**3GPP TSG-RAN WG4 Meeting #110 R4-23xxxxx**

**Athens, Greece, 26 Feb– 01 Mar 2024**

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

**DRAFT Meeting Report  
for  
TSG RAN WG4  
meeting: 109**

**Chicago, USA, 13/11/2023 to 17/11/2023**

Report generated on Monday, 2023-11-06 09:35 UTC

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## 1 Opening of the meeting

The Chair Xizeng Dai (Huawei) opened the meeting at RAN4#109 on 13/11/2023 at 09:00.

**Intellectual Property Rights Declaration 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 Chair and Vice-Chairs 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 in three parallel sessions; Main session, RRM session, and BS RF Test Demod session. The Main session was chaired by RAN4 Chair Xizeng Dai (Huawei), RRM session was chaired by RAN4 Vice Chair Andrey Chervyakov (Intel), and BS RF Test Demod session was chaired by RAN4 Vice Chair Haijie Qiu (Samsung). The sessions were further broken down into separate GTW sessions (separate meeting rooms in F2F meeting). Webinar sessions were made available for online particpants.

Note: One additional offline GTW may be scheduled according to RAN conclusion, but not for every day. Totally at most four GTW sessions would be scheduled. Offline GTW = ad hoc room in F2F meeting.

**Check-in for Registered Delegates**

The attention of the delegates to this meeting was drawn to the fact that it is not permitted to check in other delegates on their behalf. In the even of technical difficulties preventing check in, delegates are encouraged to contact in person MCC.

**Ordinary E-meeting participation**

Attendance at ordinary e-meetings now counts towards accrual and maintenance of voting rights.

- A delegate is deemed to have attended a given meeting if they confirm their participation by check in. If a delegate does not check in during the meeting, it shall be assumed that the individual did not attend.

**Face-to-Face meeting with two-way remote participation**

When it is a face-to-face (ordinary) meeting with two-way remote participation.

- In a meeting designated as face to face (ordinary), those participating remotely are not to be counted toward quorum or attendance, and are not allowed to vote

**F2F network usage conditions**

The PCG has laid down the following network usage conditions as provided below:

**Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws**.

**Users shall not engage in non-work related activities that consume excessive bandwidth** or cause significant degradation of the performance of the network.

Since the **network is a shared resource**, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting Chair should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

**1. DON’T place your WiFi device in ad-hoc mode**

**2. DON’T set up a personal hotspot in the meeting room**

**3. DO try 802.11a if your WiFi device supports it**

**4. DON’T manually allocate an IP address**

**5. DON’T be a bandwidth hog by streaming video, playing online games, or downloading huge files**

**6. DON’T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)**

**Recording of RAN4 Meeting**

Recording of the GoToWebinar sessions of the present meeting is strictly prohibited. No individual or entity – including the speakers and/or the authors – may electronically record any portion of the meeting without prior written consent of the Chair and all the RAN4 meeting participants.

Snapshot of contributions type areas submitted in 3GU before the start of the meeting: Total: 3022

Figure 1: Breakdown of contributions type areas for RAN4#109 pre-meeting

At the beginning of the meeting, there are 868 CRs that have been submitted to the meeting.

- For Rel-13 and Rel-14, they each have only 1 CR submitted under agenda item 4, 5 and 6.

- For Rel-15, ther are 36 CRs submitted under agenda item 4, 5 and 6.

- For Rel-16, there are 110 CRs submitted under agenda item 4, 5 and 6.

- For Rel-17, there are 253 CRs submitted under agenda item 4, 5 and 6.

- For Rel-18, there are 467 CRs submitted

- There are 180 CAT B CRs

- There are 287 CAT A, C and F CRs

## 2 Meeting agenda, arrangement and meeting report

[**R4-2318000**](file:///D:\RAN4%23109\Docs\R4-2318000.zip) **RAN4#108-bis Meeting Report**

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

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Approved.**

[**R4-2318001**](file:///D:\RAN4%23109\Docs\R4-2318001.zip) **Agenda for RAN4#109**

*Type: agenda For: Approval  
 Source: RAN4 Chair (Huawei)*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Approved.**

[**R4-2318002**](file:///D:\RAN4%23109\Docs\R4-2318002.zip) **RAN4#109 Meeting Arrangements and Guidelines**

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

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Approved.**

## 3 Incoming LS

[**R4-2318003**](file:///D:\RAN4%23109\Docs\R4-2318003.zip) **LS on PRS bandwidth aggregation**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310478, to RAN4, cc RAN2, RAN3  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318004**](file:///D:\RAN4%23109\Docs\R4-2318004.zip) **LS on TS38.300 TP for UL Tx switching in Rel-18**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310492, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318005**](file:///D:\RAN4%23109\Docs\R4-2318005.zip) **Reply LS on RAN1 impacts regarding enhancements to realize increasing UE power high limit for CA and DC**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310518, to RAN4, cc RAN2  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318006**](file:///D:\RAN4%23109\Docs\R4-2318006.zip) **Reply LS on power scaling and PHR in 38.213**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310555, to RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318007**](file:///D:\RAN4%23109\Docs\R4-2318007.zip) **Response LS on frequencyInfo for NR SL RSRP measurements**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310559, to RAN2, cc RAN4, RAN5  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318008**](file:///D:\RAN4%23109\Docs\R4-2318008.zip) **LS on NCD-SSB time offset for RedCap UEs in TDD**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310566, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318009**](file:///D:\RAN4%23109\Docs\R4-2318009.zip) **Reply LS on Dual TCI state switching in mDCI**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310581, to RAN4, cc RAN2  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318010**](file:///D:\RAN4%23109\Docs\R4-2318010.zip) **LS on conditions for triggering switch and descriptions on determination of the length of switching period in specifications**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310584, to RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318011**](file:///D:\RAN4%23109\Docs\R4-2318011.zip) **LS on PSFCH power control**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310595, to RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318012**](file:///D:\RAN4%23109\Docs\R4-2318012.zip) **LS on Rel-18 RAN1 UE features list for LTE after RAN1#114bis**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310634, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318013**](file:///D:\RAN4%23109\Docs\R4-2318013.zip) **LS on Rel-18 RAN1 UE features list for NR after RAN1#114bis**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310637, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318014**](file:///D:\RAN4%23109\Docs\R4-2318014.zip) **LS on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310645, to RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318015**](file:///D:\RAN4%23109\Docs\R4-2318015.zip) **Draft reply LS on report quantity parameter setting for CQI reporting with 1Tx**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310649, to RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318016**](file:///D:\RAN4%23109\Docs\R4-2318016.zip) **Response LS on determination of switching period location in frequency domain based on band priority**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310679, to RAN2, RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318017**](file:///D:\RAN4%23109\Docs\R4-2318017.zip) **LS on Rel-18 higher-layers parameter list**

*Type: LS in For: Information  
 Original outgoing LS: R1-2310694, to RAN2, RAN3, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318018**](file:///D:\RAN4%23109\Docs\R4-2318018.zip) **Reply LS on the handling of additional regulatory requirements for UAV UEs**

*Type: LS in For: Information  
 Original outgoing LS:* [*R4-2311387*](file:///D:\RAN4%23109\Docs\R4-2311387.zip)*, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318019**](file:///D:\RAN4%23109\Docs\R4-2318019.zip) **LS on L1 measurements for LTM**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311333, to RAN1, RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318020**](file:///D:\RAN4%23109\Docs\R4-2318020.zip) **LS on request for clarifications on RedCap positioning, carrier phase positioning, and bandwidth aggregation for positioning**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311391, to RAN1, cc RAN3, RAN4  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318021**](file:///D:\RAN4%23109\Docs\R4-2318021.zip) **Reply LS on monitoring of paging occasions for CG-SDT with HD-FDD Redcap UEs**

*Type: LS in For: Information  
 Original outgoing LS: R3-2311424, to RAN4, cc RAN1  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318022**](file:///D:\RAN4%23109\Docs\R4-2318022.zip) **LS on combination of HST and RRM relaxation**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311435, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318023**](file:///D:\RAN4%23109\Docs\R4-2318023.zip) **LS on the CA Aggregated BW capability signaling by the UE**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311440, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318024**](file:///D:\RAN4%23109\Docs\R4-2318024.zip) **Reply LS on higher power limit capability for inter-band UL DC**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311441, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318025**](file:///D:\RAN4%23109\Docs\R4-2318025.zip) **LS reply to RAN4 LS** [**R4-2314351**](file:///D:\RAN4%23109\Docs\R4-2314351.zip)

*Type: LS in For: Information  
 Original outgoing LS: R2-2311505, to RAN4, cc RAN1  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318026**](file:///D:\RAN4%23109\Docs\R4-2318026.zip) **Reply LS on R1-2308644 for CPP**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311565, to RAN1, cc RAN4, RAN3, SA2  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318027**](file:///D:\RAN4%23109\Docs\R4-2318027.zip) **LS on TA validation for LPHAP**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311568, to RAN1, RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318028**](file:///D:\RAN4%23109\Docs\R4-2318028.zip) **LS on power class indication in lower MSD capability**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311586, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318029**](file:///D:\RAN4%23109\Docs\R4-2318029.zip) **Reply LS on FS\_VMR solutions review**

*Type: LS in For: Information  
 Original outgoing LS: R3-235924, to SA2, cc RAN2, RAN4, RAN  
 Source: RAN3*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318077**](file:///D:\RAN4%23109\Docs\R4-2318077.zip) **LS on Stage-2 CR for MIMO evolution**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311293, to RAN1, cc RAN4  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318078**](file:///D:\RAN4%23109\Docs\R4-2318078.zip) **Reply LS on delta power class**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311611, to RAN4, cc RAN1  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2318079**](file:///D:\RAN4%23109\Docs\R4-2318079.zip) **Reply LS to Reply LS on MAC-CE Based Indication for Cross-RRH TCI State**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311619, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

[**R4-2321323**](file:///D:\RAN4%23109\Docs\R4-2321323.zip) **Response LS to LS on Dual TCI state switching in mDCI**

*Type: LS in For: Information  
 Original outgoing LS: R2-2311594, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#109][100] Main Session

**Decision: Noted.**

## 3A Topic Summary (pre-meeting)

## 4 Up to Rel-16 maintenance for LTE and NR

**Guidance for maintenance agendas (AI 4, AI 5 and AI 6)**

The following guidance are provided for AI 4, AI5 and AI6:

- For maintenance agenda AI 4 (up to Rel-16), AI 5 (Rel-17) and AI 6 (Rel-18), formal CRs are expected and multiple formal CRs per company in the lowest agenda are allowed. For tracking the changes easily, it expected that one batch of CRs (Cat-F/A/…) will just cover a single topic/WI rather than multiple topics/WIs and Cat-F CR with corresponding Cat-A CRs needs be submitted under the same agenda.

- When submitting contributions to AI 4, AI 5 and AI 6, please add [WI\_code] in the beginning of titles for both discussion files and CRs to facilitate moderators and session chairs handling.

- When reserving the tdoc number, please use the correct WI code rather than simply using TEI and fill the column of “Related WIs” in your reservation spreadsheet. If you submit a CR with TEI as WI code, please inform session chair.

### 4.1 UE RF requirements

**Topic #1 5MHz CBW with 30kHz SCS**

[**R4-2320639**](file:///D:\RAN4%23109\Docs\R4-2320639.zip) **FRCs for 5 MHz channel bandwidth in 30 KHz SCS**

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

**Decision: Noted.**

[**R4-2320632**](file:///D:\RAN4%23109\Docs\R4-2320632.zip) **[NR\_newRAT] CR to 38.101-1 on FRC deletion for 5MHz 30 KHz**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1960 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

Qualcomm (Toni) flags R4-2320632: This change is unnecessary, FRC has been there since rel-15 and there is no practical issue to solve.

**Decision: Agreed.**

[**R4-2320633**](file:///D:\RAN4%23109\Docs\R4-2320633.zip) **[NR\_newRAT] CR to 38.101-1 on FRC deletion for 5MHz 30 KHz**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1961 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2320634**](file:///D:\RAN4%23109\Docs\R4-2320634.zip) **[NR\_newRAT] CR to 38.101-1 on FRC deletion for 5MHz 30 KHz**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1962 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2320635**](file:///D:\RAN4%23109\Docs\R4-2320635.zip) **[NR\_newRAT] CR to 38.101-1 on FRC deletion for 5MHz 30 KHz**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1963 rev Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**Topic #2 UE coexistence simplify CRs**

[**R4-2318520**](file:///D:\RAN4%23109\Docs\R4-2318520.zip) **CR for 38.101-1 UE to UE coex R16**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1840 rev Cat: F (Rel-16)  
  
 Source: Nokia*

CHTTL flags all of the CRs, prefer to have some online discussion of possible. And at least two NR bands in R4-2318448 and R4-2318454 needs to be updated. There may be impact on some regulation. We would like to check othe operators whether it is OK not to test the protects.

CAICT flags R4-2318520, R4-2318523 and R4-2318517 for the revisions of the NOTE, and the referenced clause number of single carreier requirement in R4-2318517.

**Decision: Agreed.**

[**R4-2318521**](file:///D:\RAN4%23109\Docs\R4-2318521.zip) **CR for 38.101-1 UE to UE coex R17**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1841 rev Cat: A (Rel-17)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318522**](file:///D:\RAN4%23109\Docs\R4-2318522.zip) **CR for 38.101-1 UE to UE coex R18**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1842 rev Cat: A (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318523**](file:///D:\RAN4%23109\Docs\R4-2318523.zip) **CR for 38.101-3 UE to UE coex R16**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1043 rev Cat: F (Rel-16)  
  
 Source: Nokia*

**Decision: Revised to R4-2321935 (from R4-2318523).**

[**R4-2321935**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321935.zip) **CR for 38.101-3 UE to UE coex R16**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1043 rev Cat: F (Rel-16)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318681**](file:///D:\RAN4%23109\Docs\R4-2318681.zip) **CR for 38.101-3 UE to UE coex R17**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1047 rev Cat: A (Rel-17)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318525**](file:///D:\RAN4%23109\Docs\R4-2318525.zip) **CR for 38.101-3 UE to UE coex R18**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1045 rev Cat: A (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318517**](file:///D:\RAN4%23109\Docs\R4-2318517.zip) **CR for 36.101 UE to UE coex R16**

*Type: CR For: Agreement  
 36.101 v16.18.0 CR-6022 rev Cat: F (Rel-16)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318518**](file:///D:\RAN4%23109\Docs\R4-2318518.zip) **CR for 36.101 UE to UE coex R17**

*Type: CR For: Agreement  
 36.101 v17.11.0 CR-6023 rev Cat: A (Rel-17)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318519**](file:///D:\RAN4%23109\Docs\R4-2318519.zip) **CR for 36.101 UE to UE coex R18**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6024 rev Cat: A (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318451**](file:///D:\RAN4%23109\Docs\R4-2318451.zip) **CR on TS38.101-1 for simplification of NR V2X UE coexistence in Rel-16**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1830 rev Cat: F (Rel-16)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This is Cat. F CR to update UE coexistence RF requirements for NR V2X UE based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)).

**Decision: Agreed.**

[**R4-2318452**](file:///D:\RAN4%23109\Docs\R4-2318452.zip) **CR on TS38.101-1 for simplification of NR V2X UE coexistence in Rel-17 (Cat. A)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1831 rev Cat: A (Rel-17)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This CR is Cat. A CR of [R4-2318451](file:///D:\RAN4%23109\Docs\R4-2318451.zip). Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in Rel-17.

**Decision: Agreed.**

[**R4-2318453**](file:///D:\RAN4%23109\Docs\R4-2318453.zip) **CR on TS38.101-1 for simplification of NR V2X UE coexistence in Rel-18 (Cat. A)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1832 rev Cat: A (Rel-18)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This CR is Cat. A CR of [R4-2318451](file:///D:\RAN4%23109\Docs\R4-2318451.zip). Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in Rel-18.

**Decision: Agreed.**

[**R4-2318454**](file:///D:\RAN4%23109\Docs\R4-2318454.zip) **CR on TS38.101-3 for simplification of NR V2X UE coexistence in Rel-16**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1039 rev Cat: F (Rel-16)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This CR is Cat. F CR to update NR V2X UE coexistence requirements in TS38.101-3. Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in TS38.101-3.

**Decision: Revised to R4-2321936 (from R4-2318454).**

[**R4-2321936**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321936.zip) **CR on TS38.101-3 for simplification of NR V2X UE coexistence in Rel-16**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1039 rev Cat: F (Rel-16)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This CR is Cat. F CR to update NR V2X UE coexistence requirements in TS38.101-3. Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in TS38.101-3.

**Decision: Agreed.**

[**R4-2318455**](file:///D:\RAN4%23109\Docs\R4-2318455.zip) **CR on TS38.101-3 for simplification of NR V2X UE coexistence in Rel-17 (Cat. A)**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1040 rev Cat: A (Rel-17)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This CR is Cat. A CR of [R4-2318454](file:///D:\RAN4%23109\Docs\R4-2318454.zip). Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in TS38.101-3.

**Decision: Agreed.**

[**R4-2318456**](file:///D:\RAN4%23109\Docs\R4-2318456.zip) **CR on TS38.101-3 for simplification of NR V2X UE coexistence in Rel-18 (Cat. A)**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1041 rev Cat: A (Rel-18)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This CR is Cat. A CR of [R4-2318454](file:///D:\RAN4%23109\Docs\R4-2318454.zip). Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in Rel-18.

**Decision: Agreed.**

[**R4-2318448**](file:///D:\RAN4%23109\Docs\R4-2318448.zip) **CR on TS36.101 for simplification of LTE V2X UE co-existence in Rel-16**

*Type: CR For: Agreement  
 36.101 v16.18.0 CR-6019 rev Cat: F (Rel-16)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in TS36.101 (Cat. F)

**Decision: Revised to R4-2321937 (from R4-2318448).**

[**R4-2321937**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321937.zip) **CR on TS36.101 for simplification of LTE V2X UE co-existence in Rel-16**

*Type: CR For: Agreement  
 36.101 v16.18.0 CR-6019 rev Cat: F (Rel-16)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in TS36.101 (Cat. F)

**Decision: Agreed.**

[**R4-2318449**](file:///D:\RAN4%23109\Docs\R4-2318449.zip) **CR on TS36.101 for simplification of LTE V2X UE coexistence in Rel-17 (Cat.A)**

*Type: CR For: Agreement  
 36.101 v17.11.0 CR-6020 rev Cat: A (Rel-17)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This is Cat. A CR of [R4-2318448](file:///D:\RAN4%23109\Docs\R4-2318448.zip). Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in Rel-17.

**Decision: Agreed.**

[**R4-2318450**](file:///D:\RAN4%23109\Docs\R4-2318450.zip) **CR on TS36.101 for simplification of LTE V2X UE co-existence in Rel-18 (Cat. A)**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6021 rev Cat: A (Rel-18)  
  
 Source: Meta Ireland, Nokia*

**Abstract:**

This CR is Cat.A CR of [R4-2318448](file:///D:\RAN4%23109\Docs\R4-2318448.zip). Based on agreed WF ([R4-2317633](file:///D:\RAN4%23109\Docs\R4-2317633.zip)), RAN4 update the UE-to-UE coexistence requirements for inter-band con-current V2X operation in Rel-18.

**Decision: Agreed.**

**Topic#3 MOP table format for 38.101-3**

[**R4-2320606**](file:///D:\RAN4%23109\Docs\R4-2320606.zip) **Discussion on the HPUE inter-band uplink EN-DC support in the MOP table**

*Type: discussion For: Discussion  
 Source: CHTTL*

**Decision: Noted.**

[**R4-2320607**](file:///D:\RAN4%23109\Docs\R4-2320607.zip) **[DC\_R16\_1BLTE\_1BNR\_2DL2UL] CR for corrections and re-structures of the MOP table for EN-DC (Rel.16)**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1091 rev Cat: F (Rel-16)  
  
 Source: CHTTL*

**Abstract:**

Note: The Change request Work Item on the coversheet is missing a comma: DC\_R16\_1BLTE\_1BNR\_2DL2UL-CoreENDC\_UE\_PC2\_TDD\_TDD-Core.

Qualcomm (Toni) flags R4-2320607. Cat A CRs are missing. Additional change in later release should have a new cat F CR together with its cat A CR(s).

**Decision: Postponed.**

[**R4-2320608**](file:///D:\RAN4%23109\Docs\R4-2320608.zip) **[DC\_R16\_1BLTE\_1BNR\_2DL2UL] CR for corrections and re-structures of the MOP table for EN-DC (Rel.17)**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1092 rev Cat: F (Rel-17)  
  
 Source: CHTTL*

**Abstract:**

Note: The CR coversheet is 17.11.1 but the latest version is 17.11.2. Also, the WI code is missing comma between WIs for CR cover value : DC\_R16\_1BLTE\_1BNR\_2DL2UL-CoreENDC\_UE\_PC2\_TDD\_TDD-CoreDC\_R17\_1BLTE\_1BNR\_2DL2UL-CoreENDC\_UE\_PC2\_R17\_NR\_TDD-Core.

**Decision: Postponed.**

[**R4-2320609**](file:///D:\RAN4%23109\Docs\R4-2320609.zip) **[DC\_R16\_1BLTE\_1BNR\_2DL2UL] CR for corrections and re-structures of the MOP table for EN-DC (Rel.18)**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1093 rev Cat: F (Rel-18)  
  
 Source: CHTTL*

**Abstract:**

Note: The CR coversheet is missing comma in WI codes: CR cover value : DC\_R16\_1BLTE\_1BNR\_2DL2UL-CoreENDC\_UE\_PC2\_TDD\_TDD-CoreDC\_R17\_1BLTE\_1BNR\_2DL2UL-CoreENDC\_UE\_PC2\_R17\_NR\_TDD-CoreDC\_R18\_1BLTE\_1BNR\_2DL2UL-CoreHPUE\_FR1\_DC\_LTE\_NR\_R18-Core.

**Decision: Postponed.**

**Topic#4: Harmonic mixing MSD**

**Topic#5: 38.307 working approaches**

**Topic#6: CRs for 38.101-1**

Fc

[**R4-2318237**](file:///D:\RAN4%23109\Docs\R4-2318237.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1812 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

Ericsson: Flag R4-2318237: FC is a reference frequency FREF on the channel raster. It is not necessarily mapped to a center [of the RF channel] with multiple numerologies.

Nokia: R4-2318237 (Hisashi) The change needs to be aligned with channel raster enhancement CR. Also agree with E/// comments about multiple numerologies.

