124] NR\_bands\_R17\_BWs**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 10.21.1 General and Rapporteur Input (WID/TR/CR) [NR\_bands\_R17\_BWs -Core/Per]

**R4-2015910 Revised RP-201294 - Basket WID on adding channel bandwidth support to existing NR bands**

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

**Abstract:**

This contribution is the revision of RP-201294 to include the new requests received before RAN4#96e meeting

**Decision: Revised to R4-2016858.**

**R4-2016858 Revised RP-201294 - Basket WID on adding channel bandwidth support to existing NR bands**

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

**Abstract:**

This contribution is the revision of RP-201294 to include the new requests received before RAN4#96e meeting

**Decision: Return to.**

**R4-2015911 Big CR to 38.104 - Additional Channel BW**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0258 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Add following channel BWs support: 70MHz in n48, 30MHz in n83 and 25/30/40/50 MHz in n84.

**Decision: Revised to R4-2016859.**

**R4-2016859 Big CR to 38.104 - Additional Channel BW**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0258 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Add following channel BWs support: 70MHz in n48, 30MHz in n83 and 25/30/40/50 MHz in n84.

**Decision: Return to.**

**R4-2015912 Big CR to 38.101-1 - Additional Channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0546 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Add following channel BWs support: 70MHz in n41, 70MHz in n48, 30MHz in n83 and 25/30/40/50 MHz in n84.

**Decision: Revised to R4-2016860.**

**R4-2016860 Big CR to 38.101-1 - Additional Channel BW**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0546 Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Add following channel BWs support: 70MHz in n41, 70MHz in n48, 30MHz in n83 and 25/30/40/50 MHz in n84.

**Decision: Return to.**

#### 10.21.2 UE RF requirement [NR\_bands\_R17\_BWs -Core]

**R4-2015292 Adding 40M bandwidth for band n80 and n83**

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

**Decision: Noted.**

**R4-2015293 draftCR to 38101-1 to add 40MHz BW for band n80**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR is to introduce UE RF requirements for adding 40MHz channel bandwidth for band n80.

**Decision: Endorsed.**

**R4-2015296 Adding 90 and 100MHz UE bandwidth for band n40**

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

**Decision: Noted.**

**R4-2015297 draftCR to 38101-1 to add 90 and 100MHz BW for band n40**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR is to introduce UE RF requirements for adding 90 and 100MHz channel bandwidth for band n40.

**Decision: Revised to R4-2016861.**

**R4-2016861 draftCR to 38101-1 to add 90 and 100MHz BW for band n40**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR is to introduce UE RF requirements for adding 90 and 100MHz channel bandwidth for band n40.

**Decision: Return to.**

##### 10.21.2.1 Reference sensitivity [NR\_bands\_R17\_BWs -Core]

##### 10.21.2.2 MPR/A-MPR/NS signaling [NR\_bands\_R17\_BWs -Core]

**R4-2014593 n40 MPR and Interference for Additional Channel Bandwidths**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we discuss the related fractional BW criteria issue, deltaMPR and potential interference to ISM band of the addition of 90 and 100 MHZ channel bandwidth to Band n40.

**Decision: Noted.**

##### 10.21.2.3 others [NR\_bands\_R17\_BWs -Core]

#### 10.21.3 BS RF requirement [NR\_bands\_R17\_BWs -Core]

**R4-2015294 draftCR to 38104 to add 40MHz BW for band n80**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR is to introduce 40MHz channel bandwidths for band n80.

**Decision: Endorsed.**

**R4-2015295 draftCR to 38104 to add 40MHz BW for band n83**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR is to introduce 40MHz channel bandwidth for band n83.

**Decision: Return to.**

**R4-2015298 draftCR to 38104 to add 90MHz BW for band n40**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

This CR is to introduce 90MHz channel bandwidth for band n40.

**Decision: Return to.**

### 10.22 Introduction of channel bandwidths 35MHz and 45MHz for NR [NR\_FR1\_35MHz\_45MHz\_BW]

**R4-2016627 Email discussion summary for [97e][125] NR\_FR1\_35MHz\_45MHz\_BW**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016967.**

**R4-2016967 Email discussion summary for [97e][125] NR\_FR1\_35MHz\_45MHz\_BW**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016862 WF on release independence for 35 MHz and 45 MHz**

*Type: other For: Approval  
 Source: T-Mobile USA*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016863 WF on general aspects for UE RF requirements**

*Type: other For: Approval  
 Source: Skyworks*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016864 WF on UE REFSENS and A-MPR for 35MHz and 45MHz CBW**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016865 WF on BS RF requirements**

*Type: other For: Approval  
 Source: ZTE*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016452 35 and 45 MHz CH BW Release Independence**

*Type: discussion For: Approval  
 Source: T-Mobile USA, TELUS, Bell Mobility, AT&T*

**Decision: Noted.**

#### 10.22.1 General and Rapporteur Input (WID/TR/CR) [NR\_FR1\_35MHz\_45MHz\_BW-Core/Per]

**R4-2015701 Discussion on release independence**

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

**Decision: Noted.**

**R4-2016113 Discussion on release independent and signalling for brand new channel bandwidth**

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

**Decision: Noted.**

#### 10.22.2 Spectrum utilization [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2015043 Further discussion on spectrum utilization for 35MHz and 45MHz**

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

**Decision: Return to.**

#### 10.22.3 UE RF requirements [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2014173 35M\_45M AMPR, MPR, REFSENS**

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

**Decision: Revised to R4-2016600.**

**R4-2016600 35M\_45M AMPR, MPR, REFSENS**

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

**Decision: Noted.**

**R4-2015044 On UE RF requirement for new channel bandwidth of 35MHz and 45MHz**

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

**Decision: Noted.**

**R4-2015351 Release independence for 35MHz and 45Mhz BW**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2015432 REFSENS of n3, n8, n25 and n71 for new channel bandwidth**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

**R4-2015702 Draft CR for TS 38.101: introduction of channel bandwidths 35MHz and 45MHz for general part**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of channel bandwidths 35MHz and 45MHz for general part

**Decision: Not pursued.**

**R4-2015800 Specification impact of additional 35&45MHz channel bandwidths**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we discuss the technical issues, specification impact, UE capability and release independence aspects for single CC and band combination support related to 35 and 45 MHz new channel BW.

**Decision: Noted.**

**R4-2015801 Specification impact of additional 35&45MHz channel bandwidths**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we discuss the technical issues, specification impact, UE capability and release independence aspects for single CC and band combination support related to 35 and 45 MHz new channel BW.

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

**R4-2016010 n71 35MHz AMPR and MSD Measurements**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**R4-2016011 n8 35MHz AMPR and MSD Measurements**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**R4-2016027 n7 35MHz AMPR and MSD Measurements**

*Type: discussion For: Discussion  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**R4-2016059 Draft CR to add 35MHz and 45 MHz Bandwidth to TS38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: Ericsson*

**Abstract:**

Adding 35MHz and 45 MHz Bandwidth to TS38.101-1 in clauses 5 and 6.

This CR does not change clases containing CA, DC combinations sice RAN4 have not concluded how to cater for these new BWs when it comes to band combinations.

**Decision: Not pursued.**

**R4-2016060 Introduction of 35MHz and 45MHz regarding CA, DC, V2x combinations**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

The papers lists remaining CA, DC, V2X clauses that needs to be updated in 38.101-1 and -3. And proposes not to add new BCS per default for new BWs

**Decision: Noted.**

**R4-2016295 Introduction of 35 MHz for n8, n66, n71 and 45 MHz for n66**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Decision: Noted.**

**R4-2014186 REFSENS of n8 and n71 for new channel bandwidth**

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

**Decision: Noted.**

#### 10.22.4 BS RF requirements [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2015703 CR for TS 38.104: draft CR on introduction of channel bandwidths 35MHz and 45MHz for BS TX and general part**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of channel bandwidths 35MHz and 45MHz for BS TX and general part

**Decision: Revised to R4-2016866.**

**R4-2016866 CR for TS 38.104: draft CR on introduction of channel bandwidths 35MHz and 45MHz for BS TX and general part**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of channel bandwidths 35MHz and 45MHz for BS TX and general part

**Decision: Return to.**

**R4-2015718 Draft CR to TS 38.104: Introduction of CBWs 35 MHz and 45 MHz**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Ericsson*

**Abstract:**

Including BS RF requirements for 35/45 MHz

**Decision: Not pursued.**

**R4-2015719 Draft CR to TS 38.141-1: Introduction of CBWs 35 MHz and 45 MHz**

*Type: draftCR For: Endorsement  
 38.141-1 v16.5.0  
 Source: Ericsson*

**Abstract:**

Including BS RF requirements for 35/45 MHz

**Decision: Revised to R4-2016867.**

**R4-2016867 Draft CR to TS 38.141-1: Introduction of CBWs 35 MHz and 45 MHz**

*Type: draftCR For: Endorsement  
 38.141-1 v16.5.0  
 Source: Ericsson*

**Abstract:**

Including BS RF requirements for 35/45 MHz

**Decision: Return to.**

**R4-2015720 Draft CR to TS 38.141-2: Introduction of CBWs 35 MHz and 45 MHz**

*Type: draftCR For: Endorsement  
 38.141-2 v16.5.0  
 Source: Ericsson*

**Abstract:**

Including BS RF requirements for 35/45 MHz

**Decision: Not pursued.**

**R4-2016114 Discussion on BS RF requirement for new channel bandwidth of 35MHz and 45MHz**

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

**Decision: Noted.**

**R4-2016115 Draft CR to TS 38.104: Introduction of 35MHz and 45MHz**

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

**Decision: Noted.**

**R4-2016116 Draft CR to TS 38.141-1: Introduction of 35MHz and 45MHz**

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

**Decision: Noted.**

**R4-2016117 Draft CR to TS 38.141-2: Introduction of 35MHz and 45MHz**

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

**Decision: Revised to R4-2016868.**

**R4-2016868 Draft CR to TS 38.141-2: Introduction of 35MHz and 45MHz**

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

**Decision: Return to.**

**R4-2016118 Draft CR to TS 37.104: Introduction of 35MHz and 45MHz**

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

**Decision: Not pursued.**

**R4-2016119 Draft CR to 37.141: Introduction of 35MHz and 45MHz**

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

**Decision: Not pursued.**

**R4-2016120 Draft CR to TS 37.105: Introduction of 35MHz and 45MHz**

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

**Decision: Not pursued.**

**R4-2016121 Draft CR to 37.145-1: Introduction of 35MHz and 45MHz**

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

**Decision: Not pursued.**

**R4-2016122 Draft CR to 37.145-2: Introduction of 35MHz and 45MHz**

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

**Decision: Not pursued.**

#### 10.22.5 Others [NR\_FR1\_35MHz\_45MHz\_BW-Core]

**R4-2014911 UE RF requirments tables with channel BW dependency**

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

**Decision: Noted.**

### 10.23 Band combinations for Uu and V2X con-current operation [NR\_LTE\_V2X\_PC5\_combos]

**R4-2016628 Email discussion summary for [97e][126] NR\_LTE\_V2X\_PC5\_combos**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016968.**

**R4-2016968 Email discussion summary for [97e][126] NR\_LTE\_V2X\_PC5\_combos**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016869 WF on band combinations for V2X con-current operation**

*Type: other For: Approval  
 Source: CATT*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 10.23.1 General and Rapporteur Input (WID/TR/CR) [NR\_LTE\_V2X\_PC5\_combos-Core/Per]

**R4-2014421 Discussion on Rel-17 band combinations for Uu and V2X con-current operation**

*Type: discussion For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2014425 Revised WID for V2X band combination**

*Type: WID revised For: Approval  
 Source: CATT*

**Decision:** The document was **not treated**.

**R4-2015561 TP for TR 37.875: adding some UE RF study for NR V2X band combinations**

*Type: pCR For: Approval  
 37.875 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016870.**

**R4-2016870 TP for TR 37.875: adding some UE RF study for NR V2X band combinations**

*Type: pCR For: Approval  
 37.875 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Return to.**

#### 10.23.2 UE RF requirement for concurrent operation between NR Uu band and NR PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core]

**R4-2014422 TP on V2X\_n40A-n47A coexistence study**

*Type: pCR For: Approval  
 37.875 v0.0.0  
 Source: CATT*

**Decision: Revised to R4-2016871.**

**R4-2016871 TP on V2X\_n40A-n47A coexistence study**

*Type: pCR For: Approval  
 37.875 v0.0.0  
 Source: CATT*

**Decision: Return to.**

**R4-2014423 CR for TS 38.101-1, Introduce new band combination of V2X\_n39A-n47A and V2X\_n40A-n47A**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0503 Cat: B (Rel-17)  
  
 Source: CATT*

**Abstract:**

The con-current operation of V2X\_n39A-n47A and V2X\_n40A-n47A should be introduced based on request.

**Decision: Revised to R4-2016872.**

**R4-2016872 CR for TS 38.101-1, Introduce new band combination of V2X\_n39A-n47A and V2X\_n40A-n47A**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0503 Cat: B (Rel-17)  
  
 Source: CATT*

**Abstract:**

The con-current operation of V2X\_n39A-n47A and V2X\_n40A-n47A should be introduced based on request.