**Decision: Revised to R4-2321940 (from R4-2318237).**

[**R4-2321940**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321940.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1812 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2318238**](file:///D:\RAN4%23109\Docs\R4-2318238.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1813 rev Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2318239**](file:///D:\RAN4%23109\Docs\R4-2318239.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1814 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2318240**](file:///D:\RAN4%23109\Docs\R4-2318240.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1815 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

UL MIMO

[**R4-2318395**](file:///D:\RAN4%23109\Docs\R4-2318395.zip) **UL MIMO Spurious emissions per UE**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1827 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

This is reverse cat A CR. No need to Cat A since all consecutive releases are allready updated.

Correction removes confusion in RAN5 since change in requirements between releases technically would need a capability but this was not the intention.

**Decision: Agreed.**

CA MPR

[**R4-2320902**](file:///D:\RAN4%23109\Docs\R4-2320902.zip) **CR for Intra-band UL CA MPR clarification**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1974 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

R4-2320902 (Petri) Is the definition of CC1 and CC2 clear enough? CC1 is lower in frequency than CC2?

vivo Mobile Communication Co. Also for R4-2320902, the New condition for outer: In contiguous CA, a non-contiguous RB allocation is a non-contiguous outer 1 RB allocation when it is not satisfying inner allocation conditions I have a question: is it possible for the outer 1 condition to have overlapping condition for inner case?

**Decision: Revised to R4-2321920 (from R4-2320902).**

[**R4-2321920**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321920.zip) **CR for Intra-band UL CA MPR clarification**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1974 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

R4-2320902 (Petri) Is the definition of CC1 and CC2 clear enough? CC1 is lower in frequency than CC2?

vivo Mobile Communication Co. Also for R4-2320902, the New condition for outer: In contiguous CA, a non-contiguous RB allocation is a non-contiguous outer 1 RB allocation when it is not satisfying inner allocation conditions I have a question: is it possible for the outer 1 condition to have overlapping condition for inner case?

**Decision: Agreed.**

[**R4-2318246**](file:///D:\RAN4%23109\Docs\R4-2318246.zip) **CR for Intra-band UL CA MPR clarification**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1817 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2318247**](file:///D:\RAN4%23109\Docs\R4-2318247.zip) **CR for Intra-band UL CA MPR clarification**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1818 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2318245**](file:///D:\RAN4%23109\Docs\R4-2318245.zip) **CR for Intra-band UL CA MPR clarification**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1816 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

[**R4-2318746**](file:///D:\RAN4%23109\Docs\R4-2318746.zip) **CR to TS38.101-1 Rel-16 CAT-F: On corrections for NR-U A-MPR requirements**

*Type: CR For: Agreement  
 38.104 v16.17.0 CR-0531 rev Cat: F (Rel-16)  
  
 Source: Apple*

Skyworks flags: R4-2318746 - Please check cover page - TS 38.104 vs 38.101-1 and WI codes.

**Decision: Not pursued.**

[**R4-2318747**](file:///D:\RAN4%23109\Docs\R4-2318747.zip) **CR to TS38.101-1 Rel-17 CAT-A: On corrections for NR-U A-MPR requirements**

*Type: CR For: Agreement  
 38.104 v17.11.0 CR-0532 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Withdrawn.**

[**R4-2318748**](file:///D:\RAN4%23109\Docs\R4-2318748.zip) **CR to TS38.101-1 Rel-18 CAT-A: On corrections for NR-U A-MPR requirements**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0533 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Withdrawn.**

[**R4-2321941**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321941.zip) **CR to TS38.101-1 Rel-16 CAT-F: On corrections for NR-U A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 vx.x.x CR-xxxx rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Not pursued.**

[**R4-2321942**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321942.zip) **CR to TS38.101-1 Rel-17 CAT-A: On corrections for NR-U A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1vx.x.x CR-xxxx rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Withdrawn.**

[**R4-2321943**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321943.zip) **CR to TS38.101-1 Rel-18 CAT-A: On corrections for NR-U A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 vx.x.x CR-xxxx rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Withdrawn.**

MSD for harmonic mixing

[**R4-2318754**](file:///D:\RAN4%23109\Docs\R4-2318754.zip) **[NR\_newRAT-Core] CR for TS 38.101-1 Rel-15: Introducing missing MSD for harmonic mixing**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1852 rev Cat: F (Rel-15)  
  
 Source: Apple*

Qualcomm Flag R4-2318754: This is good to discuss, but the existing 1UL/5DL RX mixing cases have a lot different MSD. For the smae frequency group bands, the MSD’s should b aligned

CHTTL R4-2318754 (seems like R4-2319800 proposed with different value and since like there are duplicated notes) R4-23190

Skyworks: R4-2318754 - We would like to have further discussions on how to prevent the UL RB allocation to scale with DL CBW for Rx mixing MSD test points.

**Decision: Revised to R4-2321944 (from R4-2318754).**

[**R4-2321944**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321944.zip) **[NR\_newRAT-Core] CR for TS 38.101-1 Rel-15: Introducing missing MSD for harmonic mixing**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1852 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision: Revised to R4-2321990 (from R4-2321944).**

[**R4-2321990**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321990.zip) **[NR\_newRAT-Core] CR for TS 38.101-1 Rel-15: Introducing missing MSD for harmonic mixing**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1852 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision: Revised to R4-2322002 (from R4-2321990).**

[**R4-2322002**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2322002.zip) **[NR\_newRAT-Core] CR for TS 38.101-1 Rel-15: Introducing missing MSD for harmonic mixing**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1852 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2318755**](file:///D:\RAN4%23109\Docs\R4-2318755.zip) **[NR\_newRAT-Core] CR for TS 38.101-1 Rel-16: Introducing missing MSD for harmonic mixing**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1853 rev Cat: A (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2318756**](file:///D:\RAN4%23109\Docs\R4-2318756.zip) **[NR\_newRAT-Core] CR for TS 38.101-1 Rel-17: Introducing missing MSD for harmonic mixing**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1854 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2318757**](file:///D:\RAN4%23109\Docs\R4-2318757.zip) **[NR\_newRAT-Core] CR for TS 38.101-1 Rel-18: Introducing missing MSD for harmonic mixing**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1855 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Withdrawn.**

In-band emissions for NR-U

[**R4-2318888**](file:///D:\RAN4%23109\Docs\R4-2318888.zip) **CR for Rel-16 38.101-1 to correct the general limit for in-band emissions shared spectrum channel access.**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1865 rev Cat: F (Rel-16)  
  
 Source: Xiaomi*

R4-2318888 (Ville) The justification for this CR is that PC3 and unliimited SCS was added in Rel-18 but other SCSs were there allready in previous releases, the intention of the limittations is that the requirement applies to the 15 kHz SCS and as NOTE in the table says, only to certain RIV values and certain interlaces. In addition, the CR would create a conflict since the text above says requirement is limitted. to 15 kHz in the text above.

**Decision: Not pursued.**

[**R4-2318889**](file:///D:\RAN4%23109\Docs\R4-2318889.zip) **CR for Rel-17 38.101-1 to correct the general limit for in-band emissions shared spectrum channel access.**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1866 rev Cat: A (Rel-17)  
  
 Source: Xiaomi*

**Decision: Withdrawn.**

[**R4-2318890**](file:///D:\RAN4%23109\Docs\R4-2318890.zip) **CR for Rel-18 38.101-1 to correct the general limit for in-band emissions shared spectrum channel access.**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1867 rev Cat: A (Rel-18)  
  
 Source: Xiaomi*

**Decision: Withdrawn.**

Applicability of Rx # for Rx requirements

[**R4-2319016**](file:///D:\RAN4%23109\Docs\R4-2319016.zip) **[NR\_newRAT] CR for clarification on applicability of Rx antenna number for Rx requirements for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1872 rev Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

The ambiguity issue was identified during Rel-18 8Rx discussion.

To finalize the Rel-18 8Rx CR, this CR is submitted.

Qualcomm Flag R4-2319016: More discussion is needed on the wording, the current proposal is changing the way how verification is intended to be done.

CHTTL: R4-2319016 (prefer to improve the wording, otherwise it seems like it is saying some bands are verified with 2Rx, and some band with 4Rx.)

**Decision: Revised to R4-2321897 (from R4-2319016).**

[**R4-2321897**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321897.zip) **[NR\_newRAT] CR for clarification on applicability of Rx antenna number for Rx requirements for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1872 rev Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC., CHTTL*

**Abstract:**

The ambiguity issue was identified during Rel-18 8Rx discussion.

To finalize the Rel-18 8Rx CR, this CR is submitted.

**Decision: Agreed.**

[**R4-2319017**](file:///D:\RAN4%23109\Docs\R4-2319017.zip) **[NR\_newRAT] CR for clarification on applicability of Rx antenna number for Rx requirements for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1873 rev Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

The ambiguity issue was identified during Rel-18 8Rx discussion.

To finalize the Rel-18 8Rx CR, this CR is submitted.

**Decision: Agreed.**

[**R4-2319018**](file:///D:\RAN4%23109\Docs\R4-2319018.zip) **[NR\_newRAT] CR for clarification on applicability of Rx antenna number for Rx requirements for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1874 rev Cat: A (Rel-17)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

The ambiguity issue was identified during Rel-18 8Rx discussion.

To finalize the Rel-18 8Rx CR, this CR is submitted.

**Decision: Agreed.**

[**R4-2319019**](file:///D:\RAN4%23109\Docs\R4-2319019.zip) **[NR\_newRAT] CR for clarification on applicability of Rx antenna number for Rx requirements for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1875 rev Cat: A (Rel-18)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

The ambiguity issue was identified during Rel-18 8Rx discussion.

To finalize the Rel-18 8Rx CR, this CR is submitted.

**Decision: Agreed.**

30KHz SCS for sync raster for n53

[**R4-2319166**](file:///D:\RAN4%23109\Docs\R4-2319166.zip) **Addition of 30 kHz SCS for Sync Raster for Band n53**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1878 rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

Question for clarification, is there NBC issue if add 30khz to band n53 in Rel-16 spec?

Qualcomm: R4-2319166: this should be from Rel-15. the original CR was submitted to Rel-18 but this was an oversight, the changes should be made from Rel-15. we do not see any NBC issue because nothing is yet deployed in this band

**Decision: Agreed.**

[**R4-2319167**](file:///D:\RAN4%23109\Docs\R4-2319167.zip) **Addition of 30 kHz SCS for Sync Raster for Band n53**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1879 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

PC1.5 for n41 30MHz

[**R4-2319403**](file:///D:\RAN4%23109\Docs\R4-2319403.zip) **[NR\_n41\_BW-Core] Support of PC1.5 for n41 30MHz in Japan (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1884 rev Cat: F (Rel-16)  
  
 Source: SoftBank Corp.*

**Abstract:**

The introduction of n41 NS\_47 for PC1.5 due to the changes of Japanese regulation.

**Decision: Agreed.**

[**R4-2319404**](file:///D:\RAN4%23109\Docs\R4-2319404.zip) **[NR\_n41\_BW-Core] Support of PC1.5 for n41 30MHz in Japan (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1885 rev Cat: A (Rel-17)  
  
 Source: SoftBank Corp.*

**Abstract:**

Mirror of R16

The introduction of n41 NS\_47 for PC1.5 due to the changes of Japanese regulation

**Decision: Agreed.**

[**R4-2319418**](file:///D:\RAN4%23109\Docs\R4-2319418.zip) **[NR\_n41\_BW-Core] Support of PC1.5 for n41 30MHz in Japan (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1887 rev Cat: A (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Mirror of R17

The introduction of n41 NS\_47 for PC1.5 due to the changes of Japanese regulation

**Decision: Agreed.**

Additional SEM for NS\_21

[**R4-2319451**](file:///D:\RAN4%23109\Docs\R4-2319451.zip) **[NR\_n30-Core] CR to correct the measurement BW for Additional SEM for NS\_21 - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1897 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

R4-2319452 (Ville) This CR adds emission requirements but not the AMPR as it was agreed in the WF the CR refers to. Also, this woudl mean we need a new capability since this adds new requirements to the fielded UEs. Same issue with the R17 CR R4-2319451.

Guangdong OPPO Mobile Telecom. Flag R4-2319451: For clarification, this inconsistent regulation between US and Canada has been discussed before and clarified by LS from Canadian regulations but seems no update of specs afterwards. Is there concluions of updating or not updating spec at that time?

Murata:R4-2319451 (Pushp - MMC) Additional comment to the comment of R4-2319452. Even after a re-certification (due to recall) of release 16 UE if this CR is approved, those UE will most likely PASS due to the AMPR being derived at the MPR0 calibration point which essentially amounts to worst case corner conditions.

**Decision: Not pursued.**

[**R4-2319452**](file:///D:\RAN4%23109\Docs\R4-2319452.zip) **[NR\_n30-Core] CR to add resolution BW for Additional SEM for NS\_21 - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1898 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

R4-2319452 (Ville) This CR adds emission requirements but not the AMPR as it was agreed in the WF the CR refers to. Also, this woudl mean we need a new capability since this adds new requirements to the fielded UEs. Same issue with the R17 CR R4-2319451.

R4-2319452 (Pushp - MMC) The WF states newly introduced UE should be subjected to extra backoff for the 5MHz BW which means release 17 forward. NS\_21 was introduced in release 16 for only 10MHz and those release 16 devices have already been certified. This could require an extensive re-certification or recall of release 16 devices by the network operator.

**Decision: Revised to R4-2321945 (from R4-2319452).**

[**R4-2321945**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321945.zip) **[NR\_n30-Core] CR to add resolution BW for Additional SEM for NS\_21 - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1898 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2319453**](file:///D:\RAN4%23109\Docs\R4-2319453.zip) **[NR\_n30-Core] CR to add resolution BW for Additional SEM for NS\_21 - TS38.101-1, Rel-18, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1899 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

PC3

[**R4-2319454**](file:///D:\RAN4%23109\Docs\R4-2319454.zip) **[NR\_newRAT-Core] CR to remove the word capable in power class 3 capable UE - TS38.101-1, Rel-15, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1900 rev Cat: F (Rel-15)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2319455**](file:///D:\RAN4%23109\Docs\R4-2319455.zip) **[NR\_newRAT-Core] CR to remove the word capable in power class 3 capable UE - TS38.101-1, Rel-16, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1901 rev Cat: A (Rel-16)  
  
 Source: Anritsu Limited*

**Decision: Revised to R4-2321900 (from R4-2319455).**

[**R4-2321900**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321900.zip) **[NR\_newRAT-Core] CR to remove the word capable in power class 3 capable UE - TS38.101-1, Rel-16, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1901 rev Cat: A (Rel-16)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2319456**](file:///D:\RAN4%23109\Docs\R4-2319456.zip) **[NR\_newRAT-Core] CR to remove the word capable in power class 3 capable UE - TS38.101-1, Rel-17, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1902 rev Cat: A (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2319457**](file:///D:\RAN4%23109\Docs\R4-2319457.zip) **[NR\_newRAT-Core] CR to remove the word capable in power class 3 capable UE - TS38.101-1, Rel-18, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1903 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

RMS average for EVM measurement with transient period

[**R4-2319458**](file:///D:\RAN4%23109\Docs\R4-2319458.zip) **[NR\_RF\_FR1-Core] CR concerning the RMS average used in EVM measurement with transient period - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1904 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

– QUALCOMM JAPAN LLC. R4-2319458: we do not think the first change is needed, the text is clear enough. if there really is an ambiguity, wording should be different. Maybe we can say something like: The RMS average of the basic EVM measurements over 108 subframes for the calculated only on the symbols where the transient occurs

Skyworks: R4-2319458 - We believe this CR is not needed. The reference measurement channel and the conformance test is intended to be FDD/TDD and frequency band agnostic as explained at RAN4 in R4-2300034 and at RAN5 in R5-230058. The intention of NR EVM with transient is to maximize commonality with LTE EVM with transients where a common OFF–>ON –> ON –> OFF –>ON –> ON –> OFF test pattern applies to both TDD and FDD bands,

**Decision: Revised to R4-2321946 (from R4-2319458).**

[**R4-2321946**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321946.zip) **[NR\_RF\_FR1-Core] CR concerning the RMS average used in EVM measurement with transient period - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1904 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2319459**](file:///D:\RAN4%23109\Docs\R4-2319459.zip) **[NR\_RF\_FR1-Core] CR concerning the RMS average used in EVM measurement with transient period - TS38.101-1, Rel-17, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1905 rev Cat: A (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2319460**](file:///D:\RAN4%23109\Docs\R4-2319460.zip) **[NR\_RF\_FR1-Core] CR concerning the RMS average used in EVM measurement with transient period - TS38.101-1, Rel-18, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1906 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

A-MPR

[**R4-2319597**](file:///D:\RAN4%23109\Docs\R4-2319597.zip) **[NR\_n38\_BW2] Clarify A-MPR values for NS\_44 - Rel16**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1911 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This CR is just changing the font color of agreed A-MPR values, they are currently not visible (white font)

**Decision: Agreed.**

[**R4-2319598**](file:///D:\RAN4%23109\Docs\R4-2319598.zip) **[NR\_n38\_BW2] Clarify A-MPR values for NS\_44 - Rel17**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1912 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR is just changing the font color of agreed A-MPR values, they are currently not visible (white font)

**Decision: Agreed.**

[**R4-2319599**](file:///D:\RAN4%23109\Docs\R4-2319599.zip) **[NR\_n38\_BW2] Clarify A-MPR values for NS\_44 - Rel18**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1913 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This CR is just changing the font color of agreed A-MPR values, they are currently not visible (white font)

**Decision: Agreed.**

Inter-band NR DC

[**R4-2319605**](file:///D:\RAN4%23109\Docs\R4-2319605.zip) **[NR\_CADC\_R16\_2BDL\_xBUL] CR for TS 38.101-1 to correct inter-band NR DC configuration table (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1915 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319606**](file:///D:\RAN4%23109\Docs\R4-2319606.zip) **[NR\_CADC\_R16\_2BDL\_xBUL] CR for TS 38.101-1 to correct inter-band NR DC configuration table (R17\_CAT A)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1916 rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319607**](file:///D:\RAN4%23109\Docs\R4-2319607.zip) **[NR\_CADC\_R16\_2BDL\_xBUL] CR for TS 38.101-1 to correct inter-band NR DC configuration table (R18\_CAT A)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1917 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

Additional UTRA ACLR requirements

[**R4-2319869**](file:///D:\RAN4%23109\Docs\R4-2319869.zip) **[NR\_newRAT-Core] CR for 38.101-1 to clarify the applicable bands for additional UTRA ACLR requirements. (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1926 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

vivo flags R4-2319869 and R4-2319870. The CR contents do not cover the part in the coverpage, and the statements that UTRAACLR is not applicable in some bands were not removed in the CR as proposed in the coverpage.

Also for R4-2319869 and R4-2319870. We would like to clarify what is the plan for LTE spec? Currently only NR is covered.

Qualcomm (Toni) flags R4-2319869, it is sufficient to keep only the very last part of the modified text: ”UTRA ACLR requirement is applicable when the network signalling value NS\_03U, NS\_05U, NS\_43U or NS\_100 is indicated in the field additionalSpectrumEmission.

**Decision: Revised to R4-2321898 (from R4-2319869).**

[**R4-2321898**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321898.zip) **[NR\_newRAT-Core] CR for 38.101-1 to clarify the applicable bands for additional UTRA ACLR requirements. (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1926 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319870**](file:///D:\RAN4%23109\Docs\R4-2319870.zip) **[NR\_newRAT-Core] CR for 38.101-1 to clarify the applicable bands for additional UTRA ACLR requirements. (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1927 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

vivo flags R4-2319869 and R4-2319870. The CR contents do not cover the part in the coverpage, and the statements that UTRAACLR is not applicable in some bands were not removed in the CR as proposed in the coverpage.

Also for R4-2319869 and R4-2319870. We would like to clarify what is the plan for LTE spec? Currently only NR is covered.

Guangdong OPPO Mobile Telecom. Flag R4-2319870, should be CAT-F.

**Decision: Revised to R4-2321899 (from R4-2319870).**

[**R4-2321899**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321899.zip) **[NR\_newRAT-Core] CR for 38.101-1 to clarify the applicable bands for additional UTRA ACLR requirements. (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1927 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319871**](file:///D:\RAN4%23109\Docs\R4-2319871.zip) **[NR\_newRAT-Core] CR for 38.101-1 to clarify the applicable bands for additional UTRA ACLR requirements. (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1928 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319872**](file:///D:\RAN4%23109\Docs\R4-2319872.zip) **[NR\_newRAT-Core] CR for 38.101-1 to clarify the applicable bands for additional UTRA ACLR requirements. (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1929 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

P-MPR

[**R4-2320096**](file:///D:\RAN4%23109\Docs\R4-2320096.zip) **[NR\_RF\_FR1\_enh-Core] Correct the P-MPRc terms in the Pcmax equation for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1942 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

Qualcomm R4-2320096 (Ville) P-MPR = P-MPR\_C in the text so it is clear that there is only one P-MPR. But the since the pcmax formula is for cell, the the P-MPR should cell specific P-MPR.

CHTTL R4-2320096, R4-2320097 since like no need to change, as P-MPRc = P-MPR?

**Decision: Revised to R4-2321902 (from R4-2320096).**

[**R4-2321902**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321902.zip) **[NR\_RF\_FR1\_enh-Core] Correct the P-MPRc terms in the Pcmax equation for intra-band contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1942 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

Qualcomm R4-2320096 (Ville) P-MPR = P-MPR\_C in the text so it is clear that there is only one P-MPR. But the since the pcmax formula is for cell, the the P-MPR should cell specific P-MPR.

CHTTL R4-2320096, R4-2320097 since like no need to change, as P-MPRc = P-MPR?

**Decision: Postponed.**

[**R4-2320097**](file:///D:\RAN4%23109\Docs\R4-2320097.zip) **[NR\_RF\_FR1\_enh-Core] Correct the P-MPRc and MPRc terms in the Pcmax equation for intra-band CA**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1943 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

R4-2320097 same as above. Not sure why this is Cat-F CR.

**Decision: Revised to R4-2321903 (from R4-2320097).**

[**R4-2321903**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321903.zip) **[NR\_RF\_FR1\_enh-Core] Correct the P-MPRc and MPRc terms in the Pcmax equation for intra-band CA**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1943 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

R4-2320097 same as above. Not sure why this is Cat-F CR.

**Decision: Postponed.**

[**R4-2320098**](file:///D:\RAN4%23109\Docs\R4-2320098.zip) **[NR\_RF\_FR1\_enh-Core] Correct the P-MPRc and MPRc terms in the Pcmax equation for intra-band CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1944 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

FRC correction

[**R4-2320628**](file:///D:\RAN4%23109\Docs\R4-2320628.zip) **[NR\_newRAT] CR to 38.101-1 on FRC correction**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1956 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2320629**](file:///D:\RAN4%23109\Docs\R4-2320629.zip) **[NR\_newRAT] CR to 38.101-1 on FRC correction**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1957 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2320630**](file:///D:\RAN4%23109\Docs\R4-2320630.zip) **[NR\_newRAT] CR to 38.101-1 on FRC correction**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1958 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2320631**](file:///D:\RAN4%23109\Docs\R4-2320631.zip) **[NR\_newRAT] CR to 38.101-1 on FRC correction**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1959 rev Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

UE co-existence

[**R4-2320974**](file:///D:\RAN4%23109\Docs\R4-2320974.zip) **CR to TS 38.101-1 Rel-16 Corrections to UE co-existence requirements**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1975 rev Cat: F (Rel-16)  
  
 Source: Skyworks Solutions, Inc., Nokia*

**Decision: Agreed.**

[**R4-2320976**](file:///D:\RAN4%23109\Docs\R4-2320976.zip) **CR to TS 38.101-1 Rel-17 Corrections to UE co-existence requirements**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1976 rev Cat: A (Rel-17)  
  
 Source: Skyworks Solutions, Inc., Nokia*

**Abstract:**

Mirror CR

**Decision: Agreed.**

[**R4-2321949**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321949.zip) **CR to TS 38.101-1 Rel-17 Corrections to UE co-existence requirements**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1976 rev Cat: A (Rel-17)  
  
 Source: Skyworks Solutions, Inc., Nokia*

**Abstract:**

Mirror CR

**Decision: Withdrawn.**

[**R4-2320977**](file:///D:\RAN4%23109\Docs\R4-2320977.zip) **CR to TS 38.101-1 Rel-18 Corrections to UE co-existence requirements**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1977 rev Cat: A (Rel-18)  
  
 Source: Skyworks Solutions, Inc., Nokia*

**Abstract:**

Mirror CR

**Decision: Agreed.**

SRS

[**R4-2320884**](file:///D:\RAN4%23109\Docs\R4-2320884.zip) **Correction of ?T\_RxSRS for SRS resource set consisting of two SRS ports**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1969 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

Nokia flags R4-2320884 (HU), R4-2320902 (Petri) Is the definition of CC1 and CC2 clear enough? CC1 is lower in frequency than CC2?

**Decision: Agreed.**

[**R4-2320885**](file:///D:\RAN4%23109\Docs\R4-2320885.zip) **Correction of ?T\_RxSRS for SRS resource set consisting of two SRS ports**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1970 rev Cat: A (Rel-16)  
  
 Source: Ericsson India Private Limited*

**Decision: Agreed.**

[**R4-2320886**](file:///D:\RAN4%23109\Docs\R4-2320886.zip) **Correction of ?T\_RxSRS for SRS resource set consisting of two SRS ports**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1971 rev Cat: A (Rel-17)  
  
 Source: Ericsson India Private Limited*

**Decision: Agreed.**

[**R4-2320887**](file:///D:\RAN4%23109\Docs\R4-2320887.zip) **Correction of ?T\_RxSRS for SRS resource set consisting of two SRS ports**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1972 rev Cat: A (Rel-18)  
  
 Source: Ericsson India Private Limited*

**Decision: Agreed.**

**Topic#7: CRs for 38.101-2**

Fc

[**R4-2318241**](file:///D:\RAN4%23109\Docs\R4-2318241.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-2 v15.23.0 CR-0660 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

*Nokia:* R4-2318241

**Decision: Revised to R4-2321987 (from R4-2318241).**

[**R4-2321987**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321987.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-2 v15.23.0 CR-0660 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

*Nokia:* R4-2318241

**Decision: Agreed.**

[**R4-2318242**](file:///D:\RAN4%23109\Docs\R4-2318242.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-2 v16.17.0 CR-0661 rev Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2318243**](file:///D:\RAN4%23109\Docs\R4-2318243.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-2 v17.11.0 CR-0662 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2318244**](file:///D:\RAN4%23109\Docs\R4-2318244.zip) **Fc terminology update**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0663 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

Spectrum emission

[**R4-2318880**](file:///D:\RAN4%23109\Docs\R4-2318880.zip) **CR for Rel-15 38.101-2 to correct some errors in the clause of the spectrum emission mask for CA.**

*Type: CR For: Agreement  
 38.101-2 v15.23.0 CR-0667 rev Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Decision: Agreed.**

[**R4-2318881**](file:///D:\RAN4%23109\Docs\R4-2318881.zip) **CR for Rel-16 38.101-2 to correct some errors in the clause of the spectrum emission mask for CA.**

*Type: CR For: Agreement  
 38.101-2 v16.17.0 CR-0668 rev Cat: F (Rel-16)  
  
 Source: Xiaomi*

**Decision: Agreed.**

[**R4-2318882**](file:///D:\RAN4%23109\Docs\R4-2318882.zip) **CR for Rel-17 38.101-2 to correct some errors in the clause of the spectrum emission mask for CA.**

*Type: CR For: Agreement  
 38.101-2 v17.11.0 CR-0669 rev Cat: A (Rel-17)  
  
 Source: Xiaomi*

**Decision: Agreed.**

[**R4-2318883**](file:///D:\RAN4%23109\Docs\R4-2318883.zip) **CR for Rel-18 38.101-2 to correct some errors in the clause of the spectrum emission mask for CA.**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0670 rev Cat: A (Rel-18)  
  
 Source: Xiaomi*

**Decision: Agreed.**

Missed sub-clause 6.5A.2.2 as void

[**R4-2318884**](file:///D:\RAN4%23109\Docs\R4-2318884.zip) **CR for Rel-15 38.101-2 to introduce the missed sub-clause 6.5A.2.2 as void**

*Type: CR For: Agreement  
 38.101-2 v15.23.0 CR-0671 rev Cat: F (Rel-15)  
  
 Source: Xiaomi*

**Decision: Agreed.**

[**R4-2318885**](file:///D:\RAN4%23109\Docs\R4-2318885.zip) **CR for Rel-16 38.101-2 to introduce the missed sub-clause 6.5A.2.2 as void**

*Type: CR For: Agreement  
 38.101-2 v16.17.0 CR-0672 rev Cat: A (Rel-16)  
  
 Source: Xiaomi*

**Decision: Agreed.**

[**R4-2318886**](file:///D:\RAN4%23109\Docs\R4-2318886.zip) **CR for Rel-17 38.101-2 to introduce the missed sub-clause 6.5A.2.2 as void**

*Type: CR For: Agreement  
 38.101-2 v17.11.0 CR-0673 rev Cat: A (Rel-17)  
  
 Source: Xiaomi*

**Decision: Agreed.**

[**R4-2318887**](file:///D:\RAN4%23109\Docs\R4-2318887.zip) **CR for Rel-18 38.101-2 to introduce the missed sub-clause 6.5A.2.2 as void**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0674 rev Cat: A (Rel-18)  
  
 Source: Xiaomi*

**Decision: Agreed.**

EIS

[**R4-2318990**](file:///D:\RAN4%23109\Docs\R4-2318990.zip) **CR to 38.101-2 on adding missing definition of EIS spherical coverage link angle(Rel-15)**

*Type: CR For: Agreement  
 38.101-2 v15.23.0 CR-0675 rev Cat: F (Rel-15)  
  
 Source: vivo*

CHTTL: R4-2318990 Meas=Link angle

**Decision: Agreed.**

[**R4-2318991**](file:///D:\RAN4%23109\Docs\R4-2318991.zip) **CR to 38.101-2 on adding missing definition of EIS spherical coverage link angle(Rel-16)**

*Type: CR For: Agreement  
 38.101-2 v16.17.0 CR-0676 rev Cat: A (Rel-16)  
  
 Source: vivo*

**Decision: Agreed.**

[**R4-2318992**](file:///D:\RAN4%23109\Docs\R4-2318992.zip) **CR to 38.101-2 on adding missing definition of EIS spherical coverage link angle(Rel-17)**

*Type: CR For: Agreement  
 38.101-2 v17.11.0 CR-0677 rev Cat: A (Rel-17)  
  
 Source: vivo*

**Decision: Agreed.**

[**R4-2318993**](file:///D:\RAN4%23109\Docs\R4-2318993.zip) **CR to 38.101-2 on adding missing definition of EIS spherical coverage link angle(Rel-18)**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0678 rev Cat: A (Rel-18)  
  
 Source: vivo*

**Decision: Agreed.**

Interlaced channel bandwidth

[**R4-2319424**](file:///D:\RAN4%23109\Docs\R4-2319424.zip) **[NR\_RF\_FR2\_req\_enh] Removal of interlaced channel bandwidths for CA BW class fallback groups 1-4**

*Type: CR For: Agreement  
 38.101-2 v16.17.0 CR-0681 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce a restriction on interlaced channel bandwidths

Nokia flags R4-2319424 (Johannes)Can the proponent please explain the implications to NR-U wideband operation and how they define ”blocks of spectrum” since this is not clear as of now.”

CHTTL flags R4-2319424 maybe the description covers 50, 50, 100, 100, but not 50, 100, 100, 100 if my understanding is correct, so maybe need to add a single carrier, for example: each with “a single carrier” or contiguous component carriers of a single channel bandwidth.

**Decision: Revised to R4-2321947 (from R4-2319424).**

[**R4-2321947**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321947.zip) **[NR\_RF\_FR2\_req\_enh] Removal of interlaced channel bandwidths for CA BW class fallback groups 1-4**

*Type: CR For: Agreement  
 38.101-2 v16.17.0 CR-0681 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

**Decision: Agreed.**

[**R4-2319425**](file:///D:\RAN4%23109\Docs\R4-2319425.zip) **[NR\_RF\_FR2\_req\_enh] Removal of interlaced channel bandwidths for CA BW class fallback groups 1-4**

*Type: CR For: Agreement  
 38.101-2 v17.11.0 CR-0682 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce a restriction on interlaced channel bandwidths

**Decision: Revised to R4-2321999 (from R4-2319425).**

[**R4-2321999**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321999.zip) **[NR\_RF\_FR2\_req\_enh] Removal of interlaced channel bandwidths for CA BW class fallback groups 1-4**

*Type: CR For: Agreement  
 38.101-2 v17.11.0 CR-0682 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce a restriction on interlaced channel bandwidths

**Decision: Agreed.**

[**R4-2319426**](file:///D:\RAN4%23109\Docs\R4-2319426.zip) **[NR\_RF\_FR2\_req\_enh] Removal of interlaced channel bandwidths for CA BW class fallback groups 1-4**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0683 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to introduce a restriction on interlaced channel bandwidths

**Decision: Agreed.**

**Topic#8: CRs for 38.101-3**

6.5B.3.3.2

[**R4-2318470**](file:///D:\RAN4%23109\Docs\R4-2318470.zip) **[NR\_newRAT-Core] Correction to 6.5B.3.3.2 (Rel-15)**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1042 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

No Cat-A CR needed.

**Decision: Agreed.**

FR2 testing with NR-DC and NR-CA

[**R4-2318825**](file:///D:\RAN4%23109\Docs\R4-2318825.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1053 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2322000 (from R4-2318825).**

[**R4-2322000**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2322000.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1053 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

[**R4-2322009**](ftp://10.10.10.10/ftp/tsg_ran/WG4_Radio/TSGR4_109/Inbox/R4-2322009.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1053 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

[**R4-2318826**](file:///D:\RAN4%23109\Docs\R4-2318826.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1861 rev Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

[**R4-2322006**](ftp://10.10.10.10/ftp/tsg_ran/WG4_Radio/TSGR4_109/Inbox/R4-2322006.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1861 rev Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

[**R4-2318827**](file:///D:\RAN4%23109\Docs\R4-2318827.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1862 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

[**R4-2322007**](ftp://10.10.10.10/ftp/tsg_ran/WG4_Radio/TSGR4_109/Inbox/R4-2322007.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1862 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

[**R4-2318828**](file:///D:\RAN4%23109\Docs\R4-2318828.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1863 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

[**R4-2322008**](ftp://10.10.10.10/ftp/tsg_ran/WG4_Radio/TSGR4_109/Inbox/R4-2322008.zip) **[NR\_newRAT-Core] Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1863 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

[**R4-2318829**](file:///D:\RAN4%23109\Docs\R4-2318829.zip) **[NR\_newRAT-Core] Clarifications for FR5 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1864 rev Cat: A (Rel-19)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Note: This CR need to be withdrawn as it is a maintenance CR with Rel-19 which does not exist.

**Decision: Withdrawn.**

CA\_n28A-n78A

[**R4-2318753**](file:///D:\RAN4%23109\Docs\R4-2318753.zip) **[NR\_newRAT-Core] MSD analysis for CA\_n28A-n78A**

*Type: other For: Approval*  *Source: Apple*

Skyworks: R4-2318753 - May need off-line discussions to review the RFFE assumptions.

**Decision: Noted.**

Non-collocated

[**R4-2319412**](file:///D:\RAN4%23109\Docs\R4-2319412.zip) **Rel16 Cat F CR for 38.101-3 Correct the clause indication for non-collocated deployment**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1056 rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Agreed.**

[**R4-2319413**](file:///D:\RAN4%23109\Docs\R4-2319413.zip) **Rel17 Cat F CR for 38.101-3 Correct the clause indication and the typo for non-collocated deployment**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1057 rev Cat: F (Rel-17)  
  
 Source: Samsung*

**Abstract:**

Note: The current version of Rel-17 version of specification is 17.11.2, but the CR coversheet has 17.11.0 as the version.

**Decision: Revised to R4-2321988 (from R4-2319413).**

[**R4-2321988**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321988.zip) **Rel17 Cat F CR for 38.101-3 Correct the clause indication and the typo for non-collocated deployment**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1057 rev Cat: F (Rel-17)  
  
 Source: Samsung*

**Abstract:**

Note: The current version of Rel-17 version of specification is 17.11.2, but the CR coversheet has 17.11.0 as the version.

**Decision: Agreed.**

Simultaneous Rx-Tx

[**R4-2319762**](file:///D:\RAN4%23109\Docs\R4-2319762.zip) **Rel15 Cat F CR for 38.101-3 Add a general note to each configuration tables to alleviate the issue of missing mandatory simultaneous RxTx note**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1068 rev Cat: F (Rel-15)  
  
 Source: Samsung, CHTTL*

Nokia flags R4-2319762 (Johannes) This needs to be discussed together with the documents submitted under AI 7.27.2 R4-2319877 (Petri) New note says UE that has 3300 ~ 4200 MHz filter implementation. This is impossible to detect.

R4-2319762 (Ville) This exact issue seems to be allready captured in the section heading: ”If the mandatory simultaneous Rx/Tx capability applies for a lower order DC configuration, when the applicable lower order DC configuration is a band pair in a higher order DC configuration, the mandatory simultaneous Rx/Tx capability also applies for the band pair in the higher order DC configuration.” So this note is not needed, In addition for future, the propose note language is very confusing, ”mandatory simultaneous Rx/Tx capability is applied”, it is not very clear how are capabilities applied? The difference to the section heading is that heading refers UE that has ”capability for the simultaneousn Rx/Tx ” but not the capability indication itself. Better wording would be ”if UE is mandated to support simultaneous Rx/Tx for EN-DC configuration”.

Huawei(Danica) flags R4-2319762: The Note clarification in each table is not necessary. DC\_XC\_nYA is the high order DC configuration to DC\_XA\_nYA with one more carrier in band X.

Guangdong OPPO Mobile Telecom. Flag R4-2319762, seems be covered by current spec already for the low order/high order issue

Skyworks Solutions Inc. Skyworks flags: R4-2319762- There are ongoing discussions on handling of footnotes for simultaneous Rx/Tx in other agenda items this week.

**Decision: Not pursued.**

[**R4-2319763**](file:///D:\RAN4%23109\Docs\R4-2319763.zip) **Rel16 Cat A CR for 38.101-3 Add a general note to each configuration tables to alleviate the issue of missing mandatory simultaneous RxTx note**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1069 rev Cat: A (Rel-16)  
  
 Source: Samsung, CHTTL*

**Decision: Withdrawn.**

[**R4-2319764**](file:///D:\RAN4%23109\Docs\R4-2319764.zip) **Rel17 Cat A CR for 38.101-3 Add a general note to each configuration tables to alleviate the issue of missing mandatory simultaneous RxTx note**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1070 rev Cat: A (Rel-17)  
  
 Source: Samsung, CHTTL*

**Decision: Withdrawn.**

[**R4-2319765**](file:///D:\RAN4%23109\Docs\R4-2319765.zip) **Rel18 Cat A CR for 38.101-3 Add a general note to each configuration tables to alleviate the issue of missing mandatory simultaneous RxTx note**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1071 rev Cat: A (Rel-18)  
  
 Source: Samsung, CHTTL*

**Decision: Withdrawn.**

[**R4-2319877**](file:///D:\RAN4%23109\Docs\R4-2319877.zip) **[NR\_newRAT-Core] CR for 38.101-3 to improve the wordings of the note 15 on simulataneous Rx/Tx capability for Band 42 and n77 (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1076 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

Qualcomm: R4-2319877: CR contains explicit frequencies that a UE filter should support, specifications should not contain such statements. Such CRs should not be presented. Even if this would be in the specifications, how would one know what filter the UE is using?

Samsung(Tina) flag R4-2319877(Huawei): Is the title incorrect? band 42 and n79?

Nokia flags R4-2319762 (Johannes) This needs to be discussed together with the documents submitted under AI 7.27.2 R4-2319877 (Petri) New note says UE that has 3300 ~ 4200 MHz filter implementation. This is impossible to detect.

CHTTL flag R4-2319877 Similar question as Nokia.

**Decision: Not pursued.**

[**R4-2319878**](file:///D:\RAN4%23109\Docs\R4-2319878.zip) **[NR\_newRAT-Core] CR for 38.101-3 to improve the wordings of the note 15 on simulataneous Rx/Tx capability for Band 42 and n77 (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1077 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2319879**](file:///D:\RAN4%23109\Docs\R4-2319879.zip) **[NR\_newRAT-Core] CR for 38.101-3 to improve the wordings of the note 15 on simulataneous Rx/Tx capability for Band 42 and n77 (R17)**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1078 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2319880**](file:///D:\RAN4%23109\Docs\R4-2319880.zip) **[NR\_newRAT-Core] CR for 38.101-3 to improve the wordings of the note 15 on simulataneous Rx/Tx capability for Band 42 and n77 (R18)**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1079 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

EN-DC MOP

[**R4-2320605**](file:///D:\RAN4%23109\Docs\R4-2320605.zip) **Discussion on the HPUE inter-band uplink EN-DC support in the MOP table**

*Type: discussion For: Discussion  
 Source: CHTTL*

*Not available.*

**Decision: Noted.**

**38.307 CRs**

[**R4-2320090**](file:///D:\RAN4%23109\Docs\R4-2320090.zip) **[NR\_newRAT-Core] Common UE RF requirements for 4Rx**

*Type: CR For: Agreement  
 38.307 v16.14.0 CR-0137 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2320091**](file:///D:\RAN4%23109\Docs\R4-2320091.zip) **[NR\_newRAT-Core] Common UE RF requirements for 4Rx**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0138 rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**Treat** [**R4-2319864**](file:///D:\RAN4%23109\Docs\R4-2319864.zip)**,** [**R4-2319865**](file:///D:\RAN4%23109\Docs\R4-2319865.zip)**,** [**R4-2319866**](file:///D:\RAN4%23109\Docs\R4-2319866.zip)**,** [**R4-2319867**](file:///D:\RAN4%23109\Docs\R4-2319867.zip)**,** [**R4-2319868**](file:///D:\RAN4%23109\Docs\R4-2319868.zip) **in [123].**

[**R4-2319864**](file:///D:\RAN4%23109\Docs\R4-2319864.zip) **[NR\_newRAT-Core] Discussion on how to specify the MSD due to harmonic mixing issue**

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

**Decision: Noted.**

[**R4-2319865**](file:///D:\RAN4%23109\Docs\R4-2319865.zip) **[NR\_newRAT-Core] CR for 38.101-3 to maintain the new table format for MSD due to harmonic mixing issue (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1072 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

*Skyworks: need agree rule first.*

*Qualcomm: we cannot complete the work in this meeting.*

**Decision: Not pursued.**

[**R4-2321948**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321948.zip) **[NR\_newRAT-Core] CR for 38.101-3 to maintain the new table format for MSD due to harmonic mixing issue (R15)**

*Type: CR For: Agreement  
 38.101-3 v15.23.0 CR-1072 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2319866**](file:///D:\RAN4%23109\Docs\R4-2319866.zip) **[NR\_newRAT-Core] CR for 38.101-3 to maintain the new table format for MSD due to harmonic mixing issue (R16)**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1073 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2319867**](file:///D:\RAN4%23109\Docs\R4-2319867.zip) **[NR\_newRAT-Core] CR for 38.101-3 to maintain the new table format for MSD due to harmonic mixing issue (R17)**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1074 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2319868**](file:///D:\RAN4%23109\Docs\R4-2319868.zip) **[NR\_newRAT-Core] CR for 38.101-3 to maintain the new table format for MSD due to harmonic mixing issue (R18)**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1075 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**Withdrawn**

[**R4-2318510**](file:///D:\RAN4%23109\Docs\R4-2318510.zip) **CR to 38.101-1 on FRC correction\_rel15\_23\_0**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1836 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318511**](file:///D:\RAN4%23109\Docs\R4-2318511.zip) **CR to 38.101-1 on FRC correction\_rel16\_17\_0**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1837 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318512**](file:///D:\RAN4%23109\Docs\R4-2318512.zip) **CR to 38.101-1 on FRC correction\_rel17\_11\_0**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1838 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318513**](file:///D:\RAN4%23109\Docs\R4-2318513.zip) **CR to 38.101-1 on FRC correction\_rel18\_3\_0**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1839 rev Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318524**](file:///D:\RAN4%23109\Docs\R4-2318524.zip) **CR for 38.101-3 UE to UE coex R17**

*Type: CR For: Agreement  
 38.101-3 v17.11.0 CR-1044 rev Cat: A (Rel-17)  
  
 Source: Nokia*

**Abstract:**

Note: The version of Rel-17 have updated to 17.11.2.