**Decision: Return to.**

#### 10.23.3 UE RF requirement for concurrent operation between LTE Uu band and NR PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core]

**R4-2014424 CR for TS 38.101-3, Introduce new band combination of V2X\_39A-n47A, V2X\_n39A-47A, V2X\_40A-n47A and V2X\_n40A-47A**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0365 Cat: B (Rel-17)  
  
 Source: CATT*

**Abstract:**

The con-current operation of V2X\_39A-n47A, V2X\_n39A-47A, V2X\_40A-n47A and V2X\_n40A-47A should be introduced based on request.

**Decision: Revised to R4-2016873.**

**R4-2016873 CR for TS 38.101-3, Introduce new band combination of V2X\_39A-n47A, V2X\_n39A-47A, V2X\_40A-n47A and V2X\_n40A-47A**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0365 Cat: B (Rel-17)  
  
 Source: CATT*

**Abstract:**

The con-current operation of V2X\_39A-n47A, V2X\_n39A-47A, V2X\_40A-n47A and V2X\_n40A-47A should be introduced based on request.

**Decision: Return to.**

#### 10.23.4 UE RF requirement for concurrent operation between NR Uu band and LTE PC5 band [NR\_LTE\_V2X\_PC5\_combos-Core]

#### 10.23.5 UE RF requirement for concurrent operation of LTE/NR CA/DC band combinations + PC5 V2X [NR\_LTE\_V2X\_PC5\_combos-Core]

### 10.24 Introduction of FR2 FWA UE with maximum TRP of 23dBm for band n257 and n258 [NR\_FR2\_FWA\_Bn257\_Bn258]

#### 10.24.1 UE RF (38.101-2) [NR\_FR2\_FWA\_Bn257\_Bn258-Core]

**R4-2016629 Email discussion summary for [97e][127] NR\_FR2\_FWA\_Bn257\_Bn258**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016969.**

**R4-2016969 Email discussion summary for [97e][127] NR\_FR2\_FWA\_Bn257\_Bn258**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016874 WF on FR2 FWA RF requirements**

*Type: other For: Approval  
 Source: Softbank*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016875 CR for FR2 FWA RF requirements**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR- Cat: B (Rel-17)  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016876 LS for FR2 FWA power class**

*Type: LS out For: Approval  
 Source: Softbank*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014264 On Japan FWA EIRP requirement**

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

**Abstract:**

PC5 is more performance oriented than PC3, so EIRP requirement can support higher levels.

**Decision: Noted.**

**R4-2014826 Proposals on FR2 FWA UE with maximum TRP of 23dBm**

*Type: report For: (not specified)  
 Source: MediaTek Beijing Inc.*

**Abstract:**

Proposal1: n257 and n258 Peak EIRP is 28.4 dBm for FR2 FWA UE with maximum TRP of 23dBm.

Proposal2.a: n257 REFSENS for 50MHz channel BW is -92.5 dBm for FR2 FWA UE with maximum TRP of 23dBm.

Proposal2.b: n258 REFSENS for 50MHz channel BW is -92.6 dBm for

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

**R4-2014832 Proposals on FR2 FWA UE with maximum TRP of 23dBm**

*Type: discussion For: Approval  
 Source: MediaTek Beijing Inc.*

**Abstract:**

Proposal1: n257 and n258 Peak EIRP is 28.4 dBm for FR2 FWA UE with maximum TRP of 23dBm.

Proposal2.a: n257 REFSENS for 50MHz channel BW is -92.5 dBm for FR2 FWA UE with maximum TRP of 23dBm.

Proposal2.b: n258 REFSENS for 50MHz channel BW is -92.6 dBm for

**Decision: Noted.**

**R4-2015085 Open issues on FR2 FWA UE RF requirement**

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

**Decision: Noted.**

**R4-2015347 Discussion on Rel-17 FWA**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2015809 Views on RF requirement for FWA**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

**R4-2015887 Views on UE RF requirements of new FWA with 23dBm maximum TRP**

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

**Decision: Noted.**

**R4-2016529 on new FR2 FWA UE RF requirement**

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

**Decision: Noted.**

**R4-2016530 Draft CR for FR2 FWA RF requirements**

*Type: draftCR For: Endorsement  
 38.101-2 v16.5.0  
 Source: Huawei, HiSilicon*

**Abstract:**

Power class 5 is introduced in Rel-17 for FWA usage.

**Decision: Not pursued.**

#### 10.24.4 Others [NR\_FR2\_FWA\_Bn257\_Bn258-Core/Perf]

### 10.25 Introduction of NR band n13 [NR\_n13]

**R4-2016630 Email discussion summary for [97e][128] NR\_n13**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016970.**

**R4-2016970 Email discussion summary for [97e][128] NR\_n13**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016877 WF on A-MPR for NS\_07**

*Type: other For: Approval  
 Source: Apple*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 10.25.1 UE RF (38.101-1) [NR\_n13-Core]

**R4-2014902 A-MPR Proposal for n13**

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

**Decision: Noted.**

**R4-2015682 CR to TS 38.101-1: introduction of NR band n13**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0543 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 38.101-1.

**Decision: Revised to R4-2016878.**

**R4-2016878 CR to TS 38.101-1: introduction of NR band n13**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0543 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 38.101-1.

**Decision: Return to.**

#### 10.25.2 BS RF (38.104) [NR\_n13-Core]

**R4-2015684 CR to TS 38.104: introduction of NR band n13**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0253 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 38.104

**Decision: Return to.**

**R4-2015685 CR to TS 38.141-1: introduction of NR band n13**

*Type: CR For: Agreement  
 38.141-1 v16.5.0 CR-0164 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 38.141-1

**Decision: Return to.**

**R4-2015686 CR to TS 38.141-2: introduction of NR band n13**

*Type: CR For: Agreement  
 38.141-2 v16.5.0 CR-0241 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 38.141-2

**Decision: Return to.**

**R4-2015687 CR to TS 36.104: introduction of NR band n13**

*Type: CR For: Agreement  
 36.104 v16.7.0 CR-4916 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 36.104

**Decision: Return to.**

**R4-2015688 CR to TS 36.141: introduction of NR band n13**

*Type: CR For: Agreement  
 36.141 v16.7.0 CR-1285 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 36.141

**Decision: Return to.**

**R4-2015689 CR to TS 37.104: introduction of NR band n13**

*Type: CR For: Agreement  
 37.104 v16.7.0 CR-0911 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 37.104

**Decision: Return to.**

**R4-2015690 CR to TS 37.141: introduction of NR band n13**

*Type: CR For: Agreement  
 37.141 v16.7.0 CR-0952 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 37.141

**Decision: Return to.**

**R4-2015691 CR to TS 37.105: introduction of NR band n13**

*Type: CR For: Agreement  
 37.105 v16.5.0 CR-0203 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 37.105

**Decision: Return to.**

**R4-2015692 CR to TS 37.145-1: introduction of NR band n13**

*Type: CR For: Agreement  
 37.145-1 v16.4.0 CR-0220 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 37.145-1

**Decision: Return to.**

**R4-2015693 CR to TS 37.145-2: introduction of NR band n13**

*Type: CR For: Agreement  
 37.145-2 v16.5.0 CR-0245 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 37.145-2

**Decision: Return to.**

#### 10.25.3 RRM (38.133) [NR\_n13-Core]

**R4-2015683 CR to TS 38.133: introduction of NR band n13**

*Type: CR For: Agreement  
 38.133 v16.5.0 CR-1313 Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Introduction of NR band n13 in TS 38.133

**Decision: Return to.**

#### 10.25.4 Others [NR\_n13-Core/Perf]

### 10.26 Introduction of 1880-1920MHz SUL band for NR [NR\_SUL\_band\_1880\_1920MHz]

**R4-2016631 Email discussion summary for [97e][129] NR\_SUL\_bands**

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

**Abstract:**

**Discussion:** All work is completed in first round.

**Decision: Noted.**

#### 10.26.1 UE RF (38.101-1) [NR\_SUL\_band\_1880\_1920MHz-Core]

**R4-2014330 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0499 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL band for NR into Rel-17 TS 38.101-1

**Decision: Agreed.**

**R4-2015290 Discussion on new SUL band n98 UE requirements**

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

**Decision: Noted.**

#### 10.26.2 BS RF (38.104) [NR\_SUL\_band\_1880\_1920MHz -Core]

**R4-2014331 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0240 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014332 Introduction of 1880-1920MHz SUL band into Rel-16 TS 36.104**

*Type: CR For: Agreement  
 36.104 v16.7.0 CR-4912 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014333 Introduction of 1880-1920MHz SUL band into Rel-17 TS 36.141**

*Type: CR For: Agreement  
 36.141 v16.7.0 CR-1274 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014334 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.104**

*Type: CR For: Agreement  
 37.104 v16.7.0 CR-0908 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014335 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.105**

*Type: CR For: Agreement  
 37.105 v16.5.0 CR-0200 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014336 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.141**

*Type: CR For: Agreement  
 37.141 v16.7.0 CR-0949 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014337 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-1**

*Type: CR For: Agreement  
 37.145-1 v16.4.0 CR-0217 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014338 Introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-2**

*Type: CR For: Agreement  
 37.145-2 v16.5.0 CR-0242 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014339 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v16.5.0 CR-0151 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014340 Introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v16.5.0 CR-0223 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 1880-1920MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2015291 Discussion on new SUL band n98 BS requirements**

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

**Decision: Noted.**

#### 10.26.3 RRM (38.133) [NR\_SUL\_band\_1880\_1920MHz -Core]

#### 10.26.4 Others [NR\_SUL\_band\_1880\_1920MHz -Core/Perf]

### 10.27 Introduction of 2300-2400MHz SUL band for NR [NR\_SUL\_band\_2300\_2400MHz]

#### 10.27.1 UE RF (38.101-1) [NR\_SUL\_band\_2300\_2400MHz -Core]

**R4-2014341 introduction of 2300-2400MHz SUL band into Rel-17 TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0500 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL band for NR into Rel-17 TS 38.101-1

**Decision: Agreed.**

**R4-2015288 Discussion on new SUL band n97 UE requirements**

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

**Decision: Noted.**

#### 10.27.2 BS RF (38.104) [NR\_SUL\_band\_2300\_2400MHz -Core]

**R4-2014342 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.104**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0241 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014343 Introduction of 2300-2400MHz SUL band into Rel-16 TS 36.104**

*Type: CR For: Agreement  
 36.104 v16.7.0 CR-4913 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014344 Introduction of 2300-2400MHz SUL band into Rel-17 TS 36.141**

*Type: CR For: Agreement  
 36.141 v16.7.0 CR-1275 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014345 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.104**

*Type: CR For: Agreement  
 37.104 v16.7.0 CR-0909 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014346 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.105**

*Type: CR For: Agreement  
 37.105 v16.5.0 CR-0201 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014347 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.141**

*Type: CR For: Agreement  
 37.141 v16.7.0 CR-0950 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014348 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.145-1**

*Type: CR For: Agreement  
 37.145-1 v16.4.0 CR-0218 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014349 Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.145-2**

*Type: CR For: Agreement  
 37.145-2 v16.5.0 CR-0243 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014350 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v16.5.0 CR-0152 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2014351 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v16.5.0 CR-0224 Cat: B (Rel-17)  
  
 Source: CMCCCMCC, Huawei, HiSilicon*

**Decision: Withdrawn.**

**R4-2014355 Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.141-2**

*Type: CR For: Agreement  
 38.141-2 v16.5.0 CR-0225 Cat: B (Rel-17)  
  
 Source: CMCC, Huawei, HiSilicon*

**Abstract:**

Introduction of 2300-2400MHz SUL (supplemental uplink) band for NR

**Decision: Agreed.**

**R4-2015289 Discussion on new SUL band n97 BS requirements**

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

**Decision: Noted.**

#### 10.27.3 RRM (38.133) [NR\_SUL\_band\_2300\_2400MHz -Core]

#### 10.27.4 Others [NR\_SUL\_band\_2300\_2400MHz -Core/Perf]

### 10.28 Introduction of NR 47 GHz band [NR\_47GHz\_Band]

**R4-2016632 Email discussion summary for [97e][130] NR\_47GHz\_Band**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016971.**

**R4-2016971 Email discussion summary for [97e][130] NR\_47GHz\_Band**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016879 WF on UE RF requirement of n262**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016880 WF on multi-band relaxation of n262**

*Type: other For: Approval  
 Source: Apple*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016881 WF on BS MU/TT for n262**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016461 Revised WID: introduction of NR 47 GHz band**

*Type: WID revised For: Information  
 Source: T-Mobile USA, Dish Network*

**Decision: Noted.**

#### 10.28.1 UE RF (38.101-2) [NR\_47GHz\_Band -Core]

**R4-2014263 Discussion on PC3 EIRP and EIS in n262**

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

**Abstract:**

peak gain, spherical coverage of gain discussed

**Decision: Noted.**

**R4-2015084 UE RF requirements for NR band n262**

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

**Decision: Noted.**

**R4-2015855 Link budget for PC3 for n262**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

**R4-2015888 PC3 minimum peak EIRP and EIS requirements for band n262**

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

**Decision: Noted.**

**R4-2015894 Link budget for PC3 for n262**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

**R4-2015896 Link budget for PC3 for n262**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

**R4-2016229 EIRP and EIS evaluation for band n262**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2016296 Peak EIRP and Peak EIS for band n262**