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

[**R4-2318544**](file:///D:\RAN4%23109\Docs\R4-2318544.zip) **CR to 38.101-1 on FRC deletion for 5MHz 30 KHz rel15\_23\_0**

*Type: CR For: Agreement  
 38.101-1 v15.23.0 CR-1846 rev Cat: F (Rel-15)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318545**](file:///D:\RAN4%23109\Docs\R4-2318545.zip) **CR to 38.101-1 on FRC deletion for 5MHz 30 KHz rel16\_17\_0**

*Type: CR For: Agreement  
 38.101-1 v16.17.0 CR-1847 rev Cat: A (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318546**](file:///D:\RAN4%23109\Docs\R4-2318546.zip) **CR to 38.101-1 on FRC deletion for 5MHz 30 KHz rel17\_11\_0**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1848 rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318547**](file:///D:\RAN4%23109\Docs\R4-2318547.zip) **CR to 38.101-1 on FRC deletion for 5MHz 30 KHz rel18\_3\_0**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1849 rev Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2318548**](file:///D:\RAN4%23109\Docs\R4-2318548.zip) **FRCs for 5MHz channel bandwidth in 30 KHz SCS**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: ()  
  
 Source: Nokia, Nokia Shanghai Bell*

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

### 4.2 BS RF requirements and BS conformance testing

### 4.3 UE/BS EMC requirements

### 4.4 RRM requirements

### 4.5 Demodulation and CSI requirements

### 4.6 OTA and TRP/TRS test aspects

### 4.7 Rel-15/16 TEI

### 4.8 Moderator summary and conclusions (for Agenda 4)

[**R4-2318107**](file:///D:\RAN4%23109\Docs\R4-2318107.zip) **Topic summary for [109][101] Upto\_R16\_UERF\_maintenance**

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

**Abstract:**

[109][100] Main Session AI 4.1, 4.7

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

## 5 Rel-17 maintenance for LTE and NR

**Guidance for maintenance agendas (AI 4, AI 5 and AI 6)**

The following guidance are provided for AI 4, AI5 and AI6:

- For maintenance agenda AI 4 (up to Rel-16), AI 5 (Rel-17) and AI 6 (Rel-18), formal CRs are expected and multiple formal CRs per company in the lowest agenda are allowed. For tracking the changes easily, it expected that one batch of CRs (Cat-F/A/…) will just cover a single topic/WI rather than multiple topics/WIs and Cat-F CR with corresponding Cat-A CRs needs be submitted under the same agenda.

- When submitting contributions to AI 4, AI 5 and AI 6, please add [WI\_code] in the beginning of titles for both discussion files and CRs to facilitate moderators and session chairs handling.

- When reserving the tdoc number, please use the correct WI code rather than simply using TEI and fill the column of “Related WIs” in your reservation spreadsheet. If you submit a CR with TEI as WI code, please inform session chair.

### 5.1 Rel-17 spectrum related WI maintenance

#### 5.1.1 Bands introduced in Rel-17 and related requirements

[**R4-2318742**](file:///D:\RAN4%23109\Docs\R4-2318742.zip) **Removing 20MHz channel raster points for 5925-5945MHz in the lower 6GHz bands**

*Type: CR For: Agreement  
 38.104 v17.11.0 CR-0529 rev Cat: F (Rel-17)  
  
 Source: Apple, Nokia*

**Abstract:**

Note: The CR coversheet does not have CR number 0529 on coversheet. Also, the WI code on CR coversheet have an extra space NR\_6GHz\_unlic\_EU -Core.

Huawei Michal flags R4-2318742: mode detailed offline clarification needed on the source of the Rel-17 introduction of that raster point (ok to mark Return to)

**Decision: Agreed.**

[**R4-2321019**](file:///D:\RAN4%23109\Docs\R4-2321019.zip) **Removing 20MHz channel raster points for 5925-5945MHz in the lower 6GHz bands**

*Type: CR For: Agreement  
 38.104 v17.11.0 CR-0548 rev Cat: F (Rel-17)  
  
 Source: Apple Inc., Nokia*

**Decision: Agreed.**

[**R4-2319449**](file:///D:\RAN4%23109\Docs\R4-2319449.zip) **[NR\_n13-Core] CR to correct typo for RBstart used in A-MPR regions for NS\_07 - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1895 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Not pursued.**

[**R4-2319450**](file:///D:\RAN4%23109\Docs\R4-2319450.zip) **[NR\_n13-Core] CR to correct typo for RBstart used in A-MPR regions for NS\_07 - TS38.101-1, Rel-18, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1896 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Withdrawn.**

[**R4-2319511**](file:///D:\RAN4%23109\Docs\R4-2319511.zip) **[DC\_R17\_2BLTE\_1BNR\_3DL2UL] CR for 38.101-3:Removal of wrong UL configuration for DC\_3A-32A\_n78(2A),Rel-17**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1059 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Note: Revision number in CR coversheet for TDoc [R4-2319511](file:///D:\RAN4%23109\Docs\R4-2319511.zip) is <Rev#>.

**Decision: Agreed.**

[**R4-2319512**](file:///D:\RAN4%23109\Docs\R4-2319512.zip) **[DC\_R17\_2BLTE\_1BNR\_3DL2UL] CR for 38.101-3: Removal of wrong UL configuration for DC\_3A-32A\_n78(2A), Rel-18**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1060 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319513**](file:///D:\RAN4%23109\Docs\R4-2319513.zip) **[DC\_R17\_3BLTE\_1BNR\_4DL2UL] CR for 38.101-3: Correction on the delta\_T/R for DC\_1-7-32\_n78, Rel-17**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1061 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319514**](file:///D:\RAN4%23109\Docs\R4-2319514.zip) **[DC\_R17\_3BLTE\_1BNR\_4DL2UL] CR for 38.101-3: Correction on the delta\_T/R for DC\_1-7-32\_n78, Rel-18**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1062 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2320274**](file:///D:\RAN4%23109\Docs\R4-2320274.zip) **[NR\_CADC\_R17\_3BDL\_2BUL-Core] CR for 38.101-01 to add missing IMD5 for CA\_n48-n66-n70 with UL CA\_n48-n66 (Rel-17, Cat. F)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1950 rev Cat: F (Rel-17)  
  
 Source: DISH Network, Samsung, Fujitsu, Qualcomm*

**Abstract:**

Note: The specification number wrong on CR coversheet for TDoc [R4-2320274](file:///D:\RAN4%23109\Docs\R4-2320274.zip) it should be value : 38.101-1.

– Murata Manufacturing Co Ltd. R4-2320274 (Pushp - MMC) No matter how simple the conclusion of the MSD value, kindly include supplementary information on the cover sheet on how MSD was determined, if a companion TDOC was not provided. To me, the proposed value you submitted seems to be in-line (not objectionable) in our projected range from [2.1 to 5]dB based on similar examples in the specification between 38.101-1/3 and based on the REFSENS difference between victim bands of previous MSD values.

draft for Rev1 for R4-2320274 is available in the draft folder [109][102]. Thank you Pushp for the comment. Your comment is incorporated in the revised version.

**Decision: Revised to** [**R4-2321675**](file:///D:\RAN4%23109\Docs\R4-2321675.zip) **(from** [**R4-2320274**](file:///D:\RAN4%23109\Docs\R4-2320274.zip)**).**

[**R4-2321675**](file:///D:\RAN4%23109\Docs\R4-2321675.zip) **[NR\_CADC\_R17\_3BDL\_2BUL-Core] CR for 38.101-01 to add missing IMD5 for CA\_n48-n66-n70 with UL CA\_n48-n66 (Rel-17, Cat. F)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1950 rev Cat: F (Rel-17)  
  
 Source: DISH Network, Samsung, Fujitsu, Qualcomm*

**Abstract:**

Note: The specification number wrong on CR coversheet for TDoc [R4-2320274](file:///D:\RAN4%23109\Docs\R4-2320274.zip) it should be value : 38.101-1.

**Decision: Agreed.**

[**R4-2320299**](file:///D:\RAN4%23109\Docs\R4-2320299.zip) **[NR\_CADC\_R17\_3BDL\_2BUL-Core] CR for 38.101-01 to add missing IMD5 for CA\_n48-n66-n70 with UL CA\_n48-n66 (Rel-18, Cat. A)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1951 rev Cat: A (Rel-18)  
  
 Source: DISH Network, Samsung, Fujitsu, Qualcomm*

**Abstract:**

Note: The specification number wrong on CR coversheet for TDoc [R4-2320299](file:///D:\RAN4%23109\Docs\R4-2320299.zip) it should be value : 38.101-1.

**Decision: Revised to** [**R4-2321676**](file:///D:\RAN4%23109\Docs\R4-2321676.zip) **(from** [**R4-2320299**](file:///D:\RAN4%23109\Docs\R4-2320299.zip)**).**

[**R4-2321676**](file:///D:\RAN4%23109\Docs\R4-2321676.zip) **[NR\_CADC\_R17\_3BDL\_2BUL-Core] CR for 38.101-01 to add missing IMD5 for CA\_n48-n66-n70 with UL CA\_n48-n66 (Rel-18, Cat. A)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1951 rev Cat: A (Rel-18)  
  
 Source: DISH Network, Samsung, Fujitsu, Qualcomm*

**Abstract:**

Note: The specification number wrong on CR coversheet for TDoc [R4-2320299](file:///D:\RAN4%23109\Docs\R4-2320299.zip) it should be value : 38.101-1.

**Decision: Agreed.**

#### 5.1.2 NR/LTE/MR-DC basket WIs

[**R4-2318775**](file:///D:\RAN4%23109\Docs\R4-2318775.zip) **CR to TS 38.101-1 (Rel-17): Correction of an Fc location for a 100MHz channel bandwidth of band n77**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1859 rev Cat: F (Rel-17)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Agreed.**

[**R4-2318783**](file:///D:\RAN4%23109\Docs\R4-2318783.zip) **CR to TS 38.101-1 (Rel-18): Correction of an Fc location for a 100MHz channel bandwidth of band n77**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1860 rev Cat: A (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Agreed.**

[**R4-2318776**](file:///D:\RAN4%23109\Docs\R4-2318776.zip) **Correction of an invalid channel bandwidth in 3DL/2UL inter-band reference sensitivity testing for PC2**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1049 rev Cat: F (Rel-17)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Abstract:**

Note: Specification version number on CR coversheet for TDoc [R4-2318776](file:///D:\RAN4%23109\Docs\R4-2318776.zip) should be value : 17.11.2.

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

[**R4-2318779**](file:///D:\RAN4%23109\Docs\R4-2318779.zip) **Correction of an invalid channel bandwidth in 3DL/2UL inter-band reference sensitivity testing for PC3**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1050 rev Cat: F (Rel-17)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Abstract:**

Note: Specification version number wrong on CR coversheet for TDoc [R4-2318779](file:///D:\RAN4%23109\Docs\R4-2318779.zip) it should be value 17.11.2.

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

[**R4-2319754**](file:///D:\RAN4%23109\Docs\R4-2319754.zip) **Rel17 Cat F CR for 38.101-1 Add missing Uplink configurations for PC3 CA\_n46M-n48B-n96A and CA\_n46M-n48(4A)-n96D**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1920 rev Cat: F (Rel-17)  
  
 Source: Samsung*

**Decision: Agreed.**

[**R4-2319755**](file:///D:\RAN4%23109\Docs\R4-2319755.zip) **Rel18 Cat A CR for 38.101-1 Add missing Uplink configurations for PC3 CA\_n46M-n48B-n96A and CA\_n46M-n48(4A)-n96D**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1921 rev Cat: A (Rel-18)  
  
 Source: Samsung*

**Decision: Agreed.**

[**R4-2319756**](file:///D:\RAN4%23109\Docs\R4-2319756.zip) **Rel17 Cat F CR for 38.101-3 Correct the Uplink configuration for DC\_2A\_n7(2A)-n66A**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1066 rev Cat: F (Rel-17)  
  
 Source: Samsung*

**Abstract:**

Note: The release Rel-17 on CR coversheet is 17.11.0, but the latest version of Rel-17 is 17.11.2.

**Decision: Revised to R4-2321989 (from R4-2319756).**

[**R4-2321989**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321989.zip) **Rel17 Cat F CR for 38.101-3 Correct the Uplink configuration for DC\_2A\_n7(2A)-n66A**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1066 rev Cat: F (Rel-17)  
  
 Source: Samsung*

**Abstract:**

Note: The release Rel-17 on CR coversheet is 17.11.0, but the latest version of Rel-17 is 17.11.2.

**Decision: Agreed.**

[**R4-2319757**](file:///D:\RAN4%23109\Docs\R4-2319757.zip) **Rel18 Cat A CR for 38.101-3 Correct the Uplink configuration for DC\_2A\_n7(2A)-n66A**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1067 rev Cat: A (Rel-18)  
  
 Source: Samsung*

**Decision: Agreed.**

[**R4-2319766**](file:///D:\RAN4%23109\Docs\R4-2319766.zip) **Rel17 Cat F CR for 38.101-1 Add missing MSD due to UL harmonic interference for PC3 CA\_n71-n78 in clause 7.3A.4**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1922 rev Cat: F (Rel-17)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Agreed.**

[**R4-2319767**](file:///D:\RAN4%23109\Docs\R4-2319767.zip) **Rel18 Cat A CR for 38.101-1 Add missing MSD due to UL harmonic interference for PC3 CA\_n71-n78 in clause 7.3A.4**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1923 rev Cat: A (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Agreed.**

[**R4-2319875**](file:///D:\RAN4%23109\Docs\R4-2319875.zip) **[DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core] CR for 38.101-3 to remove the ENDC combo which can't be supported by RAN2 (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1932 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

1 – Google Inc. Flag R4-2319875, it is related to Topic #2:BCS ambiguity for intra-band EN-DC. Need to wait the outcome of discussion.

**Decision: Postponed.**

[**R4-2319876**](file:///D:\RAN4%23109\Docs\R4-2319876.zip) **[DC\_R17\_xBLTE\_2BNR\_yDL2UL-Core] CR for 38.101-3 to remove the ENDC combo which can't be supported by RAN2 (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1933 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2320514**](file:///D:\RAN4%23109\Docs\R4-2320514.zip) **CR to TS 38.101-3 (Rel-17): Correction of an invalid channel bandwidth in 3DL/2UL inter-band reference sensitivity testing for PC2**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1088 rev Cat: F (Rel-17)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Agreed.**

[**R4-2318782**](file:///D:\RAN4%23109\Docs\R4-2318782.zip) **CR to TS 38.101-3 (Rel-18): Correction of an invalid channel bandwidth in 3DL/2UL inter-band reference sensitivity testing for PC2**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1052 rev Cat: A (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Agreed.**

[**R4-2320517**](file:///D:\RAN4%23109\Docs\R4-2320517.zip) **CR to TS 38.101-3 (Rel-17): Correction of an invalid channel bandwidth in 3DL/2UL inter-band reference sensitivity testing for PC3**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1089 rev Cat: F (Rel-17)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Agreed.**

[**R4-2318780**](file:///D:\RAN4%23109\Docs\R4-2318780.zip) **CR to TS 38.101-3 (Rel-18): Correction of an invalid channel bandwidth in 3DL/2UL inter-band reference sensitivity testing for PC3**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1051 rev Cat: A (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

*Unclear where is Cat-F CR*

**Decision: Agreed.**

[**R4-2320650**](file:///D:\RAN4%23109\Docs\R4-2320650.zip) **[NR\_CADC\_R17\_2BDL\_xBUL] CR to 38.101-1, n3-n77(2A) test point correction**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1965 rev Cat: F (Rel-17)  
  
 Source: Qualcomm Inc.*

**Decision: Agreed.**

[**R4-2320651**](file:///D:\RAN4%23109\Docs\R4-2320651.zip) **[NR\_CADC\_R17\_2BDL\_xBUL] CR to 38.101-1, n3-n77(2A) test point correction**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1966 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Agreed.**

#### 5.1.3 Others

**Topic #2: BCS ambiguity for intra-band EN-DC**

[**R4-2320181**](file:///D:\RAN4%23109\Docs\R4-2320181.zip) **Discussion on IE supportedBandwidthCombinationSetIntraENDC**

*Type: other For: Approval  
 Source: Google Inc.*

**Decision: Noted.**

LS out

[**R4-2320241**](file:///D:\RAN4%23109\Docs\R4-2320241.zip) **[Draft] LS on IE supportedBandwidthCombinationSetIntraENDC**

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

**Decision: Postponed.**

[**R4-2321951**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321951.zip) **[Draft] LS on IE supportedBandwidthCombinationSetIntraENDC**

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

**Decision: Withdrawn.**

[**R4-2319873**](file:///D:\RAN4%23109\Docs\R4-2319873.zip) **[NR\_BCS4-Core] CR for 38.101-1 to modify the MSD value for CA\_20-n78 harmonic mixing and NOTE2 in harmonic mixing table (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1930 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319874**](file:///D:\RAN4%23109\Docs\R4-2319874.zip) **[NR\_BCS4-Core] CR for 38.101-1 to modify the MSD value for CA\_20-n78 harmonic mixing and NOTE2 in harmonic mixing table (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1931 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

### 5.2 Rel-17 non-spectrum related WI maintenance

#### 5.2.1 UE RF requirements

**Topic #1 Rel-17 DC location**

[**R4-2318988**](file:///D:\RAN4%23109\Docs\R4-2318988.zip) **Discussion on the restriction in R17 DC location signalling**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319902**](file:///D:\RAN4%23109\Docs\R4-2319902.zip) **R17 DC location reporting clarification**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

LS out

[**R4-2318989**](file:///D:\RAN4%23109\Docs\R4-2318989.zip) **draft LS on R17 DC location signaling**

*Type: LS out For: Approval  
 to RAN2  
 Source: vivo*

*Nokia: if changing it, the original intention is not met. Reluctant to change.*

*OPPO: After Rel-15/16/17 schemes, it seems Rel-18 scheme will come. Prefer not to specify.*

*Vivo: current RAN2 signalling design can support it. The issue is that RAN2 put restriction. It is simple for RAN2 to remove the restriction. UE can still use the value to reduce the overhead.*

*OPPO: we can emphasize if RAN2 current signalling can cover it we are OK. If not, we aren’t.*

*Apple: We share the same view as Nokia. The original design intention is to provide multiple options for UE. It is enhancement for this report. We would like to make sure it is not replacement of what we agreed previously.*

*Vivo: There is no strong objection.*

**Decision: Revised to R4-2321950 (from R4-2318989).**

[**R4-2321950**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321950.zip) **draft LS on R17 DC location signaling**

*Type: LS out For: Approval  
 to RAN2  
 Source: vivo*

**Decision: Approved.**

**CRs**

[**R4-2318364**](file:///D:\RAN4%23109\Docs\R4-2318364.zip) **CR for TS 38.101 Rel-17 correcting the starting RB location for NS\_07**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1825 rev Cat: F (Rel-17)  
  
 Source: Sony*

**Decision: Agreed.**

[**R4-2318365**](file:///D:\RAN4%23109\Docs\R4-2318365.zip) **CR for TS 38.101 Rel-18 correcting the starting RB location for NS\_07**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1826 rev Cat: A (Rel-18)  
  
 Source: Sony*

**Decision: Agreed.**

[**R4-2318467**](file:///D:\RAN4%23109\Docs\R4-2318467.zip) **[NR\_RF\_TxD-Core] Removing brackets from TxD release independent information**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0129 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

3 – Guangdong OPPO Mobile Telecom. Flag R4-2318467: TxD has new capabilty defined in Rel-16, not clear how this will be release independent from Rel-15.

**Decision: Agreed.**

[**R4-2318468**](file:///D:\RAN4%23109\Docs\R4-2318468.zip) **[NR\_RF\_TxD-Core] Correction to 7.3G REFSENS for TxD (Rel-17)**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1833 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2318469**](file:///D:\RAN4%23109\Docs\R4-2318469.zip) **[NR\_RF\_TxD-Core] Correction to 7.3G REFSENS for TxD (Rel-18)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1834 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2318758**](file:///D:\RAN4%23109\Docs\R4-2318758.zip) **CR to TS38.101-1 Rel-17 CAT-F: On harmonisation network signalling requirements**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1856 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2318759**](file:///D:\RAN4%23109\Docs\R4-2318759.zip) **CR to TS38.101-1 Rel-18 CAT-A: On harmonisation network signalling requirements**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1857 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2319264**](file:///D:\RAN4%23109\Docs\R4-2319264.zip) **[NR\_newRAT-Core] Editorial modification CR for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1882 rev Cat: D (Rel-17)  
  
 Source: LG Electronics*

**Decision: Agreed.**

[**R4-2319291**](file:///D:\RAN4%23109\Docs\R4-2319291.zip) **[NR\_newRAT-Core] Editorial modification CR for TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1883 rev Cat: A (Rel-18)  
  
 Source: LG Electronics UK*

**Decision: Agreed.**

[**R4-2319429**](file:///D:\RAN4%23109\Docs\R4-2319429.zip) **[NR\_RF\_FR1\_Core] Correction to UE power classes for CA configurations for HPUE**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1890 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to specify the power requirement for DL-only CA and when the per-band-per-BC power class is present for inter-band CA

**Decision: Not pursued.**

[**R4-2319430**](file:///D:\RAN4%23109\Docs\R4-2319430.zip) **[NR\_RF\_FR1-Core] Correction to UE power classes for CA configurations for HPUE**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1891 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to specify the power requirement for DL-only CA and when the per-band-per-BC power class is present for inter-band CA

**Decision: Withdrawn.**

[**R4-2319431**](file:///D:\RAN4%23109\Docs\R4-2319431.zip) **[NR\_RF\_FR1-Core] Applicability of exceptions to REFSENS for CA and SUL**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1892 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to add applicability for REFSENS for CA and SUL configurations not exempted

R4-2319431 (Ville) Not clear what is the ”supported power class”. By which capability.

Huawei (Jin Wang) flags R4-2319431. The said ambiguity has been clarified by the notes in clause 5. This CR would cause confusion instead.

**Decision: Withdrawn.**

[**R4-2319432**](file:///D:\RAN4%23109\Docs\R4-2319432.zip) **[NR\_RF\_FR1-Core] Applicability of exceptions to REFSENS for CA and SUL**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1893 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to add applicability for REFSENS for CA and SUL configurations not exempted

**Decision: Withdrawn.**

[**R4-2319859**](file:///D:\RAN4%23109\Docs\R4-2319859.zip) **[NR\_NTN\_solutions-Core] CR for 38.101-5 to align the understanding of GEO (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.5.0 CR-0045 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319860**](file:///D:\RAN4%23109\Docs\R4-2319860.zip) **[NR\_NTN\_solutions-Core] CR for 38.101-5 to align the understanding of GEO (R18)**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0046 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319861**](file:///D:\RAN4%23109\Docs\R4-2319861.zip) **[NR\_NTN\_solutions-Core] CR for 38.101-5 to update the clause of Transmit modulation quality (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.5.0 CR-0047 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

Qualcomm (Toni) flags R4-2319861: Referring 38.101-1 seems to have no issue as potential conflicting features are under UE capability. Therefore it is not necessary to explicitly write all sections.