*Type: discussion For: Approval  
 Source: Apple Inc.*

**Decision: Noted.**

#### 10.28.2 BS RF (38.104) [NR\_47GHz\_Band -Core]

**R4-2015903 Draft CR to TS 38.104 – Introduction of band n262 (47GHz)**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Ericsson*

**Abstract:**

Add band n262

**Decision: Revised to R4-2016882.**

**R4-2016882 Draft CR to TS 38.104 – Introduction of band n262 (47GHz)**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Ericsson*

**Abstract:**

Add band n262

**Decision: Return to.**

**R4-2015904 BS RF requirements and system parameters - TP to TR 38.847**

*Type: pCR For: Approval  
 38.847 v0.0.1  
 Source: Ericsson*

**Abstract:**

This contriobution is a text proposal to TR 38.847 to capture the RAN4#96-e agrements on BS RF requirements and system parameters

**Decision: Revised to R4-2016883.**

**R4-2016883 BS RF requirements and system parameters - TP to TR 38.847**

*Type: pCR For: Approval  
 38.847 v0.0.1  
 Source: Ericsson*

**Abstract:**

This contriobution is a text proposal to TR 38.847 to capture the RAN4#96-e agrements on BS RF requirements and system parameters

**Decision: Return to.**

**R4-2016155 47GHz band TT for NR BS RF requirement**

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

**Decision: Noted.**

**R4-2016191 TP to TR 38.847: BS RF requirements**

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

**Decision: Revised to R4-2016884.**

**R4-2016884 TP to TR 38.847: BS RF requirements**

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

**Decision: Return to.**

#### 10.28.3 RRM (38.133) [NR\_47GHz\_Band -Core]

**R4-2016179 Analysis of RRM requirements for 47 GHz band**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

This document analysis RRM requirements for new band on 47 GHz

**Discussion:**

Proposal 1: Band group for n262 in clause 3.5, TS 38.133 will be defined after RF group has agreed the REFSENS values for corresponding UE power classes for band n262.

Proposal 2: Minimum signal levels (e.g. SSB\_RP) in the conditions in clauses B.1-B.2, TS 38.133 will be defined after RF group has agreed the REFSENS values for corresponding UE power classes for band n262.

Proposal 3: Impact of minimum signals (e.g. min SSB\_RP level) on the existing RRM measurement accuracy tests can be assessed once conditions on the minimum levels is finalized.

**Decision: Noted.**

#### 10.28.4 Others [NR\_47GHz\_Band -Core/Perf]

**R4-2015083 TP to TR 38.847 on regulatory background and system parameters**

*Type: pCR For: Approval  
 38.847 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2015902 TR 38.847 Introduction of NR Band 262 (47Ghz band)**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

TR skeleton to capture the work done when specifying the new NR FR2 47GHz band

**Decision: Agreed.**

**R4-2016096 Simulation results on UE demodulation performance impact by the introduction of NR 47GHz band**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This paper provides UE simulation results for 47GHz FR2 band

**Decision: Noted.**

**R4-2016097 On demodulation requirements for the new 47GHz band**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This paper provides an overview of demodulation requirements for the new 47GHz band

**Decision: Noted.**

### 10.29 Introduction of NR band n24 [NR\_band\_n24]

**R4-2016633 Email discussion summary for [97e][131] NR\_LTE\_band\_n24**

*Type: other For: Information  
 Source: Moderator (Ligado Networks)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016972.**

**R4-2016972 Email discussion summary for [97e][131] NR\_LTE\_band\_n24**

*Type: other For: Information  
 Source: Moderator (Ligado Networks)*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016896 WF on work items LTE\_B24\_mod and NR\_band\_n24**

*Type: other For: Approval  
 Source: Ligado Networks*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016897 WF on work item NR\_SUL\_UL\_n24)**

*Type: other For: Approval  
 Source: Ligado Networks*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 10.29.1 UE RF (38.101-1) [NR\_band\_n24-Core]

**R4-2014466 n24 emission requirements and A-MPR assumptions**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Ligado Networks*

**Decision: Noted.**

**R4-2014495 Band 24 and n24 A-MPR**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution we provide our input on filter feasibility, A-MPR evaluation assumptions and preliminary back-off measurements for NR FDD and SUL Band n24 that is also relevant to LTE Band 24.

**Decision: Noted.**

#### 10.29.2 BS RF (38.104) [NR\_band\_n24-Core]

**R4-2016192 Draft CR to 36.104: Introduction of n24 requirements**

*Type: draftCR For: Endorsement  
 36.104 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction on n24 requirements.

**Decision: Endorsed.**

**R4-2016193 Draft CR to 36.141: Introduction of n24 requirements**

*Type: draftCR For: Endorsement  
 36.141 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction on n24 requirements.

**Decision: Endorsed.**

**R4-2016194 Draft CR to 37.104: Introduction of n24 requirements**

*Type: draftCR For: Endorsement  
 37.104 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction on n24 requirements.

**Decision: Endorsed.**

**R4-2016195 Draft CR to 37.141: Introduction of n24 requirements**

*Type: draftCR For: Endorsement  
 37.141 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction on n24 requirements.

**Decision: Endorsed.**

**R4-2016196 Draft CR to 38.104: Introduction of n24**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction on n24.

**Decision: Revised to R4-2016895.**

**R4-2016895 Draft CR to 38.104: Introduction of n24**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Introduction on n24.

**Decision: Return to.**

#### 10.29.3 RRM (38.133) [NR\_band\_n24-Core]

#### 10.29.4 Others [NR\_band\_n24-Core/Perf]

**R4-2014176 Draft CR for 37.105 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 37.105 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Endorsed.**

**R4-2014177 Draft CR for 37.145-1 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Revised to R4-2016892.**

**R4-2016892 Draft CR for 37.145-1 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Return to.**

**R4-2014178 Draft CR for 37.145-2 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 37.145-2 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Endorsed.**

**R4-2014179 Draft CR for 38.141-1 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 38.141-1 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Revised to R4-2016893.**

**R4-2016893 Draft CR for 38.141-1 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 38.141-1 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Return to.**

**R4-2014180 Draft CR for 38.141-2 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 38.141-2 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Revised to R4-2016894.**

**R4-2016894 Draft CR for 38.141-2 Introduction of NR band n24**

*Type: draftCR For: Endorsement  
 38.141-2 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of NR band n24 into the specifications

**Decision: Return to.**

### 10.30 Introduction of 1.6 GHz NR SUL band with same uplink frequency range of Band 24 [NR\_SUL\_UL\_n24]

**R4-2015356 Discussion on the new SUL band for 1.6GHz**

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

**Abstract:**

Proposal 1: Introduce the new SUL band for 1626.5-1660.5MHz as band n99.

Proposal 2: Specify UE RF requirements for the new SUL band for 1626.5-1660.5MHz following band n24.

Proposal 3: Specify BS spurious emissions requirements for the new SUL band fo

**Decision: Noted.**

#### 10.30.1 UE RF (38.101-1) [NR\_SUL\_UL\_n24-Core]

**R4-2014468 A-MPR and Emission Requirements for new SUL Band related to the UL of n24**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Ligado Networks*

**Decision: Noted.**

**R4-2015357 draftCR to 38101-1 on introducing new SUL band n99**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0538 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in the UE RF spec.

**Decision: Not pursued.**

#### 10.30.2 BS RF (38.104) [NR\_SUL\_UL\_n24-Core]

**R4-2014202 Draft CR for TS 38.104 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 38.104 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Endorsed.**

**R4-2015358 draftCR to 38104 on introducing new SUL band n99**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0246 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 38.104 spec.

**Decision: Not pursued.**

**R4-2015359 draftCR to 36104 on introducing new SUL band n99**

*Type: CR For: Agreement  
 36.104 v16.7.0 CR-4914 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 36.104 spec.

**Decision: Not pursued.**

**R4-2015360 draftCR to 38141-1 on introducing new SUL band n99**

*Type: CR For: Agreement  
 38.141-1 v16.5.0 CR-0159 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 38.141-1 spec.

**Decision: Not pursued.**

**R4-2015361 draftCR to 38141-2 on introducing new SUL band n96**

*Type: CR For: Agreement  
 38.141-2 v16.5.0 CR-0236 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 38.141-2 spec.

**Decision: Not pursued.**

**R4-2015362 draftCR to 36141 on introducing new SUL band n99**

*Type: CR For: Agreement  
 36.141 v16.7.0 CR-1283 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 36.141 spec.

**Decision: Not pursued.**

**R4-2015363 draftCR to 37104 on introducing new SUL band n99**

*Type: CR For: Agreement  
 37.104 v16.7.0 CR-0910 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 37.104 spec.

**Decision: Not pursued.**

**R4-2015364 draftCR to 37141 on introducing new SUL band n99**

*Type: CR For: Agreement  
 37.141 v16.7.0 CR-0951 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 37.141 spec.

**Decision: Not pursued.**

**R4-2015365 draftCR to 37105 on introducing new SUL band n99**

*Type: CR For: Agreement  
 37.105 v16.5.0 CR-0202 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 37.105 spec.

**Decision: Not pursued.**

**R4-2015366 draftCR to 37145-1 on introducing new SUL band n99**

*Type: CR For: Agreement  
 37.145-1 v16.4.0 CR-0219 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 37.145-1 spec.

**Discussion:**

The secretary wondered what is the correct Version? It reads 16.5.0 on the coversheet but the CR is allocated for 16.4.0 (and 16.5.0 does not exist).

**Decision: Not pursued.**

**R4-2015367 draftCR to 37145-2 on introducing new SUL band n99**

*Type: CR For: Agreement  
 37.145-2 v16.5.0 CR-0244 Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

This draftCR is to introduce new SUL band for 1626.5-1660.5MHz in 37.145-2 spec.

**Decision: Not pursued.**

#### 10.30.3 RRM (38.133) [NR\_SUL\_UL\_n24-Core]

#### 10.30.4 Others [NR\_SUL\_UL\_n24-Core/Perf]

**R4-2014203 Draft CR for TS 36.104 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 36.104 v16.7.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Endorsed.**

**R4-2014204 Draft CR for TS 36.141 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 36.141 v16.7.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Endorsed.**

**R4-2014205 Draft CR for TS 37.104 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.104 v16.7.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Endorsed.**

**R4-2014206 Draft CR for TS 37.105 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.105 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Revised to R4-2016898.**

**R4-2016898 Draft CR for TS 37.105 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.105 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Return to.**

**R4-2014207 Draft CR for TS 37.141 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.141 v16.7.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Revised to R4-2016899.**

**R4-2016899 Draft CR for TS 37.141 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.141 v16.7.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Return to.**

**R4-2014208 Draft CR for TS 37.145-1 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Revised to R4-2016900.**

**R4-2016900 Draft CR for TS 37.145-1 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Return to.**

**R4-2014209 Draft CR for TS 37.145-2 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 37.145-2 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band nXX into the specifications

**Decision: Endorsed.**

**R4-2014210 Draft CR for TS 38.141-1 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 38.141-1 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Endorsed.**

**R4-2014211 Draft CR for TS 38.141-2 Introduction of SUL for UL of NR band n24**

*Type: draftCR For: Endorsement  
 38.141-2 v16.5.0  
 Source: Ligado Networks*

**Abstract:**

Introduction of SUL Band n99 into the specifications

**Decision: Endorsed.**

## 11 Reply to ITU-R LS (RP-200042)

### 11.1 Study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz [FS\_6425\_10500MHz \_NR]

**R4-2016634 Email discussion summary for [97e][132] FS\_6425\_10500MHz \_NR**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016973.**

**R4-2016973 Email discussion summary for [97e][132] FS\_6425\_10500MHz \_NR**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016904 WF on Coexistence Simulations results for 6.425-7.125 GHz and 10.0-10.5 GHz**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016905 WF on BS and UE parameters for 6.425-7.125 and 10.0-10.5 GHz**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2015675 TR 38.921 V 0.2.0**

*Type: draft TR For: Agreement  
 38.921 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**R4-2015681 Draft reply LS on Parameters of terrestrial component of IMT for sharing and compatibility studies in preparation for WRC-23 (6.425 to 10.5 GHz)**

*Type: LS out For: Approval  
 to ITU-R WP5D, cc RAN  
 Source: Huawei, HiSilicon*

**Decision: Return to.**

**R4-2016132 Maintenance TP to TR38.921**

*Type: other For: Approval  
 38.921 v..  
 Source: ZTE Corporation*

**Decision: Revised to R4-2016903.**

**R4-2016903 Maintenance TP to TR38.921**

*Type: other For: Approval  
 38.921 v..  
 Source: ZTE Corporation*

**Decision: Return to.**

#### 11.1.1 UE parameters

**R4-2014456 UE parameters for the frequency range 6.425-7.125GHz, 7.025-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2014473 Proposals of UE Parameters for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz**

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

**Abstract:**

This contribution provides the proposals of UE parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz according to the downlink and uplink coexistence simulation results provided.