*Ericsson:RAN1 does not preclude the feature.*

**Decision: Revised to R4-2321952 (from R4-2319861).**

[**R4-2321952**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321952.zip) **[NR\_NTN\_solutions-Core] CR for 38.101-5 to update the clause of Transmit modulation quality (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.5.0 CR-0047 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

Qualcomm (Toni) flags R4-2319861: Referring 38.101-1 seems to have no issue as potential conflicting features are under UE capability. Therefore it is not necessary to explicitly write all sections.

Ericsson:RAN1 does not preclude the feature.

**Decision: Not pursued.**

[**R4-2319862**](file:///D:\RAN4%23109\Docs\R4-2319862.zip) **[NR\_NTN\_solutions-Core] CR for 38.101-5 to update the clause of Transmit modulation quality (R18)**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0048 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2320378**](file:///D:\RAN4%23109\Docs\R4-2320378.zip) **[NR\_NTN\_solutions-Core] CR on TS 38.307 for NR NTN bands release independent**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0142 rev Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated, CHTTL*

– Nokia Corporation R4-2320378, R4-2320842 (Petri), Relates to bigger discussion on release independence

2 – Guangdong OPPO Mobile Telecom. Flag R4-2320378, need to wait for further discussion of how the release independent can be applied.

Peng (Henry) Flags R4-2320378: 1. change affects should be ME. 2. Work item code should be NR NTN perf instead of core. 3. The requirements in last column should be fulfilled. 4. The RF feature’s scope of TS 38.307 only include operating bands and power class. The channel bandwidth should be captured in the fulfilled requirements.

Huawei Michal flags R4-2320378: so far this spec was referring to TN features, so the scope shall be also clarified to cover UE spec part 5. RRM requirements aspects to be clarified.

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320604**](file:///D:\RAN4%23109\Docs\R4-2320604.zip) **Addition of the antenna number restriction for TxD signaling in TR 38.837 for Rel-17**

*Type: CR For: Agreement  
 38.837 v17.1.0 CR-0007 rev Cat: F (Rel-17)  
  
 Source: vivo*

**Decision: Agreed.**

[**R4-2318950**](file:///D:\RAN4%23109\Docs\R4-2318950.zip) **Addition of the antenna number restriction for TxD signaling in TR 38.837 for Rel-17**

*Type: CR For: Agreement  
 38.837 v17.1.0 CR-0006 rev Cat: F (Rel-17)  
  
 Source: vivo*

*The paper is marked as witdhrawn*

**Decision: Withdrawn.**

[**R4-2320842**](file:///D:\RAN4%23109\Docs\R4-2320842.zip) **[NR\_NTN\_solutions-Core] CR to TS 38.307: release independent requirements for NTN FR1, Rel-17**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0145 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

In this CR we provide the proposed solution to the NTN Rel-17 release-independence aspects.

– Nokia Corporation R4-2320378, R4-2320842 (Petri), Relates to bigger discussion on release independence

Flag R4-2320842 by Qualcomm (Bin Han). To follow the guidance stated in TS 38.307: ”If an RF feature introduced in the same release as the release which the feature is independent from, (i.e. M=N), the common UE RF requirements table in annex B.4 is specified from release N+1, otherwise the common UE RF requirements table is specified from release N”. Annex for Rel-17 TS 38.307 is not needed for NTN. We coud follow the same apporach of TS 38.307 v15.x.x

4 – Guangdong OPPO Mobile Telecom. Flag R4-2320842: May need to wait for the disucsison outcome of 38.307 drafting rules.

CHTTL flags R4-2320842. can be covered by another Tdoc.

**Decision: Revised to R4-2321953 (from R4-2320842).**

[**R4-2321953**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321953.zip) **[NR\_NTN\_solutions-Core] CR to TS 38.307: release independent requirements for NTN FR1, Rel-17**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0145 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon, Qualcomm Incorporated, CHTTL, Nokia*

**Abstract:**

**Decision: Agreed.**

[**R4-2320896**](file:///D:\RAN4%23109\Docs\R4-2320896.zip) **Clarification for the Pi/2 BPSK modulation**

*Type: CR For: Agreement  
 38.101-5 v17.5.0 CR-0051 rev Cat: F (Rel-17)  
  
 Source: THALES, Inmarsat, Ligado Networks, Hughes/Echostar, Globalstar, Apple, IITH*

**Abstract:**

Note: The CR coversheet has CR revision as 0. Transmit modulation quality requirements in sub-clause 6.4.2 refer to TS 38.101-1 except Pi/2 BPSK modulation, which makes this modulation not applicable for the NTN core specifications. It is clarified that t

1 – HUAWEI Technologies Japan K.K. Flag R4-2320896 and R4-2320899 Peng (Henry) , Pi/2 BPSK is related to the power boost capabilities and MPR requirements. Only removing this restriction is not enough to enable this feature. If power boost is used to enlarge the coverage for NTN, there may be SAR issue for FDD bands.

CHTTL Flag R4-2320896 and R4-2320899 it seems like these CRs are adding new features, not a cat.F (correction CR) ?

Agreement: pi/2 BPSK modulation can be supported by NTN UE from Rel-17 and the power boosting is not supported for NTN UE.

**Decision: Agreed.**

[**R4-2320899**](file:///D:\RAN4%23109\Docs\R4-2320899.zip) **Clarification for the Pi/2 BPSK modulation**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0052 rev Cat: A (Rel-18)  
  
 Source: THALES, Inmarsat, Ligado Networks, Hughes/Echostar, Globalstar, Apple, IITH*

**Abstract:**

Note: The CR coversheet have CR revision as 0. Mirror CR: Transmit modulation quality requirements in sub-clause 6.4.2 refer to TS 38.101-1 except Pi/2 BPSK modulation, which makes this modulation not applicable for the NTN core specifications. It is clar

**Decision: Agreed.**

#### 5.2.2 BS RF requirements and BS conformance testing

#### 5.2.3 RRM requirements

#### 5.2.4 Demodulation and CSI requirements

#### 5.2.5 OTA and TRP/TRS test aspects

### 5.3 Rel-17 TEI

**Topic #3: Flexible TX-RX Separation for NR NTN FR1 bands**

[**R4-2319620**](file:///D:\RAN4%23109\Docs\R4-2319620.zip) **Flexible TX-RX Separation for NR NTN FR1 bands**

*Type: discussion For: Decision  
 Source: Inmarsat, Viasat, Globalstar, Ligado Networks, Thales, Sateliot, Hughes/Echostar*

**Decision: Noted.**

**CRs**

[**R4-2320849**](file:///D:\RAN4%23109\Docs\R4-2320849.zip) **[LTE-Repeaters] CR to TS 36.106: repeater definition corrections, Rel-17**

*Type: CR For: Agreement  
 36.106 v17.0.0 CR-0054 rev Cat: D (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Note: This was reserved for Rel-17 but the CR coversheet is Rel-18. It was observed that repeater's definition includes text with strike-through. It is fixed to avoid ambiguity. Please note that this bug exists in Rel-12 onwards.

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

[**R4-2320881**](file:///D:\RAN4%23109\Docs\R4-2320881.zip) **[LTE-Repeaters] CR to TS 36.106: repeater definition corrections, Rel-17**

*Type: CR For: Agreement  
 36.106 v17.0.0 CR-0055 rev Cat: D (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Note: CR number is incorrect on CR coversheet. It was observed that repeater's definition includes text with strike-through. It is fixed to avoid ambiguity. Please note that this bug exists in Rel-12 onwards.

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

### 5.4 Moderator summary and conclusions (for Agenda 5)

[**R4-2318108**](file:///D:\RAN4%23109\Docs\R4-2318108.zip) **Topic summary for [109][102] R17\_UERF\_maintenance**

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

**Abstract:**

[109][100] Main Session AI 5.1, 5.2.1, 5.3

**Decision: Noted.**

**New allocated Tdocs**

**Discussions of issues and conclusions in the first round**

## 6 Rel-18 maintenance for LTE and NR

**Guidance for maintenance agendas (AI 4, AI 5 and AI 6)**

The following guidance are provided for AI 4, AI5 and AI6:

- For maintenance agenda AI 4 (up to Rel-16), AI 5 (Rel-17) and AI 6 (Rel-18), formal CRs are expected and multiple formal CRs per company in the lowest agenda are allowed. For tracking the changes easily, it expected that one batch of CRs (Cat-F/A/…) will just cover a single topic/WI rather than multiple topics/WIs and Cat-F CR with corresponding Cat-A CRs needs be submitted under the same agenda.

- When submitting contributions to AI 4, AI 5 and AI 6, please add [WI\_code] in the beginning of titles for both discussion files and CRs to facilitate moderators and session chairs handling.

- When reserving the tdoc number, please use the correct WI code rather than simply using TEI and fill the column of “Related WIs” in your reservation spreadsheet. If you submit a CR with TEI as WI code, please inform session chair.

[**R4-2320867**](file:///D:\RAN4%23109\Docs\R4-2320867.zip) **CR to 38.101-4 Correction to report quantity for 1Tx CQI tests (Rel 18 - Cat A)**

*Type: CR For: Agreement  
 38.101-4 v18.1.0 CR-0460 rev Cat: A (Rel-18)  
  
 Source: Qualcomm India Pvt Ltd*

*Not available*

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

### 6.1 Rel-18 spectrum related WI maintenance

#### 6.1.1 Introduction of 900 MHz LTE Band in the US

**CR**

[**R4-2318533**](file:///D:\RAN4%23109\Docs\R4-2318533.zip) **CR for 36.307 B106 and B8 overlapping bands**

*Type: CR For: Agreement  
 36.307 v18.2.0 CR-4497 rev Cat: B (Rel-18)  
  
 Source: Nokia, Anterix*

**Decision: Revised to R4-2321954 (from R4-2318533).**

**[R4-2321954](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321954.zip) CR for 36.307 B106 and B8 overlapping bands**

*Type: CR For: Agreement  
 36.307 v18.2.0 CR-4497 rev Cat: F (Rel-18)  
  
 Source: Nokia, Anterix*

**Decision: Agreed.**

#### 6.1.2 Introduction of evolved shared spectrum bands

**CRs**

[**R4-2318743**](file:///D:\RAN4%23109\Docs\R4-2318743.zip) **Corrections on requirements for NR-U enhancements**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1851 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2320049**](file:///D:\RAN4%23109\Docs\R4-2320049.zip) **Spectrum emission mask for operation with shared spectrum channel access R18**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1939 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Revised to R4-2321955 (from R4-2320049).**

[**R4-2321955**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321955.zip) **Spectrum emission mask for operation with shared spectrum channel access R18**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1939 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2320174**](file:///D:\RAN4%23109\Docs\R4-2320174.zip) **CR to TS38.101-1 for NR-U NS table reference**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1949 rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

[**R4-2321020**](file:///D:\RAN4%23109\Docs\R4-2321020.zip) **Adding 20MHz channel raster points for 5925-5945MHz in the full 6GHz band**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0549 rev Cat: F (Rel-18)  
  
 Source: Apple Inc., Nokia*

**Decision: Agreed.**

[**R4-2321021**](file:///D:\RAN4%23109\Docs\R4-2321021.zip) **Adding 20MHz channel raster points for 5925-5945MHz in the full and lower 6GHz bands**

*Type: CR For: Agreement  
 38.849 v18.1.0 CR-0007 rev Cat: F (Rel-18)  
  
 Source: Apple, Nokia*

**Decision: Agreed.**

**Withdrawn**

[**R4-2318744**](file:///D:\RAN4%23109\Docs\R4-2318744.zip) **Adding 20MHz channel raster points for 5925-5945MHz in the full 6GHz band**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0530 rev Cat: F (Rel-18)  
  
 Source: Apple, Nokia*

**Abstract:**

Note: The CR coversheet does not have CR number 0530. Also the WI code on CR coversheet does not exist NRU\_unlic\_enh

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

[**R4-2318745**](file:///D:\RAN4%23109\Docs\R4-2318745.zip) **Adding 20MHz channel raster points for 5925-5945MHz in the full and lower 6GHz bands**

*Type: CR For: Agreement  
 38.849 v18.1.0 CR-0006 rev Cat: A (Rel-18)  
  
 Source: Apple, Nokia*

**Abstract:**

Note: The CR coversheet does not have 0006 on the coversheet. Also the WI code on coversheet does not exist NRU\_unlic\_enh

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

[**R4-2319937**](file:///D:\RAN4%23109\Docs\R4-2319937.zip) **CR for NR-U NS table reference**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1937 rev Cat: F (Rel-18)  
  
 Source: OPPO*

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

[**R4-2320118**](file:///D:\RAN4%23109\Docs\R4-2320118.zip) **CR for NR-U NS table reference**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1947 rev Cat: F (Rel-18)  
  
 Source: OPPO*

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

#### 6.1.3 30 MHz Channel Bandwidth for NR NTN in FR1

#### 6.1.4 New bands and BW allocation for 5G terrestrial broadcast - part 2

**[R4-2318414](file:///D:\\RAN4%23109\\Docs\\R4-2318414.zip) Further considerations on ACS for 5G terrestrial broadcast**

*Type: discussion For: Decision  
 Source: Apple*

**Decision: Revised to** [**R4-2321734**](file:///D:\RAN4%23109\Docs\R4-2321734.zip) **(from** [**R4-2318414**](file:///D:\RAN4%23109\Docs\R4-2318414.zip)**).**

[**R4-2321734**](file:///D:\RAN4%23109\Docs\R4-2321734.zip) **Further considerations on ACS for 5G terrestrial broadcast**

*Type: discussion For: Decision  
 Source: Apple*

**Decision: Noted.**

**CRs**

[**R4-2318249**](file:///D:\RAN4%23109\Docs\R4-2318249.zip) **CR to remove brackets**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6017 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Incorporated, SWR, EBU*

**Decision: Not pursued.**

[**R4-2318415**](file:///D:\RAN4%23109\Docs\R4-2318415.zip) **Corrections for the LTE based 5G terrestrial broadcast**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6018 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Not pursued.**

[**R4-2320840**](file:///D:\RAN4%23109\Docs\R4-2320840.zip) **[LTE\_terr\_bcast\_bands\_part2-Core] CR to TS 36.104: Separation of additional ACLR requirements for LTE based 5G terrestrial broadcast, Rel-18**

*Type: CR For: Agreement  
 36.104 v18.3.0 CR-4986 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

LTE\_terr\_bcast\_bands\_part2 was compledet during RAN4#108 meeting. However, it was observed that Additional ACLR requirements for LTE based 5G terrestrial broadcast were not separated from the Core requirements, like it was done for all other unwanted emis

**Decision: Agreed.**

[**R4-2320841**](file:///D:\RAN4%23109\Docs\R4-2320841.zip) **[LTE\_terr\_bcast\_bands\_part2-Core] CR to TR 36.792: adding missing figures, general cleanup, Rel-18**

*Type: CR For: Agreement  
 36.792 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

In this CR we introduce missing emission mask figures, as well as editorial corrections.

**Decision: Agreed.**

[**R4-2320888**](file:///D:\RAN4%23109\Docs\R4-2320888.zip) **Introduction of 5G broadcast UHF bands to 36.104**

*Type: CR For: Agreement  
 36.104 v16.14.0 CR-4987 rev Cat: B (Rel-16)  
  
 Source: ROHDE & SCHWARZ*

**Decision: Not pursued.**

[**R4-2320893**](file:///D:\RAN4%23109\Docs\R4-2320893.zip) **Introduction of 5G broadcast UHF bands to 36.104**

*Type: CR For: Agreement  
 36.104 v17.10.0 CR-4988 rev Cat: A (Rel-17)  
  
 Source: ROHDE & SCHWARZ*

**Decision: Withdrawn.**

[**R4-2320898**](file:///D:\RAN4%23109\Docs\R4-2320898.zip) **Introduction of 5G broadcast UHF bands to 36.104**

*Type: CR For: Agreement  
 36.104 v18.3.0 CR-4989 rev Cat: A (Rel-18)  
  
 Source: ROHDE & SCHWARZ*

**Decision: Withdrawn.**

**Move** [**R4-2319161**](file:///D:\RAN4%23109\Docs\R4-2319161.zip)**,** [**R4-2319162**](file:///D:\RAN4%23109\Docs\R4-2319162.zip)**,** [**R4-2319163**](file:///D:\RAN4%23109\Docs\R4-2319163.zip) **from AI 6.1.4 to AI 4.4.**

[**R4-2319161**](file:///D:\RAN4%23109\Docs\R4-2319161.zip) **Draft CR on inter-frequency measurement without gap in CHO**

*Type: CR For: Agreement  
 38.133 v16.17.0 CR-3726 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

To include inter-freq wo gap in CHO

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

[**R4-2319162**](file:///D:\RAN4%23109\Docs\R4-2319162.zip) **CR on CHO**

*Type: CR For: Agreement  
 38.133 v17.11.0 CR-3727 rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

To include inter-freq wo gap in CHO

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

[**R4-2319163**](file:///D:\RAN4%23109\Docs\R4-2319163.zip) **CR on CHO**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3728 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

To include inter-freq wo gap in CHO

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

#### 6.1.5 Other WIs related to bands introduced in Rel-18

**CRs**

[**R4-2319206**](file:///D:\RAN4%23109\Docs\R4-2319206.zip) **[NR\_600MHz\_APT-Perf] CR to TS 36.141: Addition of missing band n105 for co-location requirements**

*Type: CR For: Agreement  
 36.141 v18.2.0 CR-1372 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319207**](file:///D:\RAN4%23109\Docs\R4-2319207.zip) **[NR\_600MHz\_APT-Perf] CR to TS37.141: Addition of missing band n105 for co-location requirement**

*Type: CR For: Agreement  
 37.141 v18.3.1 CR-1063 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319208**](file:///D:\RAN4%23109\Docs\R4-2319208.zip) **[NR\_600MHz\_APT-Perf] CR to TS38.176-1: Addition of missing band n105 for IAB coexistence and co-location requirements**

*Type: CR For: Agreement  
 38.176-1 v18.2.0 CR-0033 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

### 6.2 Rel-18 non-spectrum related WI maintenance

#### 6.2.1 UE RF requirements

[**R4-2318781**](file:///D:\RAN4%23109\Docs\R4-2318781.zip) **Reference waveform for PA calibration**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

Discussion on the reference waveform for PA calibration

**Decision: Noted.**

#### 6.2.2 BS RF requirements

#### 6.2.3 RRM requirements

#### 6.2.4 Other dedicated Rel-18 Wis

##### 6.2.4.1 NB-IoT/eMTC core & perf. requirements for NTN

###### 6.2.4.1.1 SAN RF requirement and conformance testing

###### 6.2.4.1.2 UE RF requirement

[**R4-2318360**](file:///D:\RAN4%23109\Docs\R4-2318360.zip) **Maintenance on IoT NTN UE RF -- ETSI issue**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

[**R4-2319634**](file:///D:\RAN4%23109\Docs\R4-2319634.zip) **Flexible TX-RX Separation for IoT NTN in FR1 bands**

*Type: discussion For: Decision  
 Source: Inmarsat, Viasat, Globalstar, Ligado Networks, Thales, Sateliot, Hughes/Echostar*

**Decision: Noted.**

**CR**

[**R4-2318712**](file:///D:\RAN4%23109\Docs\R4-2318712.zip) **[LTE\_NBIOT\_eMTC\_NTN\_req]CR to TS 36.102 on simplification for NS flags**

*Type: CR For: Agreement  
 36.102 v18.3.0 CR-0022 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

*Qualcomm: keep the current spec and do not need optimization.*

*Mediatek: we do it for 1) easy maintanence.*

**Decision: Not pursued.**

###### 6.2.4.1.3 RRM requirement

###### 6.2.4.1.4 Demodulation requirements

##### 6.2.4.2 In-Device Co-existence (IDC) enhancements for NR and MR-DC

### 6.3 Rel-18 TEI

[**R4-2318514**](file:///D:\RAN4%23109\Docs\R4-2318514.zip) **discussion on release independence specs 38.307 and 36.307**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2319863**](file:///D:\RAN4%23109\Docs\R4-2319863.zip) **[Release independence] Discussion on how to comprehend and implement Requirements on User Equipments (UEs) Supporting a release-independent frequency band in 38.307**

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

**Decision: Noted.**

**CRs**

[**R4-2318515**](file:///D:\RAN4%23109\Docs\R4-2318515.zip) **CR for 36.307 General enhancement for future purposes and necessary fixes**

*Type: CR For: Agreement  
 36.307 v18.2.0 CR-4496 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Abstract:**

Note: Release independence specification has several explicit references into Release number. This CR replace explicit references with "this release".

**Decision: Postponed.**

[**R4-2318516**](file:///D:\RAN4%23109\Docs\R4-2318516.zip) **CR for 38.307 General enhancement for future purposes and necessary fixes**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0130 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Abstract:**

Note: Release independence specification has several explicit references into Release number. This CR replace explicit references with "this release".

Huawei: question on the wording “this release”

Mediatek: move the the pointer to general section.

CATT: the change is related to only RF. The change should be applied to RRM and demod.

Agreement: Remove the explicit pointer in TS 36.307 and 38.307.

**Decision: Postponed.**

[**R4-2318403**](file:///D:\RAN4%23109\Docs\R4-2318403.zip) **Correction of TS 36.307: spec release problem**

*Type: CR For: Agreement  
 36.307 v18.2.0 CR-4495 rev Cat: F (Rel-18)  
  
 Source: CATT*

**Decision: Postponed.**

[**R4-2318404**](file:///D:\RAN4%23109\Docs\R4-2318404.zip) **Correction of TS 38.307: spec release problem**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0128 rev Cat: F (Rel-17)  
  
 Source: CATT*

**Decision: Postponed.**

### 6.4 Moderator summary and conclusions

[**R4-2318109**](file:///D:\RAN4%23109\Docs\R4-2318109.zip) **Topic summary for [109][103] R18\_UERF\_maintenance**

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

**Abstract:**

[109][100] Main Session AI 6.1, 6.2, 6.2.1, 6.2.4.1, 6.2.4.1.2, 6.3

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

## 7 Rel-18 on-going spectrum related WIs for NR

All the rapporteurs of basket WIs are expected to reserve tdoc numbers for revised WID/draftTR/Big CR before the meeting. Please upload the big CR based on the endorsed draft big CRs in the bis meeting.