**Decision: Noted.**

**R4-2015676 TP on UE IMT technology related parameters**

*Type: pCR For: Approval  
 38.921 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision: Return to.**

**R4-2015900 SI on IMT parameters - Remaining UE parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing remaining UE parameters for the SI on IMT parameters

**Decision: Noted.**

#### 11.1.2 BS parameters

**R4-2014457 BS parameters for the frequency range 6.425-7.125GHz, 7.025-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2014474 Proposals of BS Parameters for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz**

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

**Abstract:**

This contribution provides the proposals of BS parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz according to the downlink and uplink coexistence simulation results provided.

**Decision: Noted.**

**R4-2014738 Discussion on remaining issues for 6425-7125 BS parameter**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2014749 Discussion on remaining issues for 6425-7125 BS parameter**

*Type: discussion For: (not specified)  
 Source: CMCC*

**Decision: Noted.**

**R4-2015677 TP on BS remaining parameters**

*Type: pCR For: Approval  
 38.921 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision: Return to.**

**R4-2015899 SI on IMT parameters - Remaining BS parameters**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing remaining BS parameters for the SI on IMT parameters

**Decision: Noted.**

**R4-2016133 TP to TR38.921 : BS spurious emission**

*Type: other For: Approval  
 38.921 v..  
 Source: ZTE Corporation*

**Decision: Revised to R4-2016906.**

**R4-2016906 TP to TR38.921 : BS spurious emission**

*Type: other For: Approval  
 38.921 v..  
 Source: ZTE Corporation*

**Decision: Return to.**

**R4-2016369 Draft LS to ECC SE21 on Spurious emission limits for AAS BS in 6.425 – 7.125 GHz and 10-10.5 GHz**

*Type: LS out For: Approval  
 to ECC SE21, cc TSG RAN  
 Source: Ericsson*

**Abstract:**

The LS informs SE21 what limits RAN4 intends to choose for operation in frequency range 6.425-7.125 GHz and 10-10-.5 GHz, in its work to respond to ITU-R WP5D on sharing parameters for WRC-23.

**Decision: Return to.**

#### 11.1.3 Coexistence study

##### 11.1.3.1 Simulation assumptions

**R4-2014475 TP to TR 38.921: Clarification of system level simulation assumptions for study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell, ZTE*

**Abstract:**

This contribution proposes to use the term “cell range” instead of “cell radius” in table 4.2.1.1-1 to align with figure 4.2.1.1-2 and avoid the ambiguity. The text proposal to TR 38.921 is provided below for approval.

**Decision: Revised to R4-2016901.**

**R4-2016901 TP to TR 38.921: Clarification of system level simulation assumptions for study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell, ZTE*

**Abstract:**

This contribution proposes to use the term “cell range” instead of “cell radius” in table 4.2.1.1-1 to align with figure 4.2.1.1-2 and avoid the ambiguity. The text proposal to TR 38.921 is provided below for approval.

**Decision: Return to.**

**R4-2015901 SI on IMT parameters - Simulation assumptions**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution is discussing some agreed UE assumptions that were challenged in previous meeting

**Decision: Noted.**

##### 11.1.3.2 Downlink

**R4-2014458 Simulation results for 6425-7125MHz and 10-10.5GHz-downlink**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Revised to R4-2016777.**

**R4-2016777 Simulation results for 6425-7125MHz and 10-10.5GHz-downlink**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Return to.**

**R4-2014476 Downlink Coexistence Simulation Results for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz**

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

**Abstract:**

This contribution provides the downlink coexistence simulation results according to the agreed assumptions.

**Decision: Noted.**

**R4-2015678 Simulation results on DL co-existence for 6.425-7.125GHz, 10.0-10.5 GHz**

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

**Decision: Noted.**

**R4-2015897 SI on IMT parameters - DL simulations results**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution is providing coexistence simulations results in DL for the 6-7GHz and 10GHz bands

**Decision: Noted.**

**R4-2016134 DL simulation results for 6425-7125MHz and 10-10.5GHz**

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

**Decision: Noted.**

**R4-2016236 Downlink co-existence simulation results for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 11.1.3.3 Uplink

**R4-2014459 Simulation results for 6425-7125MHz and 10-10.5GHz-uplink**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Revised to R4-2016778.**

**R4-2016778 Simulation results for 6425-7125MHz and 10-10.5GHz-uplink**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Return to.**

**R4-2014477 Uplink Coexistence Simulation Results for Frequency Ranges 6.425-7.125GHz and 10.0-10.5GHz**

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

**Abstract:**

This contribution provides the uplink coexistence simulation results according to the agreed assumptions.

**Decision: Noted.**

**R4-2015679 Simulation results on UL co-existence for 6.425-7.125GHz, 10.0-10.5 GHz**

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

**Decision: Noted.**

**R4-2015898 SI on IMT parameters - UL simulations results**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution is providing coexistence simulations results in UL for the 6-7GHz and 10GHz bands

**Decision: Noted.**

**R4-2016135 UL simulation results for 6425-7125MHz and 10-10.5GHz**

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

**Decision: Noted.**

**R4-2016136 TP to TR38.921: uplink ACIR model**

*Type: other For: Approval  
 38.921 v..  
 Source: ZTE Corporation*

**Decision: Return to.**

**R4-2016237 Uplink co-existence simulation results for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2016601.**

**R4-2016601 Uplink co-existence simulation results for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Return to.**

#### 11.1.4 Antenna characteristics

**R4-2014478 TP to TR 38.921: Clarification of BS array antenna element peak gain for study on IMT parameters for frequency ranges 6.425-7.125GHz and 10.0-10.5GHz**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Nokia, Nokia Shanghai Bell, ZTE*

**Abstract:**

This contribution provides a TP to include the information on how the BS array antenna element peak gains were determined in the reply LSs directly into TR 38.921.

**Decision: Approved.**

**R4-2014979 TP to TR 38.921: Correction to antenna parameter table in clause 3 and sub-clause 8.1**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Ericsson*

**Abstract:**

In this contribution a text proposal has been created to update TR 38.921, subclause 8.1 according to the reply LS sent to ITU-R WP 5D at last meeting. Also, clause 3 is updated with all for the antenna model relevant definitions.

**Decision: Revised to R4-2016902.**

**R4-2016902 TP to TR 38.921: Correction to antenna parameter table in clause 3 and sub-clause 8.1**

*Type: pCR For: Approval  
 38.921 v0.1.0  
 Source: Ericsson*

**Abstract:**

In this contribution a text proposal has been created to update TR 38.921, subclause 8.1 according to the reply LS sent to ITU-R WP 5D at last meeting. Also, clause 3 is updated with all for the antenna model relevant definitions.

**Decision: Return to.**

#### 11.1.5 Relevant information for the sharing and compatibility studies

**R4-2014978 On AAS base station array antenna model and spatial selectivity**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In addition, as RAN1 requests a timely feedback from RAN4 on phase noise, this contribution also contain a draft LS response to RAN1.

**Decision: Noted.**

**R4-2015680 TP on spatial emission and interference mitigation**

*Type: pCR For: Approval  
 38.921 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016907.**

**R4-2016907 TP on spatial emission and interference mitigation**

*Type: pCR For: Approval  
 38.921 v0.2.0  
 Source: Huawei, HiSilicon*

**Decision: Return to.**

## 12 Rel-17 non-spectrum related work items for NR

### 12.2 RF requirements enhancement for NR frequency range 1 (FR1) [NR\_RF\_FR1\_enh]

#### 12.2.1 General and work plan [NR\_RF\_FR1\_enh -Core]

**R4-2016635 Email discussion summary for [97e][133] NR\_RF\_FR1\_enh\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016974.**

**R4-2016974 Email discussion summary for [97e][133] NR\_RF\_FR1\_enh\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016910 WF on MPR simulation assumption for PC2 intra-band contiguous UL CA**

*Type: other For: Approval  
 Source: Skyworks*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016911 WF on RF requirements for PC2 intra-band contiguous UL CA**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016912 WF on 4Rx requirement for CA\_n77(3A) and CA\_77(4A)**

*Type: other For: Approval  
 Source: Softbank*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016540 work plan for Rel-17 FR1 UE RF enhancement**

*Type: Work Plan For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016908.**

**R4-2016908 work plan for Rel-17 FR1 UE RF enhancement**

*Type: Work Plan For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Return to.**

#### 12.2.2 RF core requirements [NR\_RF\_FR1\_enh -Core]

##### 12.2.2.1 UL MIMO configuration for SUL band configurations [NR\_RF\_FR1\_enh -Core]

**R4-2014735 Draft CR: Introduce NR SUL bands n80 to UL-MIMO configuration**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: CMCC*

**Abstract:**

In RAN#89E meeting, RF requirements enhancement for NR frequency range (FR1) in Rel-17 was approved in RP-202088.

One of the objectives of this WID is:

1) Enable UL MIMO configuration for SUL band configurations

Specify UL MIMO requirements for example SUL configurations with SUL band n80

Take SUL\_n41A-n80A for the example SUL band configuration

Remove the RAN2 and RAN4 restriction on configuring UL MIMO for SUL band configurations

In RAN4#95e meeting, several lower NR bands including n3 were introduced to support UL-MIMO (R4-2009162). Since n80 is the SUL band with the same frequency range of n3 uplink, n80 should also support UL-MIMO.

**Decision: Endorsed.**

**R4-2014736 LS on removing restriction on configuring UL MIMO for SUL band**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: CMCC*

**Decision: Revised to R4-2016909.**

**R4-2016909 LS on removing restriction on configuring UL MIMO for SUL band**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: CMCC*

**Decision: Return to.**

**R4-2015181 Considerations on enabling UL-MIMO support for SUL**

*Type: discussion For: Discussion  
 Source: ZTE Wistron Telecom AB*

**Decision: Noted.**

**R4-2015284 Removing restrictions on SUL UL-MIMO in Rel-17**

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

**Decision: Noted.**

##### 12.2.2.2 2Tx switching between carrier 1 and carrier 2 [NR\_RF\_FR1\_enh -Core]

**R4-2016636 Email discussion summary for [97e][134] NR\_RF\_FR1\_enh\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016975.**

**R4-2016975 Email discussion summary for [97e][134] NR\_RF\_FR1\_enh\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016914 WF on RF requirements for Rel-17 Tx switching enhancement**

*Type: other For: Approval  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014465 Discussion on 2Tx switching between carrier 1 and carrier 2**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2014717 Discussion on 2Tx-2tx switching comapred to the 1Tx-2Tx case**

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

**Decision: Noted.**

**R4-2014739 UL Tx switching related RF requirements for R17 new scenarios**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2015182 Initial considerations on 2Tx switching between 2 carriers**

*Type: discussion For: Discussion  
 Source: ZTE Wistron Telecom AB*

**Decision: Noted.**

**R4-2015197 Discussion on 2Tx switching between carrier 1 and carrier 2**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Noted.**

**R4-2015262 consideration on UL Tx switching enhancement in Rel 17**

*Type: other For: Approval  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2015283 Discussion on the introduction of 2Tx - 2Tx UE uplink switch**

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

**Decision: Noted.**

**R4-2015325 Enhancment of Tx Switching in R17**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

**R4-2015355 Discussion on Rel-17 FR1 Tx switching**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

##### 12.2.2.3 Tx switching between 1 carrier on band A and 2 contiguous aggregated carriers on band B [NR\_RF\_FR1\_enh -Core]

**R4-2015198 Discussion on Tx switching between 1 carrier on band A and 2 contiguous aggregated carriers on band B**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Noted.**

##### 12.2.2.4 HPUE for TDD intra-band contiguous UL CA [NR\_RF\_FR1\_enh -Core]

**R4-2014175 HPUE TDD+TDD considerations**

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

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

**R4-2014392 Discussion on SAR solutions of TDD intra-band contiguous UL CA HPUE**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2014508 PC2 UL CA Class B/C UE Architecture and MPR/A-MPR evaluation**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc., Apple Inc.*

**Abstract:**

This contribution discusses the transmitter architecture options and related preliminary MPR and A-MPR results valid for PC2 PA in class B and C UL CA.