### 7.1 Issues arising from basket WIs but not subject to block approval

[**R4-2318420**](file:///D:\RAN4%23109\Docs\R4-2318420.zip) **CR Bug Fixes for Band Combinations in 38101-1-i30\_s00-05**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1829 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2318421**](file:///D:\RAN4%23109\Docs\R4-2318421.zip) **CR Bug Fixes for Band Combinations in 38101-3-i30\_s00-05**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1034 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

#### 7.1.1 UE RF requirements

##### 7.1.1.1 Band combinations with UL configurations including intra-band ULCA with IMD or triple beat issues

[**R4-2318417**](file:///D:\RAN4%23109\Docs\R4-2318417.zip) **MSD analysis for CA\_n5B-n12, CA\_n5B-n14, and CA\_n5B-n29 with C\_n5B UL**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318418**](file:///D:\RAN4%23109\Docs\R4-2318418.zip) **MSD analysis for CA\_n5B**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318506**](file:///D:\RAN4%23109\Docs\R4-2318506.zip) **Discussion on clarifying the 1 UL configuration for NR CA**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, Hisilicon*

**Decision: Noted.**

[**R4-2320035**](file:///D:\RAN4%23109\Docs\R4-2320035.zip) **On addition of CA\_n102B and CA\_n102C uplink**

*Type: other For: Approval  
 Source: Nokia, BT*

**Abstract:**

This discussion includes also a TP to TR 38.718.01-01

**Decision: Noted.**

[**R4-2320037**](file:///D:\RAN4%23109\Docs\R4-2320037.zip) **A-MPR study for CA\_n102B and CA\_n102C uplink**

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

**Abstract:**

Simulation results for the A-MPR study conducted for the inclusion of CA\_n102B and CA\_n102C uplink

**Decision: Noted.**

[**R4-2320247**](file:///D:\RAN4%23109\Docs\R4-2320247.zip) **MSD for CA\_n5B-n12A, CA\_n5B-n14A, and CA\_n5B-n29A**

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

**Abstract:**

Analysis and proposals on CA\_n5B-n12A, CA\_n5B-n14A, and CA\_n5B-n29A MSD are provided in this contribution.

**Decision: Noted.**

[**R4-2320800**](file:///D:\RAN4%23109\Docs\R4-2320800.zip) **CA\_n7B BCS4/5**

*Type: other For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

[**R4-2320801**](file:///D:\RAN4%23109\Docs\R4-2320801.zip) **CA\_n5B-n12, CA\_n5B-n14, CA\_n5B-n29 LB-LB**

*Type: other For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

[**R4-2320991**](file:///D:\RAN4%23109\Docs\R4-2320991.zip) **PC5 CA\_NS\_53 CA\_NS\_54 A-MPR**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2320992**](file:///D:\RAN4%23109\Docs\R4-2320992.zip) **PC5 CA\_NS\_58 A-MPR**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Revised to** [**R4-2321674**](file:///D:\RAN4%23109\Docs\R4-2321674.zip) **(from** [**R4-2320992**](file:///D:\RAN4%23109\Docs\R4-2320992.zip)**).**

[**R4-2321674**](file:///D:\RAN4%23109\Docs\R4-2321674.zip) **PC5 CA\_NS\_58 A-MPR**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2320993**](file:///D:\RAN4%23109\Docs\R4-2320993.zip) **Updated CA\_n5B BCS1 MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2320994**](file:///D:\RAN4%23109\Docs\R4-2320994.zip) **On nominal channel spacing for NR-U**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Note: This contribution was authored only by Skyworks Solutions and [Apple] is not co-source.

**Decision: Revised to** [**R4-2321677**](file:///D:\RAN4%23109\Docs\R4-2321677.zip) **(from** [**R4-2320994**](file:///D:\RAN4%23109\Docs\R4-2320994.zip)**).**

[**R4-2321677**](file:///D:\RAN4%23109\Docs\R4-2321677.zip) **On nominal channel spacing for NR-U**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Note: This contribution was authored only by Skyworks Solutions and [Apple] is not co-source.

**Decision: Noted.**

[**R4-2320995**](file:///D:\RAN4%23109\Docs\R4-2320995.zip) **MSD for n12 n14 n29 due to UL-CA\_n5B**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**Draft CR**

[**R4-2320036**](file:///D:\RAN4%23109\Docs\R4-2320036.zip) **draftCR for addition of CA\_n102B and CA\_n102C uplink**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to R4-2321938 (from R4-2320036).**

**[R4-2321938](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321938.zip) draftCR for addition of CA\_n102B and CA\_n102C uplink**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Endorsed.**

##### 7.1.1.2 Others

[**R4-2319259**](file:///D:\RAN4%23109\Docs\R4-2319259.zip) **DC\_18-n77 and CA\_n18-n77 MSD analysis**

*Type: discussion For: Discussion  
 Source: LG Electronics France*

**Decision: Noted.**

[**R4-2319855**](file:///D:\RAN4%23109\Docs\R4-2319855.zip) **Discussion on MSD for CA\_n34A-n40A\_BCS4 and 5**

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

**Decision: Noted.**

[**R4-2320171**](file:///D:\RAN4%23109\Docs\R4-2320171.zip) **A-MPR tables for CA\_NS\_53 and CA\_NS\_54 when introducing NR-U CA\_n96**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Charter Communications, Inc*

**Decision: Noted.**

[**R4-2320802**](file:///D:\RAN4%23109\Docs\R4-2320802.zip) **CA\_n34-n40 MSD**

*Type: other For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

**TPs**

[**R4-2319856**](file:///D:\RAN4%23109\Docs\R4-2319856.zip) **TP for TR 38.718-02-01 to introduce CA\_n34A-n40A\_BCS4 and 5 with MSD analysis**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321925 (from R4-2319856).**

[**R4-2321925**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321925.zip) **TP for TR 38.718-02-01 to introduce CA\_n34A-n40A\_BCS4 and 5 with MSD analysis**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**Draft CRs/CRs**

[**R4-2319858**](file:///D:\RAN4%23109\Docs\R4-2319858.zip) **Draft CR for 38.101-1 to introduce CA\_n8A-n20A-n28A-n75A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, DT*

**Decision: Endorsed.**

[**R4-2320173**](file:///D:\RAN4%23109\Docs\R4-2320173.zip) **CR for introducing NR-U uplink CA for NS\_53 and NS\_54**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1948 rev Cat: F (Rel-18)  
  
 Source: Charter Communications, Inc.*

**Decision: Revised to R4-2321926 (from R4-2320173).**

**[R4-2321926](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321926.zip) CR for introducing NR-U uplink CA for NS\_53 and NS\_54**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1948 rev Cat: F (Rel-18)  
  
 Source: Charter Communications, Inc., Skyworks Solutions, Inc., Nokia*

**Decision: Agreed.**

#### 7.1.2 Moderator summary and conclusions

[**R4-2318110**](file:///D:\RAN4%23109\Docs\R4-2318110.zip) **Topic summary for [109][104] NR\_Baskets\_Part\_1**

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

**Abstract:**

[109][100] Main Session AI 7.1

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321906**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321906.zip) **Draft CR to TS 38.101-1 (Rel-18): Add CA\_n5B BCS1**

*Type: draftCR For: Endorsement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-1x)  
  
 Source: Skyworks, Verizion, AT&T, Qualcomm, Murata, Apple*

**Decision: Endorsed.**

**New tdoc allocated**

[**R4-2321924**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321924.zip) **Ad hoc minutes on NR\_Baskets\_Part\_1**

*Type: other For: Approval  
 Source: Skyworks*

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2321927**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321927.zip) **WF on CA\_n7B A-MPR for BCS4/5**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Approved.**

[**R4-2321928**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321928.zip) **WF on nominal channel spacing for NR-U**

*Type: other For: Approval  
 Source: Skyworks*

**Decision: Approved.**

[**R4-2321929**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321929.zip) **WF on clarifying valid one uplink configuration**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Approved.**

[**R4-2321930**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321930.zip) **WF on CA\_n78-n104**

*Type: other For: Approval  
 Source: Qualcomm*

**Decision: Approved.**

### 7.2 Moderator summary and conclusions (for basket WI AI 7.3 to AI 7.26)

[**R4-2318111**](file:///D:\RAN4%23109\Docs\R4-2318111.zip) **Topic summary for [109][105] NR\_Baskets\_Part\_2**

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

**Abstract:**

[109][100] Main Session AI 7.3~7.8

**Decision: Noted.**

[**R4-2318112**](file:///D:\RAN4%23109\Docs\R4-2318112.zip) **Topic summary for [109][106] NR\_Baskets\_Part\_3**

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

**Abstract:**

[109][100] Main Session AI 7.9~7.13

**Decision: Noted.**

[**R4-2318114**](file:///D:\RAN4%23109\Docs\R4-2318114.zip) **Topic summary for [109][108] LTE\_NR\_HPUE\_FWVM**

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

**Abstract:**

[109][100] Main Session AI 7.16

**Decision: Noted.**

[**R4-2318115**](file:///D:\RAN4%23109\Docs\R4-2318115.zip) **Topic summary for [109][109] HPUE\_Basket\_EN-DC**

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

**Abstract:**

[109][100] Main Session AI 7.17

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2318116**](file:///D:\RAN4%23109\Docs\R4-2318116.zip) **Topic summary for [109][110] HPUE\_Basket\_Intra-CA\_TDD**

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

**Abstract:**

[109][100] Main Session AI 7.18, AI 7.19

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321703**](file:///D:\RAN4%23109\Docs\R4-2321703.zip) **CR for introduction of PC1.5 for NS\_50**

*Type: CR For: Agreement  
 38.1xx-0y v18.3.0 CR-1979 rev Cat: B (Rel-18)  
  
 Source: Apple, Huawei*

**Decision: Agreed.**

**Discussions of issues and conclusions in the first round**

[**R4-2318117**](file:///D:\RAN4%23109\Docs\R4-2318117.zip) **Topic summary for [109][111] HPUE\_Basket\_inter-CA\_SUL**

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

**Abstract:**

[109][100] Main Session AI 7.20

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2318118**](file:///D:\RAN4%23109\Docs\R4-2318118.zip) **Topic summary for [109][112] HPUE\_Basket\_FDD**

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

**Abstract:**

[109][100] Main Session AI 7.21, AI 7.22

Chair: the basket WI should be extended.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321715**](file:///D:\RAN4%23109\Docs\R4-2321715.zip) **WF on HPUE for FDD bands**

*Type: other For: Approval  
 Source: China Unicom*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

[**R4-2318119**](file:///D:\RAN4%23109\Docs\R4-2318119.zip) **Topic summary for [109][113] LTE\_NR\_Other\_WI**

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

**Abstract:**

[109][100] Main Session AI 7.14, 7.15, 7.23~7.27. AI 9.2

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321992**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321992.zip) **WF on simultanesou Rx-Tx requirements**

*Type: other For: Approval  
 Source: Apple*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 7.3 Rel-18 Dual Connectivity (DC) of 1 band LTE (1DL/1UL) and 1 NR band (1DL/1UL)

#### 7.3.1 Rapporteur input (WID/TR/big CR)

[**R4-2320527**](file:///D:\RAN4%23109\Docs\R4-2320527.zip) **TR 37.718-11-11 v1.2.0 Rel-18 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: draft TR For: Agreement  
 37.718-11-11 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: CHTTL*

**Decision: Withdrawn.**

[**R4-2320553**](file:///D:\RAN4%23109\Docs\R4-2320553.zip) **Big CR for Rel-18 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1090 rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Agreed.**

[**R4-2320576**](file:///D:\RAN4%23109\Docs\R4-2320576.zip) **Revised WID for Rel-18 Dual Connectivity (DC) of 1 LTE band (1DL/1UL) and 1 NR band (1DL/1UL)**

*Type: WID revised For: Endorsement  
 Source: CHTTL*

**Decision: Endorsed.**

#### 7.3.2 UE RF requirements without FR2 band

[**R4-2318255**](file:///D:\RAN4%23109\Docs\R4-2318255.zip) **Draft CR for TS38.101-3 Support of DC\_8B\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Inter-band EN-DC 8B\_n1A is added.

**Decision: Revised to R4-2321876 (from R4-2318255).**

[**R4-2321876**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321876.zip) **Draft CR for TS38.101-3 Support of DC\_8B\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Inter-band EN-DC 8B\_n1A is added.

**Decision: Endorsed.**

[**R4-2318662**](file:///D:\RAN4%23109\Docs\R4-2318662.zip) **draft CR to TS38.101-3 correction on NE-DC band combination DC\_3(n)AA**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: D (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Endorsed.**

[**R4-2319515**](file:///D:\RAN4%23109\Docs\R4-2319515.zip) **draftCR for 38.101-3 to introduce DC\_2C\_n28A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Telefonica*

**Decision: Endorsed.**

[**R4-2320586**](file:///D:\RAN4%23109\Docs\R4-2320586.zip) **draft CR for DC\_3-3\_n79, DC\_7-7\_n79**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

#### 7.3.3 UE RF requirements with FR2 band

### 7.4 Rel-18 Dual Connectivity (DC) of 2 bands LTE inter-band CA (2DL/1UL) and 1 NR band (1DL/1UL)

#### 7.4.1 Rapporteur input (WID/TR/big CR)

[**R4-2319702**](file:///D:\RAN4%23109\Docs\R4-2319702.zip) **TR 37.718-21-11 V0.9.0 for DC of 2 LTE band and 1 NR band**

*Type: draft TR For: Agreement  
 37.718-21-11 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319703**](file:///D:\RAN4%23109\Docs\R4-2319703.zip) **CR on introduction of completed DC of 2 bands LTE and 1 band NR from RAN4#109 into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1065 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319704**](file:///D:\RAN4%23109\Docs\R4-2319704.zip) **Rel-18 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: Endorsed.**

#### 7.4.2 UE RF requirements without FR2 band

[**R4-2318256**](file:///D:\RAN4%23109\Docs\R4-2318256.zip) **Draft CR for TS38.101-3 ENDC for FR1 2BLTE1BNR**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Inter-band EN-DC configurations within FR1 (three bands) as follows.

DC\_3A-8B\_n1A

DC\_3A-8B\_n77A

DC\_8B-11A\_n1A

DC\_8B-11A\_n3A

**Decision: Revised to R4-2321877 (from R4-2318256).**

[**R4-2321877**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321877.zip) **Draft CR for TS38.101-3 ENDC for FR1 2BLTE1BNR**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Inter-band EN-DC configurations within FR1 (three bands) as follows.

DC\_3A-8B\_n1A

DC\_3A-8B\_n77A

DC\_8B-11A\_n1A

DC\_8B-11A\_n3A

**Decision: Endorsed.**

[**R4-2319516**](file:///D:\RAN4%23109\Docs\R4-2319516.zip) **draftCR for 38.101-3 to introduce DC\_2C-7A\_n28A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Telefonica*

**Decision: Revised to R4-2321884 (from R4-2319516).**

[**R4-2321884**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321884.zip) **draftCR for 38.101-3 to introduce DC\_2C-7A\_n28A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Telefonica*

**Decision: Endorsed.**

[**R4-2319517**](file:///D:\RAN4%23109\Docs\R4-2319517.zip) **TP for TR 37.718-21-11 to introduce DC\_4A-5A\_n78A**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Telefonica*

**Decision: Approved.**

[**R4-2319608**](file:///D:\RAN4%23109\Docs\R4-2319608.zip) **Draft CR on TS 38.101-3 for delta TIB special values for 2L1N bands EN-DC configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

[**R4-2320105**](file:///D:\RAN4%23109\Docs\R4-2320105.zip) **TP to TR37.718-21-11 to add DC\_8A-39A\_n79A and DC\_8A-39A\_n79C**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321896 (from R4-2320105).**

[**R4-2321896**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321896.zip) **TP to TR37.718-21-11 to add DC\_8A-39A\_n79A and DC\_8A-39A\_n79C**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2320588**](file:///D:\RAN4%23109\Docs\R4-2320588.zip) **TP for TR 37.718-21-11: support of DC\_3\_7\_n79, DC\_3-3-7\_n79, DC\_3-7-7\_n79, DC\_3-3-7-7\_n79**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: CHTTL*

**Decision: Approved.**

[**R4-2320664**](file:///D:\RAN4%23109\Docs\R4-2320664.zip) **draft CR for update on DC\_1-3-3\_n78**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

[**R4-2319673**](file:///D:\RAN4%23109\Docs\R4-2319673.zip) **TP for 37.718-21-11 to include DC\_3A-5A\_n28A**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-21-11 to include DC\_3A-5A\_n28A

**Decision: Approved.**

[**R4-2320852**](file:///D:\RAN4%23109\Docs\R4-2320852.zip) **TP for 37.718-21-11 to include DC\_5A-7A\_n28A**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-21-11 to include DC\_5A-7A\_n28A

**Decision: Approved.**

[**R4-2319671**](file:///D:\RAN4%23109\Docs\R4-2319671.zip) **TP for 37.718-21-11 to include DC\_1A-5A\_n28A**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-21-11 to include DC\_1A-5A\_n28A

**Decision: Revised to R4-2321894 (from R4-2319671).**

[**R4-2321894**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321894.zip) **TP for 37.718-21-11 to include DC\_1A-5A\_n28A**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-21-11 to include DC\_1A-5A\_n28A

**Decision: Approved.**

**Withdrawn**

[**R4-2318263**](file:///D:\RAN4%23109\Docs\R4-2318263.zip) **TP for TR37.718-21-11 Support of DC\_8A-42A\_n79A**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Support of DC\_8A-42A\_n79A

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

#### 7.4.3 UE RF requirements with FR2 band

### 7.5 Rel-18 WID on DC of x bands LTE inter-band CA (x=3,4,5) and 1 NR band

#### 7.5.1 Rapporteur input (WID/TR/big CR)

[**R4-2320018**](file:///D:\RAN4%23109\Docs\R4-2320018.zip) **Revised Rel-18 WID on DC of x bands LTE inter-band CA (x=3,4,5) and 1 NR band**

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

**Abstract:**

Inclusion of requests provided for RAN4#108bis and RAN4#109

**Decision: Endorsed.**

[**R4-2320058**](file:///D:\RAN4%23109\Docs\R4-2320058.zip) **Big CR to introduce new combinations DC of x bands LTE inter-band CA (x345) and 1 NR band**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1082 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Captures agreed combinations at RAN4#108bis and shall be revised to also capture combinations agreed at RAN4#109

**Decision: Revised to R4-2321931 (from R4-2320058).**

[**R4-2321931**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321931.zip) **Big CR to introduce new combinations DC of x bands LTE inter-band CA (x345) and 1 NR band**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1082 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Captures agreed combinations at RAN4#108bis and shall be revised to also capture combinations agreed at RAN4#109

**Decision: Agreed.**

**Withdrawn**

[**R4-2320019**](file:///D:\RAN4%23109\Docs\R4-2320019.zip) **Big CR to introduce new combinations DC of x bands LTE inter-band CA (x345) and 1 NR band**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1081 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Captures agreed combinations at RAN4#108bis and shall be revised to also capture combinations agreed at RAN4#109

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

#### 7.5.2 UE RF requirements without FR2 band

[**R4-2318504**](file:///D:\RAN4%23109\Docs\R4-2318504.zip) **draft CR for TS 38101-3 to add x LTE and 1 NR inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Endorsed.**

[**R4-2319416**](file:///D:\RAN4%23109\Docs\R4-2319416.zip) **Draft CR for TS38.101-3 Addition of inter-band ENDC Combinations of x bands LTE inter-band CA (x45) and 1 NR band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, Rogers*

**Decision: Endorsed.**

[**R4-2319609**](file:///D:\RAN4%23109\Docs\R4-2319609.zip) **Draft CR for TS 38.101-3 to add DC\_3-7-20-28\_n78, DC\_1-1-3-7-20\_n78, DC\_1-3-3-7-20\_n78 and DC\_1-3-7-7-20\_n78 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321885 (from R4-2319609).**

[**R4-2321885**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321885.zip) **Draft CR for TS 38.101-3 to add DC\_3-7-20-28\_n78, DC\_1-1-3-7-20\_n78, DC\_1-3-3-7-20\_n78 and DC\_1-3-7-7-20\_n78 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2319610**](file:///D:\RAN4%23109\Docs\R4-2319610.zip) **Draft CR on TS 38.101-3 for delta TIB special values for x345L1N bands EN-DC configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

[**R4-2319654**](file:///D:\RAN4%23109\Docs\R4-2319654.zip) **draft CR 38.101-3 to add new DC configurations with xLTE and 1NR band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new DC configurations with xLTE and 1NR band

**Decision: Revised to R4-2321887 (from R4-2319654).**

[**R4-2321887**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321887.zip) **draft CR 38.101-3 to add new DC configurations with xLTE and 1NR band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new DC configurations with xLTE and 1NR band

**Decision: Endorsed.**

[**R4-2319657**](file:///D:\RAN4%23109\Docs\R4-2319657.zip) **draft CR for 38.101-3 to add new ENDC configurations with xLTE and 1NR bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR for 38.101-3 to add new ENDC configurations with xLTE and 1NR bands

**Decision: Revised to R4-2321889 (from R4-2319657).**

[**R4-2321889**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321889.zip) **draft CR for 38.101-3 to add new ENDC configurations with xLTE and 1NR bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR for 38.101-3 to add new ENDC configurations with xLTE and 1NR bands

**Decision: Endorsed.**

[**R4-2319672**](file:///D:\RAN4%23109\Docs\R4-2319672.zip) **TP for 37.718-21-11 to include DC\_3A-5A\_n28A**

*Type: pCR For: Approval  
 37.718-21-11 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-21-11 to include DC\_3A-5A\_n28A

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

#### 7.5.3 UE RF requirements with FR2 band

[**R4-2320071**](file:///D:\RAN4%23109\Docs\R4-2320071.zip) **Draft CR for 38.101-3 to add add new configurations for x LTE and 1 NR inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321895 (from R4-2320071).**

**[R4-2321895](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321895.zip) Draft CR for 38.101-3 to add add new configurations for x LTE and 1 NR inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2320046**](file:///D:\RAN4%23109\Docs\R4-2320046.zip) **Draft CR 38.101-3 to add new five bands EN-DC (FR1 and FR2)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Endorsed.**

### 7.6 Rel-18 WID: DC of x bands (x=1,2,3,4) LTE inter-band CA (xDL/1UL) and 2 bands NR inter-band CA (2DL/1UL)

#### 7.6.1 Rapporteur input (WID/TR/big CR)

[**R4-2318097**](file:///D:\RAN4%23109\Docs\R4-2318097.zip) **TS 38.101-3 big CR for DC\_R18\_xBLTE\_2BNR\_yDL2UL**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1031 rev Cat: B (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

TS38.101-3 Big CR for DC\_R18\_xBLTE\_2BNR\_yDL2UL. This CR contains the agreement in RAN4#108BIS meeting and will be revised during the meeting to reflect the agreed draft CR and TP and targeted to be agreed in the post meeting.