**Decision: Noted.**

**R4-2015038 Discussion on PC2 intra-band contiguous NR CA**

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

**Decision: Noted.**

**R4-2015261 Discussion on HP UE for TDD intra-band contiguous UL CA**

*Type: other For: Approval  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2015326 Discussion on HPUE for TDD intra-band contiguous UL CA**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

**R4-2015354 Discussion on Rel-17 FR1 intra-band contiguous HPUE**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2016537 on intra-band CA HPUE RF architecture**

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

**Decision: Noted.**

### 12.3 NR RF requirement enhancements for frequency range 2 (FR2) [NR\_RF\_FR2\_req\_enh2]

#### 12.3.1 General and work plan [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2016637 Email discussion summary for [97e][135] NR\_RF\_FR2\_req\_enh2\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016976.**

**R4-2016976 Email discussion summary for [97e][135] NR\_RF\_FR2\_req\_enh2\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016915 WF on Applicability of CBM/IBM for different CA**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016916 WF on UE requirements for CA configurations CA\_n258A-n260A and CA\_n257A-n259A based on IBM**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016917 WF on UE requirements for CA configurations within the same frequency group based on CBM**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014513 TR skeleton for Rel-17 FR2 UE RF WI**

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

**Decision: Agreed.**

**R4-2014514 Work plan for New WID on NR RF Enhancements for FR2**

*Type: Work Plan For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

#### 12.3.2 RF core requirements [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014724 Discussion on Rel-17 FR2 inter-band CA**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

##### 12.3.2.1 Inter-band DL CA enhancements [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014912 More on FR2 Inter-band DL CA**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Apple Inc.*

**Decision: Noted.**

**R4-2015327 Discussion on FR2 inter-band DL CA enhancements**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

###### 12.3.2.1.1 Applicability of CBM/IBM for different CA configurations [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014293 Inter-band DL CA CBM band pairs for FR2 Rel-17**

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

**Decision: Noted.**

**R4-2014515 FR2 interband CA CBM vs IBM**

*Type: discussion For: (not specified)  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2014586 CBM IBM Applicability for Inter-Band DL CA**

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

**Decision: Noted.**

**R4-2015348 Discussion on Rel-17 FR2 inter-band DL CA**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2016344 Views on applicability of CBM/IBM for different CA configurations**

*Type: other For: Approval  
 Source: Ericsson, Sony*

**Abstract:**

In this contribution we discuss CBM and IBM applicability and capability indication for CA configurations

**Decision: Noted.**

**R4-2016523 On Rel-17 inter band DL CA\_FR2**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

###### 12.3.2.1.2 Feasibility study for CA configurations within same frequency group based on IBM [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2016638 Email discussion summary for [97e][136] NR\_RF\_FR2\_req\_enh2\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016977.**

**R4-2016977 Email discussion summary for [97e][136] NR\_RF\_FR2\_req\_enh2\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016918 WF on inter-band CA and UE BM type**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014233 On the feasibility of IBM for FR2 inter-band CA within the same frequency group**

*Type: discussion For: Approval  
 Source: Apple*

**Decision: Noted.**

**R4-2014587 On IBM feasibility for CA configurations within same frequency group**

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

**Decision: Noted.**

**R4-2015873 Views on Feasibility for CA configurations within same frequency group based on IBM**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

###### 12.3.2.1.3 Feasibility study for CA configurations between different frequency groups based on CBM [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014232 On the feasibility of CBM for FR2 inter-band CA cross different frequency groups**

*Type: discussion For: Approval  
 Source: Apple*

**Decision: Noted.**

**R4-2015874 Views on Feasibility for CA configurations between different frequency groups based on CBM**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

###### 12.3.2.1.4 UE requirements for CA configurations CA\_n258A-n260A and CA\_n257A-n259A based on IBM [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014589 UE requirements for CA\_258A-n260A and CA\_257A-n259A based on IBM**

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

**Decision: Noted.**

**R4-2014966 DL Inter-band CA\_n257-n259**

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

**Decision: Noted.**

**R4-2015875 Views on Rel-17 inter-band DL CA in FR2**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

###### 12.3.2.1.5 UE requirements for CA configurations within the same frequency group based on CBM [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014588 UE requirements for CA configurations within the same frequency group based on CBM**

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

**Decision: Noted.**

##### 12.3.2.2 Inter-band UL CA [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014913 Views on FR2 Inter-band UL CA**

*Type: other For: Approval  
 38.101-2 v..  
 Source: Apple Inc.*

**Decision: Noted.**

**R4-2015328 Discussion on FR2 inter-band UL CA**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

###### 12.3.2.2.1 Feasibility study for CA configurations within same frequency group based on IBM and CBM [NR\_RF\_FR2\_req\_enh2-Core]

###### 12.3.2.2.2 Feasibility study for CA configurations between different frequency groups based on CBM [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2014715 Inter-band UL CA for FR2**

*Type: discussion For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

###### 12.3.2.2.3 UE requirements for CA configuration CA\_n257A-n259A based on IBM [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2016086 UL inter-band CA for different band group based on IBE**

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

**Decision: Noted.**

##### 12.3.2.3 UL gaps for self-calibration and monitoring [NR\_RF\_FR2\_req\_enh2-Core]

**R4-2016639 Email discussion summary for [97e][137] NR\_RF\_FR2\_req\_enh2\_Part\_3**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016978.**

**R4-2016978 Email discussion summary for [97e][137] NR\_RF\_FR2\_req\_enh2\_Part\_3**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016919 WF on UL gap in FR2**

*Type: other For: Approval  
 Source: Apple*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014218 Discusison on UL gaps for self-calibration/monitoring**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2014393 Discussion on UL gaps for self-calibration and monitoring**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2014516 FR2 gaps**

*Type: discussion For: (not specified)  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2014590 On performance improvements from self-calibration in UL gaps**

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

**Decision: Noted.**

**R4-2014716 UE calibration gap motivation and view to the requirements**

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

**Decision: Noted.**

**R4-2014963 Discussion on UL gap for self-calibration and monitoring**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

**R4-2015349 Discussion on Rel-17 FR2 calibration gap**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2016061 Analysis on power calibration gaps**

*Type: discussion For: Endorsement  
 Source: Ericsson, Sony*

**Abstract:**

Paper contains an analysis on power calibration gaps. Including observation and proposal

**Decision: Noted.**

**R4-2016536 on gaps for self-calibration and monitoring**

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

**Decision: Noted.**

**R4-2016560 Further discusison on UL gaps for self-calibration and monitoring**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

### 12.7 NR support for high speed train scenario in FR2 [NR\_HST\_FR2\_enh]

**R4-2016640 Email discussion summary for [97e][138] NR\_HST\_FR2\_enh**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016979.**

**R4-2016979 Email discussion summary for [97e][138] NR\_HST\_FR2\_enh**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016921 WF on NR support for HST in FR2**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 12.7.1 General and work plan [NR\_HST\_FR2\_enh-Core]

**R4-2014846 Work plan for NR support for high speed train scenario in FR2**

*Type: Work Plan For: Approval  
 Source: Samsung, Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2016920.**

**R4-2016920 Work plan for NR support for high speed train scenario in FR2**

*Type: Work Plan For: Approval  
 Source: Samsung, Nokia, Nokia Shanghai Bell*

**Decision: Return to.**

**R4-2015859 General considerations for FR2 HST**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

General discussion on FR2 HST

**Decision: Noted.**

**R4-2015880 TR skeleton for NR support for high speed train scenario in FR2**

*Type: other For: Approval  
 38.133 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2016922.**

**R4-2016922 TR skeleton for NR support for high speed train scenario in FR2**

*Type: other For: Approval  
 38.133 v..  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Return to.**

#### 12.7.2 High speed train deployment scenario in FR2 [NR\_HST\_FR2\_enh-Core]

**R4-2014564 Views on high speed train deployments scenarios in FR2**

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

**Decision: Noted.**

**R4-2014632 FR2 HST analysis framework**

*Type: discussion For: Discussion  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

**R4-2014834 Discussion on scenarios for FR2 high speed train**

*Type: discussion For: Discussion  
 Source: Verizon, Samsung*

**Decision: Noted.**

**R4-2014847 Discussion on high speed train deployment scenario in FR2**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2015614 Discussion on high speed train deployment scenario in FR2**

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

**Decision: Noted.**

**R4-2015860 Deployment scenarios for FR2 HST**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Some deployment considerations for FR2 HST

**Decision: Noted.**

**R4-2016387 On the high-speed train deployment scenario in FR2**

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

**Abstract:**

This contribution provides an overview of HST deployment scenarios in FR2. We collect main deployment parameters, highlight the magnitude and potential impact of the Doppler effect, and discuss channel models.

**Decision: Noted.**

#### 12.7.3 UE RF core requirements [NR\_HST\_FR2\_enh-Core]

**R4-2014848 Discussion on UE RF requirement for FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2015087 Power Class 4 for HST**

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

**Decision: Noted.**

**R4-2016058 On UE Core requirements for FR2 HST**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

UE RF core requirements affected by HST FR2 deployment(s)

**Decision: Noted.**

**R4-2016538 on RF requirement for NR FR2 HST**

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

**Decision: Noted.**

### 12.10 NR Sidelink enhancement [NRSL\_enh]

**R4-2016641 Email discussion summary for [97e][139] NRSL\_enh**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016980.**

**R4-2016980 Email discussion summary for [97e][139] NRSL\_enh**

*Type: other For: Information  
 Source: Moderator (LG Electronics)*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016923 WF on the proposed operating bands for NR SL operation in FR1**

*Type: other For: Approval  
 Source: AT&T*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 12.10.1 General and work plan [NRSL\_enh]

**R4-2014326 Work plan for SL enhancement for RF perspectives in Rel-17**

*Type: Work Plan For: Approval  
 Source: LG Electronics France*

**Decision: Revised to R4-2016924.**

**R4-2016924 Work plan for SL enhancement for RF perspectives in Rel-17**

*Type: Work Plan For: Approval  
 Source: LG Electronics France*

**Decision: Return to.**

**R4-2014973 General views on NR sidelink enhancements in R17**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2015256 on Rel-17 V2X work**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2016281 General aspects on RAN4 work for public safety UC support**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

in this paper, we present our view on general work aspects for RF work related to public safety UC.

**Decision: Noted.**

**R4-2016484 On Rel-17 sidelink enhancement**

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

**Decision: Noted.**

#### 12.10.2 Spectrum request for SL operation [NRSL\_enh-Core]

**R4-2016280 spectrum aspect on public saftey UC support**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

in this paper, we present our view on spectrum aspects related to regulatory work.

**Decision: Noted.**

**R4-2016464 NR Sidelink Operating Bands**

*Type: discussion For: (not specified)  
 Source: AT&T, FirstNet*

**Decision: Noted.**

## 13 Rel-17 Study Items for NR

### 13.2 Study on supporting NR from 52.6 GHz to 71 GHz [FS\_NR\_52\_to\_71GHz]

#### 13.2.1 Numerology, Channel BW [FS\_NR\_52\_to\_71GHz]

**R4-2016642 Email discussion summary for [97e][140] FS\_NR\_52\_to\_71GHz\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016981.**

**R4-2016981 Email discussion summary for [97e][140] FS\_NR\_52\_to\_71GHz\_Part\_1**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016925 WF on Min and Max Channel Bandwidths in 52 to 71 GHz**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016926 WF on Phase noise mask and PTRS**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016927 WF on timing text proposal to TR**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016928 LS on PN models**

*Type: LS out For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Return to.**

##### 13.2.1.1 General [FS\_NR\_52\_to\_71GHz]

**R4-2014382 Further discussion on numerology and CBW for above 52.6 GHz**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2014737 Bandwidth and numerology for NR in 52.6GHz ~ 71GHz**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2014892 Further considerations on the numerology and channel bandwidth sizes for the 60GHz frequency range**

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

**Decision: Noted.**

**R4-2014974 Further discussion on channel bandwidths and numerology for B52.6G**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2015206 Numerology and channel bandwidth discussion for NR beyond 52.6 GHz**

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

**Decision: Noted.**

**R4-2015307 Channel bandwidth and subcarrier spacing for 52.6 GHz to 71GHz**

*Type: discussion For: Discussion  
 Source: NEC*

**Abstract:**

We show our view on the channel bandwidth and subcarrier spacing

**Decision: Noted.**

**R4-2015563 On numerology and channel bandwidth in 52.6 - 71 GHz**

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

**Decision: Noted.**

**R4-2015700 Discussion on 52.6 GHz to 71 GHz SI**

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

**Decision: Noted.**

**R4-2015727 On 52.6 to 71 GHz numerology evaluation and channel bandwidths**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In RAN#86, a rel-17 SI covering support for NR in 52.6 – 71 GHz was approved [1]. The SI and the consecutive WI aims to maximize the leverage of FR2 based implementations and minimize the specification burden, where possible extension of FR2 operation up

**Decision: Noted.**

**R4-2015886 Views on numerologies above 52 GHz**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

**R4-2015890 Views on numerologies above 52 GHz**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

**R4-2015891 Views on numerologies above 52 GHz**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

**R4-2015892 Views on numerologies above 52 GHz**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

**R4-2015893 Views on numerologies above 52 GHz**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

**R4-2016110 Further discussion on numerology and BW for 52.6GHz-71GHz**

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

**Decision: Noted.**

**R4-2016299 Subcarrier spacing and minimum channel bandwidth**

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

**Decision: Noted.**

##### 13.2.1.2 Timing considerations [FS\_NR\_52\_to\_71GHz]

**R4-2015991 TP to TR 38.808: Timing considerations for operation between 52.6 and 71 GHz**

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

**Decision: Noted.**

**R4-2016000 TP to TR 38.808: Timing considerations for operation between 52.6 and 71 GHz**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2016036 TP for NR Rel-17 TR 38.808: Time and synchronization impact**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Ericsson*

**Abstract:**

Analysis of time and synchronization requirements of TS 38.133

**Decision: Noted.**

##### 13.2.1.3 Phase noise and RF impairments related to response to RAN1 [FS\_NR\_52\_to\_71GHz]

**R4-2014893 Futher considerations on the phase noise for the 60GHz frequency range**

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

**Decision: Noted.**

**R4-2014976 TP to TR 38.808: On 52.6 to 71 GHz phase noise characteristics, TP to TR and draft LS to RAN1**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Ericsson*

**Abstract:**

In this paper, we further discuss the phase noise model described in [3] and elaborate more on comparison between characteristics of existing models, new proposed models and state-of-the-art high performance PLL published data.