**Decision: Revised to R4-2321829 (from R4-2318097).**

[**R4-2321829**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321829.zip) **TS 38.101-3 big CR for DC\_R18\_xBLTE\_2BNR\_yDL2UL**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1031 rev Cat: B (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

TS38.101-3 Big CR for DC\_R18\_xBLTE\_2BNR\_yDL2UL. This CR contains the agreement in RAN4#108BIS meeting and will be revised during the meeting to reflect the agreed draft CR and TP and targeted to be agreed in the post meeting.

**Decision: Agreed.**

[**R4-2318098**](file:///D:\RAN4%23109\Docs\R4-2318098.zip) **TR 37.718-11-21 v0.9.0 for DC\_R18\_xBLTE\_2BNR\_yDL2UL**

*Type: draft TR For: Agreement  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: LG Electronics Deutschland*

**Abstract:**

TR 37.718-11-21 v0.9.0 for DC\_R18\_xBLTE\_2BNR\_yDL2UL

**Decision: Agreed.**

[**R4-2318099**](file:///D:\RAN4%23109\Docs\R4-2318099.zip) **Revised WID on Rel-18 Dual Connectivity (DC) of x bands (x=1,2,3,4) LTE inter-band CA (xDL/1UL) and 2 bands NR inter-band CA (2DL/1UL)**

*Type: WID revised For: Endorsement  
 Source: LG Electronics Deutschland*

**Abstract:**

Revised WID on Rel-18 Dual Connectivity (DC) of x bands (x=1,2,3,4) LTE inter-band CA (xDL/1UL) and 2 bands NR inter-band CA (2DL/1UL)

**Decision: Endorsed.**

#### 7.6.2 UE RF requirements without FR2 band

[**R4-2318257**](file:///D:\RAN4%23109\Docs\R4-2318257.zip) **Draft CR for TS38.101-3 ENDC for FR1 xBLTE2BNR**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Inter-band EN-DC configurations within FR1 (three bands and four bands) as follows.

DC\_8B\_n1A-n3A

DC\_8B\_n1A-n77A

DC\_8B-11A\_n1A-n77A

**Decision: Revised to R4-2321878 (from R4-2318257).**

[**R4-2321878**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321878.zip) **Draft CR for TS38.101-3 ENDC for FR1 xBLTE2BNR**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Inter-band EN-DC configurations within FR1 (three bands and four bands) as follows.

DC\_8B\_n1A-n3A

DC\_8B\_n1A-n77A

DC\_8B-11A\_n1A-n77A

**Decision: Endorsed.**

[**R4-2318265**](file:///D:\RAN4%23109\Docs\R4-2318265.zip) **TP for TR37.718-11-21 Support of DC\_8A\_n1A-n79A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Support of DC\_8A\_n1A-n79A

**Decision: Revised to R4-2321879 (from R4-2318265).**

[**R4-2321879**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321879.zip) **TP for TR37.718-11-21 Support of DC\_8A\_n1A-n79A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Support of DC\_8A\_n1A-n79A

**Decision: Approved.**

[**R4-2318505**](file:///D:\RAN4%23109\Docs\R4-2318505.zip) **draft CR for TS 38101-3 to add x LTE and 2 NR inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to R4-2321880 (from R4-2318505).**

[**R4-2321880**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321880.zip) **draft CR for TS 38101-3 to add x LTE and 2 NR inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Endorsed.**

[**R4-2319417**](file:///D:\RAN4%23109\Docs\R4-2319417.zip) **Draft CR for TS38.101-3 Addition of inter-band ENDC Combinations with 2 NR band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, Rogers*

**Decision: Revised to R4-2321883 (from R4-2319417).**

[**R4-2321883**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321883.zip) **Draft CR for TS38.101-3 Addition of inter-band ENDC Combinations with 2 NR band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, Rogers*

**Decision: Endorsed.**

[**R4-2319611**](file:///D:\RAN4%23109\Docs\R4-2319611.zip) **Draft CR on TS 38.101-3 for delta TIB special values for x1234L2N bands EN-DC configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Revised to R4-2321886 (from R4-2319611).**

[**R4-2321886**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321886.zip) **Draft CR on TS 38.101-3 for delta TIB special values for x1234L2N bands EN-DC configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

[**R4-2319655**](file:///D:\RAN4%23109\Docs\R4-2319655.zip) **draft CR 38.101-3 to add new DC configurations with xLTE and 2NR bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new DC configurations with xLTE and 2NR bands

**Decision: Revised to R4-2321888 (from R4-2319655).**

[**R4-2321888**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321888.zip) **draft CR 38.101-3 to add new DC configurations with xLTE and 2NR bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new DC configurations with xLTE and 2NR bands

**Decision: Endorsed.**

[**R4-2319659**](file:///D:\RAN4%23109\Docs\R4-2319659.zip) **draft CR for 38.101-3 to add DC\_1A-3A-5A-7A\_n28A-n78A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR for 38.101-3 to add DC\_1A-3A-5A-7A\_n28A-n78A

**Decision: Not pursued.**

[**R4-2319667**](file:///D:\RAN4%23109\Docs\R4-2319667.zip) **TP for 37.718-11-21 to include DC\_5A\_n1A-n28A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n1A-n28A

**Decision: Revised to R4-2321890 (from R4-2319667).**

[**R4-2321890**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321890.zip) **TP for 37.718-11-21 to include DC\_5A\_n1A-n28A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n1A-n28A

**Decision: Approved.**

[**R4-2319668**](file:///D:\RAN4%23109\Docs\R4-2319668.zip) **TP for 37.718-11-21 to include DC\_5A\_n3A-n28A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n3A-n28A

**Decision: Revised to R4-2321891 (from R4-2319668).**

[**R4-2321891**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321891.zip) **TP for 37.718-11-21 to include DC\_5A\_n3A-n28A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n3A-n28A

**Decision: Approved.**

[**R4-2319669**](file:///D:\RAN4%23109\Docs\R4-2319669.zip) **TP for 37.718-11-21 to include DC\_5A\_n28A-n78A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n28A-n78A

**Decision: Revised to R4-2321892 (from R4-2319669).**

[**R4-2321892**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321892.zip) **TP for 37.718-11-21 to include DC\_5A\_n28A-n78A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n28A-n78A

**Decision: Approved.**

[**R4-2319670**](file:///D:\RAN4%23109\Docs\R4-2319670.zip) **TP for 37.718-11-21 to include DC\_5A\_n28A-n79A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n28A-n79A

**Decision: Revised to R4-2321893 (from R4-2319670).**

[**R4-2321893**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321893.zip) **TP for 37.718-11-21 to include DC\_5A\_n28A-n79A**

*Type: pCR For: Approval  
 37.718-11-21 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 37.718-11-21 to include DC\_5A\_n28A-n79A

**Decision: Approved.**

[**R4-2319758**](file:///D:\RAN4%23109\Docs\R4-2319758.zip) **Rel18 Cat F draft CR for 38.101-3 Correct some minor typos for DC\_R18\_xBLTE\_2BNR\_yDL2UL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2320598**](file:///D:\RAN4%23109\Docs\R4-2320598.zip) **draft CR for TS 38.101-3: configurations for x LTE and 2 NR inter-band EN-DC in FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

#### 7.6.3 UE RF requirements with FR2 band

[**R4-2318669**](file:///D:\RAN4%23109\Docs\R4-2318669.zip) **draft CR to TS38.101-3 band combinations for DC\_R18\_xBLTE\_2BNR\_yDL2UL with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to R4-2321881 (from R4-2318669).**

[**R4-2321881**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321881.zip) **draft CR to TS38.101-3 band combinations for DC\_R18\_xBLTE\_2BNR\_yDL2UL with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Endorsed.**

[**R4-2318670**](file:///D:\RAN4%23109\Docs\R4-2318670.zip) **draft CR to TS38.101-3 band combinations for DC\_R18\_xBLTE\_2BNR\_yDL2UL without FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to R4-2321882 (from R4-2318670).**

[**R4-2321882**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321882.zip) **draft CR to TS38.101-3 band combinations for DC\_R18\_xBLTE\_2BNR\_yDL2UL without FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Endorsed.**

[**R4-2320599**](file:///D:\RAN4%23109\Docs\R4-2320599.zip) **draft CR for DC\_3A-3A-7A-7A\_n8A-n257K**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

### 7.7 Rel-18 Dual Connectivity (DC) of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and y bands NR inter-band CA (yDL/1UL)

#### 7.7.1 Rapporteur input (WID/TR/big CR)

[**R4-2320110**](file:///D:\RAN4%23109\Docs\R4-2320110.zip) **Revised WID: Rel-18 Dual Connectivity (DC) of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and y bands NR inter-band CA (yDL/1UL)**

*Type: WID revised For: Endorsement  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2320111**](file:///D:\RAN4%23109\Docs\R4-2320111.zip) **TS 38.101-3 big CR for DC\_R18\_xBLTE\_yBNR\_zDL2UL**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1085 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

This big CR is re-submission form the last endorsed draft big CR([R4-2317779](file:///D:\RAN4%23109\Docs\R4-2317779.zip))

**Decision: Revised to R4-2321932 (from R4-2320111).**

**[R4-2321932](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321932.zip) TS 38.101-3 big CR for DC\_R18\_xBLTE\_yBNR\_zDL2UL**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1085 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

This big CR is re-submission form the last endorsed draft big CR([R4-2317779](file:///D:\RAN4%23109\Docs\R4-2317779.zip))

**Decision: Agreed.**

#### 7.7.2 UE RF requirements without FR2 band

[**R4-2319612**](file:///D:\RAN4%23109\Docs\R4-2319612.zip) **Draft CR on TS 38.101-3 for delta TIB special values for xBLTE\_yBNR\_zDL2UL bands EN-DC configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

#### 7.7.3 UE RF requirements with FR2 band

[**R4-2320104**](file:///D:\RAN4%23109\Docs\R4-2320104.zip) **draft CR to TS38.101-3[R18]\_DC\_3A\_n40A-n79A-n258A and DC\_3A\_n40A-n79A-n258A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2320601**](file:///D:\RAN4%23109\Docs\R4-2320601.zip) **draft CR for DC\_3A-3A-7A-7A\_n8A-n78A-n257K**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

### 7.8 Rel-18 WID: DC of x LTE bands and y NR bands with z bands DL and 3 bands UL (x=1, 2, 3, 4, y=1, 2; 3<=z<=6)

#### 7.8.1 Rapporteur input (WID/TR/big CR)

[**R4-2319414**](file:///D:\RAN4%23109\Docs\R4-2319414.zip) **Revised Rel-18 WID on DC of x LTE bands and y NR bands with z bands DL and 3 bands UL**

*Type: WID revised For: Endorsement  
 Source: Samsung*

**Decision: Withdrawn.**

[**R4-2319415**](file:///D:\RAN4%23109\Docs\R4-2319415.zip) **Big CR on introduction of completed DC of x LTE bands and y NR bands with z bands DL and 3 bands UL**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1058 rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Abstract:**

big CR

**Decision: Withdrawn.**

#### 7.8.2 UE RF requirements without FR2 band

#### 7.8.3 UE RF requirements with FR2 band

### 7.9 Rel-18 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y)

#### 7.9.1 Rapporteur input (WID/TR/big CR)

[**R4-2318538**](file:///D:\RAN4%23109\Docs\R4-2318538.zip) **draftCR for 38.101-1 Intraband CA corrections**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2320300**](file:///D:\RAN4%23109\Docs\R4-2320300.zip) **Revised WID NR Intra-band Rel-18**

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

**Abstract:**

Revised WID NR Intra-band Rel-18

**Decision: Endorsed.**

[**R4-2320301**](file:///D:\RAN4%23109\Docs\R4-2320301.zip) **big CR 38.101-1 new combinations Rel-18 NR Intra-band**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1952 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-1 new combinations Rel-18 NR Intra-band

**Decision: Agreed.**

[**R4-2320302**](file:///D:\RAN4%23109\Docs\R4-2320302.zip) **big CR 38.101-2 new combinations Rel-18 NR Intra-band**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0687 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-2 new combinations Rel-18 NR Intra-band

**Decision: Agreed.**

[**R4-2320303**](file:///D:\RAN4%23109\Docs\R4-2320303.zip) **TR 38.718-01-01 v0.7.0 Rel-18 NR Intra-band**

*Type: draft TR For: Agreement  
 38.718-01-01 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TR 38.718-01-01 v0.7.0 Rel-18 NR Intra-band

**Decision: Agreed.**

#### 7.9.2 UE RF requirements for FR1 (resubmitted CR)

#### 7.9.3 UE RF requirements for FR2

**[R4-2319851](file:///D:\\RAN4%23109\\Docs\\R4-2319851.zip) CR for 38.101-2 to add new configurations for the existing NR intra-band CA configurations**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0686 rev Cat: B (Rel-18)  
  
 Source: Samsung, Verizon*

**Abstract:**

The CA combinations CA\_n260(A-I) and CA\_n260(G-I) were proposed in the draft CR [R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) which was endorsed in RAN4 #108-bis. Chair guidance:Samsung re-submit the formal CR corresponding to the follow endorsed draft CR in RAN4#109

[R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) Draft CR fo

**Decision: Agreed.**

**[R4-2321849](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321849.zip) CR for 38.101-2 to add new configurations for the existing NR intra-band CA configurations**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0686 rev Cat: B (Rel-18)  
  
 Source: Samsung, Verizon*

**Abstract:**

The CA combinations CA\_n260(A-I) and CA\_n260(G-I) were proposed in the draft CR [R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) which was endorsed in RAN4 #108-bis. Chair guidance:Samsung re-submit the formal CR corresponding to the follow endorsed draft CR in RAN4#109

[R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) Draft CR fo

**Decision: Withdrawn.**

[**R4-2320322**](file:///D:\RAN4%23109\Docs\R4-2320322.zip) **draft CR 38.101-2 adding CA\_n257O, CA\_n257P, CA\_n257Q**

*Type: draftCR For: Endorsement  
 38.101-2 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-2 adding CA\_n257O, CA\_n257P, CA\_n257Q

**Decision: Endorsed.**

**[R4-2319718](file:///D:\\RAN4%23109\\Docs\\R4-2319718.zip) CR for 38.101-2 to add new configurations for the existing NR intra-band CA configurations**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0685 rev Cat: B (Rel-18)  
  
 Source: Samsung, Verizon*

**Abstract:**

The CA combinations CA\_n260(A-I) and CA\_n260(G-I) were proposed in the draft CR [R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) which was endorsed in RAN4 #108-bis. Chair guidance:Samsung re-submit the formal CR corresponding to the follow endorsed draft CR in RAN4#109

[R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) Draft CR fo

**Decision: Withdrawn.**

**[R4-2321845](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321845.zip) CR for 38.101-2 to add new configurations for the existing NR intra-band CA configurations**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0685 rev Cat: B (Rel-18)  
  
 Source: Samsung, Verizon*

**Abstract:**

The CA combinations CA\_n260(A-I) and CA\_n260(G-I) were proposed in the draft CR [R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) which was endorsed in RAN4 #108-bis. Chair guidance:Samsung re-submit the formal CR corresponding to the follow endorsed draft CR in RAN4#109

[R4-2315955](file:///D:\RAN4%23109\Docs\R4-2315955.zip) Draft CR fo

**Decision: Withdrawn.**

### 7.10 Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)

#### 7.10.1 Rapporteur input (WID/TR/big CR)

[**R4-2320106**](file:///D:\RAN4%23109\Docs\R4-2320106.zip) **Revised WID:Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)**

*Type: WID revised For: Endorsement  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2320107**](file:///D:\RAN4%23109\Docs\R4-2320107.zip) **TR38.718-02-01 v0.9.0: Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)**

*Type: draft TR For: Agreement  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2320108**](file:///D:\RAN4%23109\Docs\R4-2320108.zip) **TS 38.101-1 big CR for NR\_CADC\_R18\_2BDL\_xBUL**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1945 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

This big CR is re-submission form the last endorsed draft big CR([R4-2317780](file:///D:\RAN4%23109\Docs\R4-2317780.zip))

**Decision: Revised to R4-2321864 (from R4-2320108).**

[**R4-2321864**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321864.zip) **TS 38.101-1 big CR for NR\_CADC\_R18\_2BDL\_xBUL**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1945 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

This big CR is re-submission form the last endorsed draft big CR([R4-2317780](file:///D:\RAN4%23109\Docs\R4-2317780.zip))

**Decision: Agreed.**

[**R4-2320109**](file:///D:\RAN4%23109\Docs\R4-2320109.zip) **TS 38.101-3 big CR for NR\_CADC\_R18\_2BDL\_xBUL**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1084 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

This big CR is re-submission form the last endorsed draft big CR([R4-2317781](file:///D:\RAN4%23109\Docs\R4-2317781.zip))

**Decision: Revised to R4-2321865 (from R4-2320109).**

[**R4-2321865**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321865.zip) **TS 38.101-3 big CR for NR\_CADC\_R18\_2BDL\_xBUL**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1084 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

This big CR is re-submission form the last endorsed draft big CR([R4-2317781](file:///D:\RAN4%23109\Docs\R4-2317781.zip))

**Decision: Agreed.**

**TP**

[**R4-2320023**](file:///D:\RAN4%23109\Docs\R4-2320023.zip) **TP to TR 38.718-02-01 Addition of UE co-existence studies for triple beat**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

While this is submitted to the TR WI the related discussion is treated in the FS\_SimBC WI agenda. The reason is to ensure the TR Rapporteur is aware of the TP.

**Decision: Revised to R4-2321850 (from R4-2320023).**

[**R4-2321850**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321850.zip) **TP to TR 38.718-02-01 Addition of UE co-existence studies for triple beat**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

While this is submitted to the TR WI the related discussion is treated in the FS\_SimBC WI agenda. The reason is to ensure the TR Rapporteur is aware of the TP.

**Decision: Approved.**

[**R4-2318539**](file:///D:\RAN4%23109\Docs\R4-2318539.zip) **draftCR for 38.101-1 Carrier Aggregation for 2 bands DL corrections**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Revised to R4-2321834 (from R4-2318539).**

**[R4-2321834](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321834.zip) draftCR for 38.101-1 Carrier Aggregation for 2 bands DL corrections**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

#### 7.10.2 UE RF requirements without FR2 band

[**R4-2318254**](file:///D:\RAN4%23109\Docs\R4-2318254.zip) **Draft CR for TS38.101-1 Support of CA\_n77(2A)-n79A, CA\_n77(3A)-n79A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Configuration of uplink CA\_n77(2A) is added to 2 Band CA combination of Band n77-n79.

**Decision: Revised to R4-2321831 (from R4-2318254).**

[**R4-2321831**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321831.zip) **Draft CR for TS38.101-1 Support of CA\_n77(2A)-n79A, CA\_n77(3A)-n79A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Configuration of uplink CA\_n77(2A) is added to 2 Band CA combination of Band n77-n79.

**Decision: Endorsed.**

[**R4-2318261**](file:///D:\RAN4%23109\Docs\R4-2318261.zip) **TP for TR38.718-02-01 Support of CA\_n8-n77**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Addition of CA\_n8-n77

**Decision: Revised to R4-2321832 (from R4-2318261).**

[**R4-2321832**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321832.zip) **TP for TR38.718-02-01 Support of CA\_n8-n77**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

Addition of CA\_n8-n77

**Decision: Approved.**

[**R4-2319613**](file:///D:\RAN4%23109\Docs\R4-2319613.zip) **Draft CR on TS 38.101-1 for delta TIB special values for 2 bands NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

[**R4-2319751**](file:///D:\RAN4%23109\Docs\R4-2319751.zip) **Draft CR for TS 38.101-1 to add PC3 new configurations for 2 bands NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, DISH Network, Fujitsu*

**Decision: Endorsed.**

[**R4-2319800**](file:///D:\RAN4%23109\Docs\R4-2319800.zip) **Draft for CR 38.101-1 to add missed harmonic mixing MSD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Revised to R4-2321848 (from R4-2319800).**

[**R4-2321848**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321848.zip) **Draft for CR 38.101-1 to add missed harmonic mixing MSD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2320034**](file:///D:\RAN4%23109\Docs\R4-2320034.zip) **Draft CR 38.101-1 to add missed approved CA\_n2A-n71A combination**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia, US Cellular*

**Abstract:**

Re-adding already approved combinations which seems missed implemented to the specificaiton.

**Decision: Revised to R4-2321933 (from R4-2320034).**

[**R4-2321933**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321933.zip) **Draft CR 38.101-1 to add missed approved CA\_n2A-n71A combination**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia, US Cellular*

**Abstract:**

Re-adding already approved combinations which seems missed implemented to the specificaiton.