**Decision: Noted.**

**R4-2015443 Draft LS: Phase noise and RF impairment considerations**

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

**Decision: Noted.**

**R4-2015564 On 60 GHz Phase noise and RF impairments**

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

**Decision: Noted.**

**R4-2016298 Phase noise and PTRS**

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

**Decision: Noted.**

**R4-2016533 on PN model for 60GHz+reply LS RAN1**

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

**Decision: Noted.**

**R4-2015728 Discussion on PTRS for 52 beyond**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

During last RAN4 meeting, RAN4 #96-e, contributions regarding technological impacts at 52.6 GHz and beyond were discussed. Interested companies brought studies on PN, antenna parameters, to name a few and impact of physical layer design, specifically PT-

**Decision: Noted.**

#### 13.2.2 BS aspect [FS\_NR\_52\_to\_71GHz]

**R4-2016643 Email discussion summary for [97e][141] FS\_NR\_52\_to\_71GHz\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016982.**

**R4-2016982 Email discussion summary for [97e][141] FS\_NR\_52\_to\_71GHz\_Part\_2**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014401 Discussion on the BS requirements for 52.6-71GHz**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2014977 TP to TR 38.808: Addition of technical background information for base station in clause 2 and sub-clause 4.2.6**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Ericsson*

**Abstract:**

In Annex A of this contribution, text proposal for technical report describing the new proposed model is attached.

**Decision: Noted.**

**R4-2015200 TP to TR 38.808 BS RF for NR beyond 52.6 GHz**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Return to.**

**R4-2015947 TP to TR 38.808: BS architecture and BS classes for 52-71 GHz range**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Huawei*

**Abstract:**

This contribution provides TP to TR 38.808 on selected BS aspects for 52.6 – 71 GHz range, including BS architecture and BS classes.

**Decision: Noted.**

#### 13.2.3 UE aspect [FS\_NR\_52\_to\_71GHz]

**R4-2014975 Further discussion on PA model for B52.6G**

*Type: discussion For: Information  
 Source: vivo*

**Decision: Noted.**

**R4-2015444 UE RF for NR beyond 52.6 GHz**

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

**Decision: Noted.**

**R4-2015984 On power amplifier aspects for UE in the 52.6-71 GHz range**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose and ACLR range for UEs operating in the 52.6-71 GHz range

**Decision: Noted.**

**R4-2016371 A Survey on Memory Based PA Models**

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

**Abstract:**

In this contributions we will discuss some memory based models that could be suitable candidates.

**Decision: Noted.**

#### 13.2.4 Others [FS\_NR\_52\_to\_71GHz]

**R4-2014894 Regulatory overview and input for the 60GHz frequency range**

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

**Decision: Noted.**

**R4-2015948 TP to TR 38.808: PA trends and typical Noise Figure values**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Huawei*

**Abstract:**

Based on the approved WF this contribution provides an updated TP for the PA trends analysis for 52.6 – 71 GHz range. Related TP to TR 38.808 is attached for approval. It shall be noted that the source PA database use for drafting the attached TP was rece

**Decision: Noted.**

**R4-2014980 TP to TR 38.808: Addition of general RAN4 structure to sub-clause 4.2**

*Type: pCR For: Approval  
 38.808 v0.0.2  
 Source: Ericsson*

**Abstract:**

A common technical report (TR 38.808) has been created to capture background information for RAN1 and RAN4. In this contribution a text proposal is attached with a sub-structure to prepare TR 38.808 to capture RAN4 specific information.

**Decision: Return to.**

### 13.3 Study on Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths [FS\_NR\_eff\_BW\_util]

**R4-2016644 Email discussion summary for [97e][142] FS\_NR\_eff\_BW\_util**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016983.**

**R4-2016983 Email discussion summary for [97e][142] FS\_NR\_eff\_BW\_util**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016931 WF on Irregular Channel Bandwidths**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 13.3.1 General and work plan [FS\_NR\_eff\_BW\_util]

**R4-2014895 Non-standard spectrum allocations for NR bands**

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

**Decision: Noted.**

**R4-2015721 Work Plan for Study on Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidth**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution provides description of the work plan for the study on efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidth [1]

**Decision: Revised to R4-2016929.**

**R4-2016929 Work Plan for Study on Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidth**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution provides description of the work plan for the study on efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidth [1]

**Decision: Return to.**

**R4-2015722 TR Skeleton on CH BW not aligned with existing BWs**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Draft TR Skeleton for Study on Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths

**Decision: Revised to R4-2016930.**

**R4-2016930 TR Skeleton on CH BW not aligned with existing BWs**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Draft TR Skeleton for Study on Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths

**Decision: Return to.**

**R4-2016456 Revised SID: Study on Efficient utilization of licensed spectrum that is not aligned with existing NR channel bandwidths**

*Type: SID revised For: Information  
 Source: T-Mobile USA, Ericsson*

**Decision: Noted.**

#### 13.3.2 Input on operator licensed channel bandwidths in FR1 that do not align with existing NR channel bandwidths [FS\_NR\_eff\_BW\_util]

**R4-2014507 UE Support for Irregular Channel Bandwidths - Options and Constraints**

*Type: discussion For: Approval  
 38.101-1 v..  
 Source: Skyworks Solutions Inc.*

**Abstract:**

This contribution discusses the different cases from UE prospective and provides an analysis of potential solutions and their related constraints to enable irregular channel BW support using existing UE channel BW.

**Decision: Noted.**

**R4-2015723 Considerations on Bandwidth Granularity**

*Type: discussion For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution highlighted challenges around adding new channel bandwidths and its proposed to keep the study and work relating to this SI to consider a nominal granularity for new channel bandwidths of which to study

**Decision: Noted.**

#### 13.3.3 Evaluation of use of larger channel bandwidths than operator licensed bandwidth [FS\_NR\_eff\_BW\_util]

**R4-2015724 Utilizing larger CBWs for available spectrum**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

In this contribution, further discussion on creating new channel bandwidth by means of utilizing the net wider channel bandwidth with only scheduling a subset of RBs

**Decision: Noted.**

**R4-2016111 Discussion on irregular channel bandwidth for NR system**

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

**Decision: Noted.**

#### 13.3.4 Evaluation of use of overlapping UE channel bandwidths (from both UE and network perspective) [FS\_NR\_eff\_BW\_util]

**R4-2014487 Handling of Channel Bandwidths That Are Not Multiples of 5MHz**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2015562 On efficient utilization of licensed spectrum**

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

**Decision: Noted.**

**R4-2015713 Overlapping UE channel bandwidths**

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

**Decision: Noted.**

##### 13.3.4.1 UE perspective [FS\_NR\_eff\_BW\_util]

**R4-2016201 On the use of overlapping channel bandwidths from UE perspective**

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

**Decision: Noted.**

##### 13.3.4.2 Network perspective [FS\_NR\_eff\_BW\_util]

**R4-2016455 Use of 5 MHz overlapping channel BWs to cover spectrum blocks between 5 and 10 MHz**

*Type: discussion For: Approval  
 Source: T-Mobile USA*

**Decision: Noted.**

#### 13.3.5 Others [FS\_NR\_eff\_BW\_util]

## 14 Rel-17 Work Items for LTE

### 14.1 LTE inter-band Carrier Aggregation for 2 bands DL with 1 band UL [LTE\_CA\_R17\_2BDL\_1BUL]

**R4-2016645 Email discussion summary for [97e][143] LTE\_Baskets**

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

**Abstract:**

**Discussion:**

**Decision: Noted.**

#### 14.1.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_2BDL\_1BUL-Core/Perf]

**R4-2016232 Revised WID: Rel17 LTE inter-band CA for 2 bands DL with 1 band UL**

*Type: WID revised For: (not specified)  
 Source: Qualcomm Incorporated*

**Decision:** To be email approved.

**R4-2016233 Introduction of Rel-17 LTE inter-band CA for 2 bands DL with 1 band UL combinations in TS36.101**

*Type: draftCR For: (not specified)  
 36.101 v16.7.0  
 Source: Qualcomm Incorporated*

**Decision:** To be email approved.

**R4-2016234 TR 36.717-02-01 Rel-17 LTE inter-band CA for 2 bands DL and 1 band UL CA**

*Type: draft TR For: Agreement  
 36.717-02-01 v0.1.0  
 Source: Qualcomm Incorporated*

**Decision:** To be email approved.

#### 14.1.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_2BDL\_1BUL-Core]

#### 14.1.3 UE RF without specific issues [LTE\_CA\_R17\_2BDL\_1BUL-Core]

**R4-2015392 TP for TR 36.717-02-01: CA\_2A-8A**

*Type: pCR For: Approval  
 36.717-02-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

### 14.2 LTE inter-band Carrier Aggregation for 3 bands DL with 1 band UL [LTE\_CA\_R17\_3BDL\_1BUL]

**R4-2014067 TP for TR 36.717-03-01: CA\_1-8-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_1-8-41 for TR 36.717-03-01 [1]. Only 1 UL is considered.

**Decision: Approved.**

**R4-2014068 TP for TR 36.717-03-01: CA\_1-40-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_1-40-41 for TR 36.717-03-01 [1]. Only 1 UL is considered.

**Decision: Revised to R4-2016768.**

**R4-2016768 TP for TR 36.717-03-01: CA\_1-40-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_1-40-41 for TR 36.717-03-01 [1]. Only 1 UL is considered.

**Decision: Approved.**

**R4-2014069 TP for TR 36.717-03-01: CA\_8-40-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_8-40-41 for TR 36.717-03-01 [1]. Only 1 UL is considered.

**Decision: Revised to R4-2016769.**

**R4-2016769 TP for TR 36.717-03-01: CA\_8-40-41**

*Type: pCR For: Approval  
 36.717-03-01 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_8-40-41 for TR 36.717-03-01 [1]. Only 1 UL is considered.

**Decision: Approved.**

#### 14.2.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_3BDL\_1BUL-Core/Perf]

**R4-2016541 Introduction of completed R17 3DL band combinations to TS 36.101**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5709 Cat: B (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

**R4-2016542 Revised WID for LTE inter-band CA for 3 bands DL with 1 bands UL**

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

**Decision:** To be email approved.

#### 14.2.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_3BDL\_1BUL-Core]

#### 14.2.3 UE RF without specific issues [LTE\_CA\_R17\_3BDL\_1BUL-Core]

### 14.3 LTE inter-band Carrier Aggregation for x bands DL (x=4, 5) with 1 band UL

**R4-2014065 TP for TR 36.717-04-01: CA\_1-3-8-41**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_1-3-8-41 for TR 36.717-04-01. Only 1 UL is considered.

**Decision: Revised to R4-2016767.**

**R4-2016767 TP for TR 36.717-04-01: CA\_1-3-8-41**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: VODAFONE Group Plc*

**Abstract:**

This contribution provides a text proposal on LTE CA band combination CA\_1-3-8-41 for TR 36.717-04-01. Only 1 UL is considered.

**Decision: Approved.**

**R4-2015201 Extension of LTE iterbCA 4/5 WI to include 6 bands**

*Type: discussion For: Approval  
 Source: VODAFONE Group Plc*

**Abstract:**

For LTE inter-band CA the existing work items currently support work on up to 5 bands for the downlink (DL). As there is now a desire to start work on 6 band DL combinations, a suitable work item needs to be identified. This document proposes extending th

**Decision: Approved.**

#### 14.3.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_xBDL\_1BUL-Core]

**R4-2015070 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 v16.7.0 CR-5687 Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

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

**Decision:** To be email approved.

**R4-2016181 Revised WID: LTE Advanced inter-band CA Rel-17 for x bands DL (x=4, 5) with 1 band UL**

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

**Decision:** To be email approved.

**R4-2016182 Updated scope of TR: LTE inter-band CA for 4/5 bands DL with 1 band UL**

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

**Decision: Approved.**

**R4-2016183 TR 36.717-04-01 v0.2.0**

*Type: draft TR For: Agreement  
 36.717-04-01 v0.2.0  
 Source: Nokia, Nokia Shanghai Bell*

**Decision:** To be email approved.

#### 14.3.2 UE RF with 4 LTE bands CA [LTE\_CA\_R17\_xBDL\_1BUL-Core]

**R4-2015393 Draft CR to 36.101 to add configuration CA\_1A-3A-8A-40C**

*Type: draftCR For: Endorsement  
 36.101 v16.7.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add configuration CA\_1A-3A-8A-40C

**Decision: Endorsed.**

**R4-2015394 Draft CR to 36.101 to add CA\_1A-3C-7A-8A with UL CA\_3C**

*Type: draftCR For: Endorsement  
 36.101 v16.7.0  
 Source: Huawei, HiSilicon*

**Abstract:**

To add configuration CA\_1A-3C-7A-8A with UL CA\_3C

**Decision: Endorsed.**

**R4-2015395 TP for TR 36.717-04-01: CA\_1A-7A-8A-38A**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016770.**

**R4-2016770 TP for TR 36.717-04-01: CA\_1A-7A-8A-38A**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015396 TP for TR 36.717-04-01: CA\_1A-8A-20A-38A**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016771.**

**R4-2016771 TP for TR 36.717-04-01: CA\_1A-8A-20A-38A**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015397 TP for TR 36.717-04-01: CA\_3A-8A-20A-38A**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016772.**

**R4-2016772 TP for TR 36.717-04-01: CA\_3A-8A-20A-38A**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015398 TP for TR 36.717-04-01: CA\_1A-3C-8A-38A with UL CA\_3C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016773.**

**R4-2016773 TP for TR 36.717-04-01: CA\_1A-3C-8A-38A with UL CA\_3C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015399 TP for TR 36.717-04-01: CA\_1A-3C-8A-20A with UL CA\_3C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016774.**

**R4-2016774 TP for TR 36.717-04-01: CA\_1A-3C-8A-20A with UL CA\_3C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015400 Updated TP for TR 36.717-04-01: CA\_1A-3C-20A-38A with UL CA\_3C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016775.**

**R4-2016775 Updated TP for TR 36.717-04-01: CA\_1A-3C-20A-38A with UL CA\_3C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2015402 Updated TP for TR 36.717-04-01: CA\_2A-5A-7A-66A-66A**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

#### 14.3.3 UE RF with 5 LTE bands CA [LTE\_CA\_R17\_xBDL\_1BUL-Core]

**R4-2015401 TP for TR 36.717-04-01: CA\_1A-3A-7A-8A-40A / CA\_1A-3A-7A-8A-40C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2016776.**

**R4-2016776 TP for TR 36.717-04-01: CA\_1A-3A-7A-8A-40A / CA\_1A-3A-7A-8A-40C**

*Type: pCR For: Approval  
 36.717-04-01 v0.1.0  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

### 14.4 LTE inter-band Carrier Aggregation for 2 bands DL with 2 band UL [LTE\_CA\_R17\_2BDL\_2BUL]

#### 14.4.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_2BDL\_2BUL-Core]

**R4-2016488 Introduction of completed R17 2DL2UL band combinations to TS 36.101**

*Type: draftCR For: Endorsement  
 36.101 v16.7.0  
 Source: Huawei, HiSilicon*

**Decision:** To be email approved.

**R4-2016489 Revised WID for LTE inter-band CA for 2 bands DL with 2 bands UL**

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

**Decision:** To be email approved.

#### 14.4.2 UE RF with harmonic, close proximity and isolation issues [LTE\_CA\_R17\_2BDL\_2BUL-Core]

#### 14.4.3 UE RF without specific issues [LTE\_CA\_R17\_2BDL\_2BUL-Core]

### 14.5 LTE inter-band Carrier Aggregation for x bands DL (x= 3, 4, 5) with 2 band UL

#### 14.5.1 Rapporteur Input (WID/TR/CR) [LTE\_CA\_R17\_xBDL\_2BUL-Core]

**R4-2014300 TR 36.717-03-02 v0.2.0 TR Update for LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-17**

*Type: draft TR For: Agreement  
 36.717-03-02 v0.2.0  
 Source: LG Electronics Polska*

**Decision: Withdrawn.**

**R4-2014301 Revised WID on LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL in Rel-17**

*Type: WID revised For: (not specified)  
 Source: LG Electronics Polska*

**Decision:** To be email approved.

**R4-2014302 Introduction of LTE-A inter-band CA for x bands (x=3,4,5) DL with 2 bands UL to TS36.101**

*Type: CR For: Agreement  
 36.101 v16.7.0 CR-5680 Cat: B (Rel-17)  
  
 Source: LG Electronics Polska*

**Decision:** To be email approved.

#### 14.5.2 UE RF with MSD [LTE\_CA\_R17\_xBDL\_2BUL-Core]

#### 14.5.3 UE RF without MSD [LTE\_CA\_R17\_xBDL\_2BUL-Core]

### 14.6 RRM for LTE CA basket WIs [LTE\_CA\_R17\_xxxx]

#### 14.6.1 RRM Core (36.133) [LTE\_CA\_R17\_xxxx-Core]

#### 14.6.2 RRM Perf (36.133) [LTE\_CA\_R17\_xxxx-Perf]

### 14.7 New WID on Additional LTE bands for UE category M1&M2 and/or NB1&NB2 in Rel-17 [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2]

**R4-2016646 Email discussion summary for [97e][144] LTE\_bands\_R17\_M1\_M2\_NB1\_NB2**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016984.**

**R4-2016984 Email discussion summary for [97e][144] LTE\_bands\_R17\_M1\_M2\_NB1\_NB2**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016932 WF on A-MPR simulation assumption for B24 CAT-M1/M2 device**

*Type: other For: Approval  
 Source: Ligado Networks*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 14.7.1 Rapporteur Input (WID/TR/CR) [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Core]

**R4-2016266 CR of adding LTE B24 for UE category NB1 in R17**

*Type: draftCR For: Endorsement  
 36.307 v13.12.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

UE cat. NB1 was introduced by REL-13.

In REL-17, requirements for additional bands have to be added UE category NB1 in a REL-independent way starting from REL-13

**Decision: Endorsed.**

**R4-2016267 CR of adding LTE B24 for UE category NB1 in R17**

*Type: draftCR For: Endorsement  
 36.307 v14.9.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

CR of adding LTE B24 for UE category NB1 in R17

**Decision:** The document was **not treated**.

**R4-2016268 CR of adding LTE B24 for UE category NB1 in R17**

*Type: draftCR For: Endorsement  
 36.307 v15.6.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

CR of adding LTE B24 for UE category NB1 in R17

**Decision:** The document was **not treated**.

**R4-2016269 CR of adding LTE B24 for UE category NB1 in R17**

*Type: draftCR For: Endorsement  
 36.307 v16.2.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

CR of adding LTE B24 for UE category NB1 in R17

**Decision:** The document was **not treated**.

**R4-2016270 CR of adding LTE B24 for UE category NB1/NB2 in R17**

*Type: draftCR For: Endorsement  
 36.101 v16.7.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

Adding B24 for NB1/NB2

**Decision: Endorsed.**

**R4-2016271 CR of adding LTE B24 for UE category NB1/NB2 in R17**

*Type: draftCR For: Endorsement  
 36.104 v16.7.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

Adding B24 for NB1/NB2

**Decision: Endorsed.**

**R4-2016272 CR of adding LTE B24 for UE category NB1/NB2 in R17**

*Type: draftCR For: Endorsement  
 36.133 v16.7.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

Adding B24 for NB1/NB2

**Decision: Endorsed.**

**R4-2016274 CR of adding LTE B24 for UE category NB1/NB2 in R17**

*Type: draftCR For: Endorsement  
 37.104 v16.7.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

Adding B24 for NB1/NB2

**Decision: Endorsed.**

**R4-2016276 CR of adding LTE B24 for UE category NB2 in R17**

*Type: draftCR For: Endorsement  
 36.307 v14.9.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

UE cat. NB2 was introduced by REL-14 WI.

In REL-17, requirements for additional bands have to be added UE category NB2 in a REL-independent way starting from REL-14

**Decision: Endorsed.**

**R4-2016277 CR of adding LTE B24 for UE category NB2 in R17**

*Type: draftCR For: Endorsement  
 36.307 v15.6.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

CR of adding LTE B24 for UE category NB2 in R17

**Decision:** The document was **not treated**.

**R4-2016278 CR of adding LTE B24 for UE category NB2 in R17**

*Type: draftCR For: Endorsement  
 36.307 v16.2.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

CR of adding LTE B24 for UE category NB2 in R17

**Decision:** The document was **not treated**.

#### 14.7.2 RF [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Core]

**R4-2015794 Band 24 Cat M1/M2 A-MPR assumptions**

*Type: discussion For: Approval  
 36.101 v..  
 Source: Ligado Networks*

**Decision: Noted.**

**R4-2016279 Further consideration of A-MPR simulation assumption for B24**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

in this paper, we present our view on the new PA model for the LTE Cat-M1/M2 device and our view on the simulation work later on

**Decision: Noted.**

#### 14.7.3 Others [LTE\_bands\_R17\_M1\_M2\_NB1\_NB2-Perf]

**R4-2016273 CR of adding LTE B24 for UE category NB1/NB2 in R17**

*Type: draftCR For: Endorsement  
 36.141 v16.7.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

Adding B24 for NB1/NB2

**Decision: Endorsed.**

**R4-2016275 CR of adding LTE B24 for UE category NB1/NB2 in R17**

*Type: draftCR For: Endorsement  
 37.141 v16.7.0  
 Source: Ericsson, Ligado Networks*

**Abstract:**

Adding B24 for NB1/NB2

**Decision: Endorsed.**

### 14.8 Modification of LTE Band 24 specifications to comply with updated regulatory emission limits [LTE\_B24\_mod]

#### 14.8.1 General and rapporteur input [LTE\_B24\_mod-Core]

#### 14.8.2 UE RF [LTE\_B24\_mod-Core]

**R4-2014161 Band 24 UE additional emissions requirements, A-MPR scenarios and assumptions, and UE REFSENS**

*Type: discussion For: Approval  
 Source: Ligado Networks*

**Decision: Noted.**

#### 14.8.3 BS RF [LTE\_B24\_mod-Core]

**R4-2016197 Draft CR to 36.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 36.104 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Revised to R4-2016888.**

**R4-2016888 Draft CR to 36.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 36.104 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Return to.**

**R4-2016198 Draft CR to 36.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 36.141 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Revised to R4-2016889.**

**R4-2016889 Draft CR to 36.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 36.141 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Return to.**

**R4-2016199 Draft CR to 37.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 37.104 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Revised to R4-2016890.**

**R4-2016890 Draft CR to 37.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 37.104 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Return to.**

**R4-2016200 Draft CR to 36.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 37.141 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Revised to R4-2016891.**

**R4-2016891 Draft CR to 36.104: Correction to Band 24 requirements (Rel-10)**

*Type: draftCR For: Endorsement  
 37.141 v16.7.0  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

There are two regulatory updates related to BS operation in Band 24 which need to be reflected in 36.104:

Regulations limits the downlink power to 9.8 dBW/MHz and limits transmission between 1526 – 1536 MHz

OOBE emission limits have been modified.

**Decision: Return to.**

#### 14.8.4 RRM and others [LTE\_B24\_mod-Core/Perf]

**R4-2014191 Draft CR for 37.105: Corrections related to Band 24 regulatory updates (Rel-15)**

*Type: draftCR For: Endorsement  
 37.105 v15.10.0  
 Source: Ligado Networks*

**Abstract:**

Regulatory requirements for Band 24 were updated in April, 2020

**Decision: Revised to R4-2016885.**

**R4-2016885 Draft CR for 37.105: Corrections related to Band 24 regulatory updates (Rel-15)**

*Type: draftCR For: Endorsement  
 37.105 v15.10.0  
 Source: Ligado Networks*

**Abstract:**

Regulatory requirements for Band 24 were updated in April, 2020

**Decision: Return to.**

**R4-2014192 Draft CR for TS 37.105 Corrections related to Band 24 regulatory updates (Rel-16)**

*Type: draftCR For: Endorsement  
 37.105 v16.5.0  
 Source: Ligado Networks*

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

**R4-2014193 Draft CR for TS 37.105 Corrections related to Band 24 regulatory updates (Rel-17)**

*Type: draftCR For: Endorsement  
 37.105 v16.5.0  
 Source: Ligado Networks*

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

**R4-2014194 Draft CR for 37.145-1: Corrections related to Band 24 regulatory updates (Rel-13)**

*Type: draftCR For: Endorsement  
 37.145-1 v13.10.0  
 Source: Ligado Networks*

**Abstract:**

Regulatory requirements for Band 24 were updated in April, 2020

**Decision: Revised to R4-2016886.**

**R4-2016886 Draft CR for 37.145-1: Corrections related to Band 24 regulatory updates (Rel-13)**

*Type: draftCR For: Endorsement  
 37.145-1 v13.10.0  
 Source: Ligado Networks*

**Abstract:**

Regulatory requirements for Band 24 were updated in April, 2020

**Decision: Return to.**

**R4-2014195 Draft CR for TS 37.145-1 Corrections related to Band 24 regulatory updates (Rel-14)**

*Type: draftCR For: Endorsement  
 37.145-1 v14.8.0  
 Source: Ligado Networks*

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

**R4-2014196 Draft CR for TS 37.145-1 Corrections related to Band 24 regulatory updates (Rel-15)**

*Type: draftCR For: Endorsement  
 37.145-1 v15.7.0  
 Source: Ligado Networks*

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

**R4-2014197 Draft CR for TS 37.145-1 Corrections related to Band 24 regulatory updates (Rel-16)**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Ligado Networks*

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

**R4-2014198 Draft CR for TS 37.145-1 Corrections related to Band 24 regulatory updates (Rel-17)**

*Type: draftCR For: Endorsement  
 37.145-1 v16.4.0  
 Source: Ligado Networks*

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

**R4-2014199 Draft CR for 37.145-2: Corrections related to Band 24 regulatory updates (Rel-15)**

*Type: draftCR For: Endorsement  
 37.145-2 v15.8.0  
 Source: Ligado Networks*

**Abstract:**

Regulatory requirements for Band 24 were updated in April, 2020

**Decision: Revised to R4-2016887.**

**R4-2016887 Draft CR for 37.145-2: Corrections related to Band 24 regulatory updates (Rel-15)**

*Type: draftCR For: Endorsement  
 37.145-2 v15.8.0  
 Source: Ligado Networks*

**Abstract:**

Regulatory requirements for Band 24 were updated in April, 2020

**Decision: Return to.**

**R4-2014200 Draft CR for TS 37.145-2 Corrections related to Band 24 regulatory updates (Rel-16)**

*Type: draftCR For: Endorsement  
 37.145-2 v16.5.0  
 Source: Ligado Networks*

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

**R4-2014201 Draft CR for TS 37.145-2 Corrections related to Band 24 regulatory updates (Rel-17)**

*Type: draftCR For: Endorsement  
 37.145-2 v16.5.0  
 Source: Ligado Networks*

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

## 15 Rel-17 Study Items for LTE

### 15.1 High-power UE operation for fixed-wireless/vehicle-mounted use cases in LTE bands 5 and 12 and NR band n71 [FS\_LTE\_NR\_HPUE\_FWVM]

**R4-2016647 Email discussion summary for [97e][145] FS\_LTE\_NR\_HPUE\_FWVM**

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

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016985.**

**R4-2016985 Email discussion summary for [97e][145] FS\_LTE\_NR\_HPUE\_FWVM**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016933 Updated Work Plan for Study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016934 TP to TR 37.880: Coexistence Simulation Results and Observations for High-power UE operation Vs NB-IoT standalone operation**

*Type: pCR For: Approval  
 37.880 v0.0.1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

**Discussion:**

**Decision: Return to.**

#### 15.1.1 General

**R4-2014479 TR 37.880 V0.1.0: High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Abstract:**

Updated TR for Study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71.

**Decision: Agreed.**

#### 15.1.2 Coexistence study

**R4-2014480 Coexistence Simulation Results for High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

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

**Abstract:**

This contribution provides the coexistence simulation results for this scenario according to the agreed assumptions.

**Decision: Noted.**

#### 15.1.3 UE RF

**R4-2014481 TP to TR 37.880: High-power UE transmitter/receiver architecture for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71**

*Type: pCR For: Approval  
 37.880 v0.0.1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides a TP to include the UE transmitter/receiver architecture in TR 37.880.

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

## 16 Liaison and output to other groups

### 16.1 R17 related

### 16.2 Others

## 17 Revision of the Work Plan

### 17.1 Simplification of band combinations in RAN4 specifications

**R4-2016648 Email discussion summary for [97e][146] BC\_simplification**

*Type: other For: Information  
 Source: Moderator (NTT DOCOMO)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2016986.**

**R4-2016986 Email discussion summary for [97e][146] BC\_simplification**

*Type: other For: Information  
 Source: Moderator (NTT DOCOMO)*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016935 WF on rules on request sheet and notations of CA/DC configurations**

*Type: other For: Approval  
 Source: Apple*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016936 WF on updating cover sheet of request sheet**

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

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016940 WF on MSD test point specification methodology for LTE CA**

*Type: other For: Approval  
 Source: Skyworks*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2016941 WF on alternative to creating new BCSs**

*Type: other For: Approval  
 Source: T-Mobile USA*

**Abstract:**

**Discussion:**

**Decision: Return to.**

**R4-2014482 On a request sheet/WID template for band combinations**

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

**Abstract:**

Discuss one remaining issue on request sheet template for band combinations.

**Decision: Noted.**

**R4-2014598 More on an alternative to creating new BCSs**

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

**Abstract:**

This paper addresses raised concerns over the discussion on R4-2010062 in RAN4#96-e.

**Decision: Noted.**

**R4-2014959 Further considerations on simplification of band combination**

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

**Abstract:**

In this contribution, we provide our considerations on how to simplify the configuration tables and the detail of specification splitting.

**Decision: Noted.**

**R4-2014960 CR to TS 38.101-1 on simplification for inter-band CA configuration**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0524 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

In current spec, most of the channel bandwidth for NR band with single carrier is described very cumbersome because of the triple SCSs of {15kHz, 30kHz, 60kHz}. To simplify the NR configuration table, a bit map to represent the different SCS values for the NR channel bandwidth is introduced. The size of configuration table is greatly reduced accordingly.

**Decision: Revised to R4-2016937.**

**R4-2016937 CR to TS 38.101-1 on simplification for inter-band CA configuration**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0524 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

In current spec, most of the channel bandwidth for NR band with single carrier is described very cumbersome because of the triple SCSs of {15kHz, 30kHz, 60kHz}. To simplify the NR configuration table, a bit map to represent the different SCS values for the NR channel bandwidth is introduced. The size of configuration table is greatly reduced accordingly.

**Decision: Return to.**

**R4-2014961 CR to TS 38.101-2 on simplification for inter-band CA configuration**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0283 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

In current spec, most of the channel bandwidth for NR band with single carrier is described very cumbersome because of the duple SCSs of {60kHz ,120kHz}. To simplify the NR configuration table, a bit map to represent the different SCS values for the NR channel bandwidth is introduced. The size of configuration table is greatly reduced accordingly.

**Decision: Revised to R4-2016938.**

**R4-2016938 CR to TS 38.101-2 on simplification for inter-band CA configuration**

*Type: CR For: Agreement  
 38.101-2 v16.5.0 CR-0283 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

In current spec, most of the channel bandwidth for NR band with single carrier is described very cumbersome because of the duple SCSs of {60kHz ,120kHz}. To simplify the NR configuration table, a bit map to represent the different SCS values for the NR channel bandwidth is introduced. The size of configuration table is greatly reduced accordingly.

**Decision: Return to.**

**R4-2014962 CR to TS 38.101-3 on simplification for inter-band CA configuration between FR1 and FR2**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0383 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

In current spec, most of the channel bandwidth for NR band with single carrier is described very cumbersome because of the triple SCSs of {15kHz, 30kHz, 60kHz } in FR1 and the duple SCSs of {60kHz, 120kHz} in FR2. To simplify the NR configuration table, a bit map to represent the different SCS values for the NR channel bandwidth is introduced. The size of configuration table for inter-band CA between FR1 and FR2 is greatly reduced accordingly.

**Decision: Revised to R4-2016939.**

**R4-2016939 CR to TS 38.101-3 on simplification for inter-band CA configuration between FR1 and FR2**

*Type: CR For: Agreement  
 38.101-3 v16.5.0 CR-0383 Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Abstract:**

In current spec, most of the channel bandwidth for NR band with single carrier is described very cumbersome because of the triple SCSs of {15kHz, 30kHz, 60kHz } in FR1 and the duple SCSs of {60kHz, 120kHz} in FR2. To simplify the NR configuration table, a bit map to represent the different SCS values for the NR channel bandwidth is introduced. The size of configuration table for inter-band CA between FR1 and FR2 is greatly reduced accordingly.

**Decision: Return to.**

**R4-2015320 Further consideration on simplification of band configuration**

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

**Decision: Noted.**

**R4-2015546 To update the coversheet of Excel table based on the Rel-17 band combination basket WI**

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

**Decision: Noted.**

**R4-2016007 LTE Rel'17 MSD Table Simplification**

*Type: discussion For: Approval  
 36.101 v..  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**R4-2016297 CA/DC Band configurations notations and usage in 3GPP**

*Type: discussion For: Approval  
 Source: Apple*

**Decision: Noted.**

**R4-2016453 An alternative to creating new BCSs**

*Type: discussion For: Approval  
 Source: T-Mobile USA, Deutsche Telekom, AT&T, TELUS, Bell Mobility, Rogers Communications, Telstra, Telecom Italia, KDDI, Vodafone, BT plc, Ericsson*

**Decision: Noted.**

**R4-2016454 Draft CR for 38.101-1: Introduction of BCS4**

*Type: draftCR For: Endorsement  
 38.101-1 v16.5.0  
 Source: T-Mobile USA*

**Abstract:**

The number of bandwidth combination sets is growing too large to be manageable.

**Decision: Return to.**

**R4-2016457 NR-CA and NR-DC 3 band requests and fallbacks**

*Type: discussion For: Approval  
 Source: T-Mobile USA, TELUS, Bell Mobility, AT&T*

**Decision: Noted.**

### 17.2 R17 new proposals

#### 17.2.1 Spectrum related

**R4-2015285 New basket WID on bands with UL-MIMO PC3**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

**R4-2015909 New WI: Specification of band n67**

*Type: WID new For: Information  
 Source: Ericsson*

**Abstract:**

This new WI is introduced band n67 which is refarmed LTE band 67

**Decision:** The document was **not treated**.

**R4-2016543 New basket WID NR\_PC2\_CA\_R17\_intra**

*Type: WID new For: Information  
 Source: Huawei, HiSilicon*

**Decision:** The document was **not treated**.

#### 17.2.2 Non-spectrum related

**R4-2014352 Motivation for new WI on air-to-ground network for NR**

*Type: WID new For: Information  
 Source: CMCC*

**Decision:** The document was **not treated**.

**R4-2014353 New WID on air-to-ground network for NR**

*Type: WID new For: Information  
 Source: CMCC*

**Decision:** The document was **not treated**.

**R4-2014594 Proposal to extend R17 FeRRM WI scope**

*Type: discussion For: Information  
 Source: Apple*

**Decision:** The document was **not treated**.

**R4-2015115 Discssion on EMC Test Simplification for Rel-17 EMC enhancement**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion paper on EMC test simplification for Rel 17 EMC enhancement

**Decision:** The document was **not treated**.

**R4-2015116 New WID proposal on RAN4 Rel-17 EMC enhancement**

*Type: WID new For: Information  
 Source: Ericsson, ZTE*

**Abstract:**

Proposal on a WID for Rel-17 EMC enhancement

**Decision:** The document was **not treated**.

**R4-2015254 [UE EMC] Further discussion on UE EMC enhancement**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision:** The document was **not treated**.

**R4-2015670 New objectives for Rel-17 demodulation performance work item**

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

**Decision:** The document was **not treated**.

**R4-2016002 CRS-IC requirements for LTE-NR coexistence scenario**

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

**Decision:** The document was **not treated**.

**R4-2016180 Email summary of UE and BS EMC discussion**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This document summarizes discussion on EMC on the RAN draft reflector

**Decision:** The document was **not treated**.

**R4-2016230 Motivation for WI: NR FR1 UE SA and EN-DC TRP and TRS**

*Type: discussion For: Information  
 Source: vivo*

**Decision:** The document was **not treated**.

**R4-2016231 New WID: NR FR1 UE SA and EN-DC TRP and TRS**

*Type: WID new For: Information  
 Source: vivo, OPPO, CMCC, CAICT, Rohde & Schwarz*

**Decision:** The document was **not treated**.

### 17.3 Others

## 18 Any other business

**R4-2014327 LTE/NR spectrum sharing in Band 40/n40**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0408 rev 2 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

(Replaces R4-2011822)

**Abstract:**

To enable dynamic spectrum sharing between LTE and NR in B40/n40 band

**Decision: Revised to R4-2016942.**

**R4-2016942 LTE/NR spectrum sharing in Band 40/n40**

*Type: CR For: Agreement  
 38.101-1 v16.5.0 CR-0408 rev 2 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

(Replaces R4-2011822)

**Abstract:**

To enable dynamic spectrum sharing between LTE and NR in B40/n40 band

**Decision: Return to.**

**R4-2014328 LTE/NR spectrum sharing in Band 40/n40**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0214 rev 2 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

(Replaces R4-2011823)

**Abstract:**

To enable dynamic spectrum sharing between LTE and NR in B40/n40 band

**Decision: Revised to R4-2016943.**

**R4-2016943 LTE/NR spectrum sharing in Band 40/n40**

*Type: CR For: Agreement  
 38.104 v16.5.0 CR-0214 rev 2 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

(Replaces R4-2011823)

**Abstract:**

To enable dynamic spectrum sharing between LTE and NR in B40/n40 band

**Decision: Return to.**

**R4-2014329 LTE/NR spectrum sharing in Band 40/n40**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR-0024 rev 2 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

(Replaces R4-2011824)

**Abstract:**

To enable dynamic spectrum sharing between LTE and NR in B40/n40 band

**Decision: Revised to R4-2016944.**

**R4-2016944 LTE/NR spectrum sharing in Band 40/n40**

*Type: CR For: Agreement  
 38.307 v16.4.0 CR-0024 rev 2 Cat: B (Rel-17)  
  
 Source: Reliance Jio*

(Replaces R4-2011824)

**Abstract:**

To enable dynamic spectrum sharing between LTE and NR in B40/n40 band

**Decision: Return to.**

## 19 Close of the E-meeting

Report prepared by: MCC

## BACKUP

**R4-20AAAAA WF on**

*Type: other For: Approval  
 Source:*

**Abstract:**

**Discussion:**

**Decision: Return to.**