**Decision: Endorsed.**

[**R4-2320038**](file:///D:\RAN4%23109\Docs\R4-2320038.zip) **TP to TR 38.718-02-01 Addition of CA\_n77-n102 and DC\_n77-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to R4-2321852 (from R4-2320038).**

[**R4-2321852**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321852.zip) **TP to TR 38.718-02-01 Addition of CA\_n77-n102 and DC\_n77-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2320039**](file:///D:\RAN4%23109\Docs\R4-2320039.zip) **TP to TR 38.718-02-01 Addition to CA\_n1-n102 and DC\_n1-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to R4-2321853 (from R4-2320039).**

[**R4-2321853**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321853.zip) **TP to TR 38.718-02-01 Addition to CA\_n1-n102 and DC\_n1-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2320040**](file:///D:\RAN4%23109\Docs\R4-2320040.zip) **TP to TR 38.718-02-01 Addition to CA\_n28-n102 and DC\_n28-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to R4-2321854 (from R4-2320040).**

[**R4-2321854**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321854.zip) **TP to TR 38.718-02-01 Addition to CA\_n28-n102 and DC\_n28-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2320041**](file:///D:\RAN4%23109\Docs\R4-2320041.zip) **TP to TR 38.718-02-01 Addition to CA\_n3-n102 and DC\_n3-n10**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to R4-2321855 (from R4-2320041).**

[**R4-2321855**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321855.zip) **TP to TR 38.718-02-01 Addition to CA\_n3-n102 and DC\_n3-n10**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2320042**](file:///D:\RAN4%23109\Docs\R4-2320042.zip) **TP to TR 38.718-02-01 Addition to CA\_n78-n102 and DC\_n78-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to R4-2321856 (from R4-2320042).**

[**R4-2321856**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321856.zip) **TP to TR 38.718-02-01 Addition to CA\_n78-n102 and DC\_n78-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2320043**](file:///D:\RAN4%23109\Docs\R4-2320043.zip) **TP to TR 38.718-02-01 Addition to CA\_n7-n102 and DC\_n7-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to R4-2321857 (from R4-2320043).**

[**R4-2321857**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321857.zip) **TP to TR 38.718-02-01 Addition to CA\_n7-n102 and DC\_n7-n102**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2320182**](file:///D:\RAN4%23109\Docs\R4-2320182.zip) **MSD for CA\_n78A-n104A**

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

**Abstract:**

Initial MSD analysis for Harmonic, Harmonic mixing, and Cross-band interference for CA\_n78A-n104A is provided in this contribution

**Decision: Noted.**

[**R4-2321866**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321866.zip) **MSD for CA\_n78A-n104A**

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

**Abstract:**

Initial MSD analysis for Harmonic, Harmonic mixing, and Cross-band interference for CA\_n78A-n104A is provided in this contribution

**Decision: Withdrawn.**

[**R4-2320307**](file:///D:\RAN4%23109\Docs\R4-2320307.zip) **TP for 38.718-02-01 adding CA\_n78-n104**

*Type: pCR For: Approval  
 38.718-02-01 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Orange*

**Abstract:**

TP for 38.718-02-01 adding CA\_n78-n104

Discussed under [104]

**Decision: Noted.**

[**R4-2321867**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321867.zip) **TP for 38.718-02-01 adding CA\_n78-n104**

*Type: pCR For: Approval  
 38.718-02-01 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Orange*

**Abstract:**

TP for 38.718-02-01 adding CA\_n78-n104

Discussed under [104]

**Decision: Withdrawn.**

[**R4-2320308**](file:///D:\RAN4%23109\Docs\R4-2320308.zip) **draft CR 38.101-1 for adding 2 bands NR CA BCS's and for adding 2 bands NR DC**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, BT plc*

**Abstract:**

draft CR 38.101-1 for adding 2 bands NR CA BCS's and for adding 2 bands NR DC

**Decision: Revised to R4-2321868 (from R4-2320308).**

[**R4-2321868**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321868.zip) **draft CR 38.101-1 for adding 2 bands NR CA BCS's and for adding 2 bands NR DC**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, BT plc*

**Abstract:**

draft CR 38.101-1 for adding 2 bands NR CA BCS's and for adding 2 bands NR DC

**Decision: Endorsed.**

[**R4-2320713**](file:///D:\RAN4%23109\Docs\R4-2320713.zip) **[NR\_CADC\_R18\_2BDL\_xBUL-Core] TP for TR 38718-02-01 to add UL CA\_n77(2A) to DL CA\_n41A-n77(2A)**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Revised to R4-2321874 (from R4-2320713).**

**[R4-2321874](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321874.zip) [NR\_CADC\_R18\_2BDL\_xBUL-Core] TP for TR 38718-02-01 to add UL CA\_n77(2A) to DL CA\_n41A-n77(2A)**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Revised to R4-2321939 (from R4-2321874).**

[**R4-2321939**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321939.zip) **[NR\_CADC\_R18\_2BDL\_xBUL-Core] TP for TR 38718-02-01 to add UL CA\_n77(2A) to DL CA\_n41A-n77(2A)**

*Type: pCR For: Approval  
 38.718-02-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Approved.**

#### 7.10.3 UE RF requirements with FR2 band

[**R4-2318094**](file:///D:\RAN4%23109\Docs\R4-2318094.zip) **draft CR 38.101-3 to add new NR-CA FR2 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Rogers Communications Canada, Ericsson*

**Abstract:**

Adding new band combination configurations

**Decision: Revised to R4-2321830 (from R4-2318094).**

[**R4-2321830**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321830.zip) **draft CR 38.101-3 to add new NR-CA FR2 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Rogers Communications Canada, Ericsson*

**Abstract:**

Adding new band combination configurations

**Decision: Endorsed.**

[**R4-2318095**](file:///D:\RAN4%23109\Docs\R4-2318095.zip) **draft CR to add new NR-DC FR2 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Rogers Communications Canada, Ericsson*

**Abstract:**

Adding new band combination configurations

**Decision: Not pursued.**

[**R4-2319719**](file:///D:\RAN4%23109\Docs\R4-2319719.zip) **Draft CR for 38.101-3 to add new inter-band NR-CA and NR-DC configurations (two bands)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Abstract:**

The inter-band CA combinations including CA\_n77A-n258(A-D), CA\_n77A-n258(A-H), etc. were proposed in the draftCR [R4-2314787](file:///D:\RAN4%23109\Docs\R4-2314787.zip), which was endorsed in RAN4 #108. However, the combinations were omitted in the current TS 38.101-3 Version 18.3.0

**Decision: Not pursued.**

[**R4-2320033**](file:///D:\RAN4%23109\Docs\R4-2320033.zip) **Draft CR 38.101-3 to add missed approved 2CA of n66 n71 n257 n260**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia, Telus, Bell Mobility*

**Abstract:**

Re-adding already approved combinations which seems missed implemented to the specificaiton.

**Decision: Not pursued.**

[**R4-2320311**](file:///D:\RAN4%23109\Docs\R4-2320311.zip) **Resubmission of endorsed** [**R4-2314805**](file:///D:\RAN4%23109\Docs\R4-2314805.zip)**, draft CR 38.101-3 to add CADC\_n78-n258 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

Resubmission of endorsed [R4-2314805](file:///D:\RAN4%23109\Docs\R4-2314805.zip), draft CR 38.101-3 to add CADC\_n78-n258 configurations

**Decision: Withdrawn.**

[**R4-2320317**](file:///D:\RAN4%23109\Docs\R4-2320317.zip) **draft CR 38.101-3 corrections NR CA 2 bands combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 corrections NR CA 2 bands combinations with FR2

**Decision: Revised to R4-2321871 (from R4-2320317).**

[**R4-2321871**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321871.zip) **draft CR 38.101-3 corrections NR CA 2 bands combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 corrections NR CA 2 bands combinations with FR2

**Decision: Endorsed.**

[**R4-2320446**](file:///D:\RAN4%23109\Docs\R4-2320446.zip) **CR for 38.101-3: Missing 2BDL xBUL Combinations from R4-2312482**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1087 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA, Ericsson, Telstra*

**Decision: Revised to R4-2321873 (from R4-2320446).**

**[R4-2321873](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321873.zip) CR for 38.101-3: Missing 2BDL xBUL Combinations from R4-2312482**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1087 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA, Ericsson, Telstra*

**Decision: Agreed.**

### 7.11 Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with x bands UL (x=1,2)

#### 7.11.1 Rapporteur input (WID/TR/big CR)

[**R4-2319600**](file:///D:\RAN4%23109\Docs\R4-2319600.zip) **TR38.718-03-01 v0.9.0 on Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with x bands UL (x=1,2)**

*Type: draft TR For: Agreement  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319601**](file:///D:\RAN4%23109\Docs\R4-2319601.zip) **Big CR to reflect the completed NR inter-band CA DC combinations for 3 bands DL with up to 2 bands UL into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1914 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321835 (from R4-2319601).**

[**R4-2321835**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321835.zip) **Big CR to reflect the completed NR inter-band CA DC combinations for 3 bands DL with up to 2 bands UL into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1914 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319602**](file:///D:\RAN4%23109\Docs\R4-2319602.zip) **Big CR to reflect the completed NR inter-band CA DC combinations for 3 bands DL with up to 2 bands UL into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1063 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321836 (from R4-2319602).**

[**R4-2321836**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321836.zip) **Big CR to reflect the completed NR inter-band CA DC combinations for 3 bands DL with up to 2 bands UL into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1063 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319603**](file:///D:\RAN4%23109\Docs\R4-2319603.zip) **Revised WID:Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with x bands UL (x=1,2)**

*Type: WID revised For: Endorsement  
 Source: ZTE Corporation*

**Decision: Endorsed.**

**TP**

[**R4-2320024**](file:///D:\RAN4%23109\Docs\R4-2320024.zip) **TP to TR 38.718-03-01 Addition of UE co-existence studies for triple beat**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

While this is submitted to the TR WI the related discussion is treated in the FS\_SimBC WI agenda. The reason is to ensure the TR Rapporteur is aware of the TP.

**Decision: Revised to R4-2321851 (from R4-2320024).**

[**R4-2321851**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321851.zip) **TP to TR 38.718-03-01 Addition of UE co-existence studies for triple beat**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

While this is submitted to the TR WI the related discussion is treated in the FS\_SimBC WI agenda. The reason is to ensure the TR Rapporteur is aware of the TP.

**Decision: Approved.**

**Draft CR**

[**R4-2318540**](file:///D:\RAN4%23109\Docs\R4-2318540.zip) **draftCR for 38.101-1 Carrier Aggregation for 3 bands DL corrections**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

#### 7.11.2 UE RF requirements without FR2 band

[**R4-2318502**](file:///D:\RAN4%23109\Docs\R4-2318502.zip) **draft CR for TS 38101-1 to add 3 bands DL NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to R4-2321833 (from R4-2318502).**

[**R4-2321833**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321833.zip) **draft CR for TS 38101-1 to add 3 bands DL NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Endorsed.**

[**R4-2318801**](file:///D:\RAN4%23109\Docs\R4-2318801.zip) **DraftCR for inter band CA DC combinations of 3BDLxUL to TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Endorsed.**

[**R4-2319614**](file:///D:\RAN4%23109\Docs\R4-2319614.zip) **Draft CR on TS 38.101-1 for delta TIB special values for 3 bands NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

[**R4-2319656**](file:///D:\RAN4%23109\Docs\R4-2319656.zip) **draft CR for 38.101-1 to add CA\_n1A-n78A-n79A BCS 4 and 5**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR for 38.101-1 to add CA\_n1A-n78A-n79A BCS 4 and 5

**Decision: Endorsed.**

[**R4-2319660**](file:///D:\RAN4%23109\Docs\R4-2319660.zip) **TP for 38.718-03-01 to include CA\_n1-n5-n79**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n1-n5-n79

**Decision: Revised to R4-2321840 (from R4-2319660).**

[**R4-2321840**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321840.zip) **TP for 38.718-03-01 to include CA\_n1-n5-n79**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n1-n5-n79

**Decision: Approved.**

[**R4-2319661**](file:///D:\RAN4%23109\Docs\R4-2319661.zip) **TP for 38.718-03-01 to include CA\_n3-n5-n28**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n3-n5-n28

**Decision: Revised to R4-2321841 (from R4-2319661).**

[**R4-2321841**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321841.zip) **TP for 38.718-03-01 to include CA\_n3-n5-n28**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n3-n5-n28

**Decision: Approved.**

[**R4-2319662**](file:///D:\RAN4%23109\Docs\R4-2319662.zip) **TP for 38.718-03-01 to include CA\_n3-n5-n79**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n3-n5-n79

**Decision: Revised to R4-2321842 (from R4-2319662).**

[**R4-2321842**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321842.zip) **TP for 38.718-03-01 to include CA\_n3-n5-n79**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n3-n5-n79

**Decision: Approved.**

[**R4-2319663**](file:///D:\RAN4%23109\Docs\R4-2319663.zip) **TP for 38.718-03-01 to include CA\_n5-n28-n79**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n5-n28-n79

**Decision: Approved.**

[**R4-2319664**](file:///D:\RAN4%23109\Docs\R4-2319664.zip) **TP for 38.718-03-01 to include CA\_n5-n78-n79**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n5-n78-n79

**Decision: Revised to R4-2321843 (from R4-2319664).**

[**R4-2321843**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321843.zip) **TP for 38.718-03-01 to include CA\_n5-n78-n79**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n5-n78-n79

**Decision: Approved.**

[**R4-2319665**](file:///D:\RAN4%23109\Docs\R4-2319665.zip) **TP for 38.718-03-01 to include CA\_n5-n28-n78**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n5-n28-n78

**Decision: Revised to R4-2321844 (from R4-2319665).**

[**R4-2321844**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321844.zip) **TP for 38.718-03-01 to include CA\_n5-n28-n78**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n5-n28-n78

**Decision: Approved.**

[**R4-2319666**](file:///D:\RAN4%23109\Docs\R4-2319666.zip) **TP for 38.718-03-01 to include CA\_n1-n5-n78**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n1-n5-n78

**Decision: Withdrawn.**

[**R4-2319752**](file:///D:\RAN4%23109\Docs\R4-2319752.zip) **Draft CR for TS 38.101-1 to add PC3 new configurations for 3 bands NR CA and correct the channel bandwidth of CA\_n26A-n66(2A)-n71A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, DISH Network, Fujitsu*

**Decision: Endorsed.**

[**R4-2319753**](file:///D:\RAN4%23109\Docs\R4-2319753.zip) **TP for TR 38.718-03-01 to include CA\_n26-n70-n71**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, DISH Network, Fujitsu*

**Decision: Approved.**

[**R4-2319768**](file:///D:\RAN4%23109\Docs\R4-2319768.zip) **Rel18 Cat F draft CR for 38.101-1 Correct the notes of MSD due to IMD for PC3 CA\_n5-n7-n77 in clause 7.3A.5**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Endorsed.**

[**R4-2320047**](file:///D:\RAN4%23109\Docs\R4-2320047.zip) **Draft CR 38.101-1 to add new 3CA combinations of n41 n66 n71 n77 n85**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Decision: Endorsed.**

[**R4-2320099**](file:///D:\RAN4%23109\Docs\R4-2320099.zip) **Draft CR to TS38.101-1[R18]\_add BCS4 and 5 for 2UL/3DL NR CA combination**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321860 (from R4-2320099).**

[**R4-2321860**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321860.zip) **Draft CR to TS38.101-1[R18]\_add BCS4 and 5 for 2UL/3DL NR CA combination**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2320100**](file:///D:\RAN4%23109\Docs\R4-2320100.zip) **TP for TR38.718-03-01\_3DL\_xUL CA\_n34A-n39A-n41A/C**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321861 (from R4-2320100).**

[**R4-2321861**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321861.zip) **TP for TR38.718-03-01\_3DL\_xUL CA\_n34A-n39A-n41A/C**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2320101**](file:///D:\RAN4%23109\Docs\R4-2320101.zip) **TP for TR38.718-03-01\_3DL\_xUL CA\_n34A-n40A-n41A/C**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321862 (from R4-2320101).**

[**R4-2321862**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321862.zip) **TP for TR38.718-03-01\_3DL\_xUL CA\_n34A-n40A-n41A/C**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2320102**](file:///D:\RAN4%23109\Docs\R4-2320102.zip) **TP for TR 38.718-03-01\_3DL\_xUL CA\_n34A-n41A/C-n79A**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321863 (from R4-2320102).**

[**R4-2321863**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321863.zip) **TP for TR 38.718-03-01\_3DL\_xUL CA\_n34A-n41A/C-n79A**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2320103**](file:///D:\RAN4%23109\Docs\R4-2320103.zip) **TP for TR38.718-03-01\_3DL\_xUL update MSD for CA\_n8A-n39A-n79A**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2320309**](file:///D:\RAN4%23109\Docs\R4-2320309.zip) **draft CR 38.101-1 to correct the UL configurations for CA\_n3A-n20A-n78A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson, BT plc*

**Abstract:**

draft CR 38.101-1 to correct the UL configurations for CA\_n3A-n20A-n78A

**Decision: Endorsed.**

[**R4-2320314**](file:///D:\RAN4%23109\Docs\R4-2320314.zip) **draft CR 38.101-1 adding missing PC3 MSD values for CA\_n5-n25-n78**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-1 adding missing PC3 MSD values for CA\_n5-n25-n78

**Decision: Endorsed.**

[**R4-2320320**](file:///D:\RAN4%23109\Docs\R4-2320320.zip) **draft CR 38.101-1 corrections NR CA FR1 3 bands combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-1 corrections NR CA FR1 3 bands combinations

**Decision: Endorsed.**

[**R4-2320851**](file:///D:\RAN4%23109\Docs\R4-2320851.zip) **TP for 38.718-03-01 to include CA\_n1-n5-n28**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n1-n5-n28

**Decision: Revised to R4-2321875 (from R4-2320851).**

**[R4-2321875](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321875.zip) TP for 38.718-03-01 to include CA\_n1-n5-n28**

*Type: pCR For: Approval  
 38.718-03-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.718-03-01 to include CA\_n1-n5-n28

**Decision: Approved.**

#### 7.11.3 UE RF requirements with FR2 band

[**R4-2319759**](file:///D:\RAN4%23109\Docs\R4-2319759.zip) **Rel18 Cat F draft CR for 38.101-3 Correct some minor typos for NR\_CADC\_R18\_3BDL\_xBUL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Decision: Revised to R4-2321846 (from R4-2319759).**

[**R4-2321846**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321846.zip) **Rel18 Cat F draft CR for 38.101-3 Correct some minor typos for NR\_CADC\_R18\_3BDL\_xBUL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2320312**](file:///D:\RAN4%23109\Docs\R4-2320312.zip) **draft CR 38.101-3 to add CADC\_n7-n78-n258 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-3 to add CADC\_n7-n78-n258 configurations

**Decision: Revised to R4-2321870 (from R4-2320312).**

[**R4-2321870**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321870.zip) **draft CR 38.101-3 to add CADC\_n7-n78-n258 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-3 to add CADC\_n7-n78-n258 configurations

**Decision: Endorsed.**

[**R4-2320318**](file:///D:\RAN4%23109\Docs\R4-2320318.zip) **draft CR 38.101-3 corrections NR CA 3 bands combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 corrections NR CA 3 bands combinations with FR2

**Decision: Endorsed.**

### 7.12 Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for y bands DL with x bands UL (y=4,5,6, x=1,2)

#### 7.12.1 Rapporteur input (WID/TR/big CR)

[**R4-2319651**](file:///D:\RAN4%23109\Docs\R4-2319651.zip) **Revised WID Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)**

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

**Abstract:**

Revised WID Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)

**Decision: Endorsed.**

[**R4-2319652**](file:///D:\RAN4%23109\Docs\R4-2319652.zip) **big CR 38.101-3 new combinations Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1918 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-1 new combinations Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)

**Decision: Revised to R4-2321838 (from R4-2319652).**

[**R4-2321838**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321838.zip) **big CR 38.101-3 new combinations Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1918 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-1 new combinations Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)

**Decision: Agreed.**

[**R4-2319653**](file:///D:\RAN4%23109\Docs\R4-2319653.zip) **big CR 38.101-3 new combinations Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1064 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-3 new combinations Rel-18 NR Inter-band CA/DC for y bands DL with x bands UL (y=4,5,6, x=1,2)

**Decision: Agreed.**

**Draft CR**

[**R4-2318541**](file:///D:\RAN4%23109\Docs\R4-2318541.zip) **draftCR for 38.101-1 Carrier Aggregation for 4 bands DL corrections**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

#### 7.12.2 UE RF requirements without FR2 band

[**R4-2318503**](file:///D:\RAN4%23109\Docs\R4-2318503.zip) **draft CR for TS 38101-1 to add y bands DL NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Endorsed.**

[**R4-2318537**](file:///D:\RAN4%23109\Docs\R4-2318537.zip) **Draft for CR 38.101-1 to add missed harmonic mixing MSD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Not pursued.**

[**R4-2318803**](file:///D:\RAN4%23109\Docs\R4-2318803.zip) **DraftCR for 38.101-1: Introduce CA\_n77C for PC3 CA combos**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Endorsed.**

[**R4-2319615**](file:///D:\RAN4%23109\Docs\R4-2319615.zip) **Draft CR on TS 38.101-1 for delta TIB special values for 4, 5 and 6 bands NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Revised to R4-2321837 (from R4-2319615).**

[**R4-2321837**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321837.zip) **Draft CR on TS 38.101-1 for delta TIB special values for 4, 5 and 6 bands NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

[**R4-2319658**](file:///D:\RAN4%23109\Docs\R4-2319658.zip) **draft CR for 38.101-1 to add new NR CA configurations with 4DL and 5DL bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR for 38.101-1 to add new NR CA configurations with 4DL and 5DL bands

**Decision: Revised to R4-2321839 (from R4-2319658).**

[**R4-2321839**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321839.zip) **draft CR for 38.101-1 to add new NR CA configurations with 4DL and 5DL bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR for 38.101-1 to add new NR CA configurations with 4DL and 5DL bands

**Decision: Endorsed.**

[**R4-2319674**](file:///D:\RAN4%23109\Docs\R4-2319674.zip) **Draft CR for 38.101-1 to add new NR CA configurations with 4DL and 5DL bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, T-Mobile USA*

**Abstract:**

Draft CR for 38.101-1 to add new NR CA configurations with 4DL and 5DL bands

**Decision: Endorsed.**

[**R4-2319857**](file:///D:\RAN4%23109\Docs\R4-2319857.zip) **Draft CR for 38.101-1 to introduce CA\_n1A-n28A-n75A-n78A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, DT*

**Decision: Endorsed.**

[**R4-2320044**](file:///D:\RAN4%23109\Docs\R4-2320044.zip) **Draft CR 38.101-1 to add new five bands and six bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Revised to R4-2321858 (from R4-2320044).**

[**R4-2321858**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321858.zip) **Draft CR 38.101-1 to add new five bands and six bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Endorsed.**

[**R4-2320045**](file:///D:\RAN4%23109\Docs\R4-2320045.zip) **Draft CR 38.101-3 to add new five bands and six bands EN-DC (only FR1)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Revised to R4-2321859 (from R4-2320045).**

[**R4-2321859**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321859.zip) **Draft CR 38.101-3 to add new five bands and six bands EN-DC (only FR1)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Endorsed.**

[**R4-2321934**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321934.zip) **Draft CR 38.101-3 to add new five bands EN-DC (only FR1)**

*Type: draftCR For: Endorsement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-1x)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Endorsed.**

[**R4-2320310**](file:///D:\RAN4%23109\Docs\R4-2320310.zip) **draft CR 38.101-1 to add 4 and 5 bands NR CA/DC combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, BT plc*

**Abstract:**

draft CR 38.101-1 to add 4 and 5 bands NR CA/DC combinations

**Decision: Revised to R4-2321869 (from R4-2320310).**

[**R4-2321869**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321869.zip) **draft CR 38.101-1 to add 4 and 5 bands NR CA/DC combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, BT plc*

**Abstract:**

draft CR 38.101-1 to add 4 and 5 bands NR CA/DC combinations

**Decision: Endorsed.**

[**R4-2320316**](file:///D:\RAN4%23109\Docs\R4-2320316.zip) **draft CR corrections NR CA FR1 4 bands combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR corrections NR CA FR1 4 bands combinations

**Decision: Endorsed.**

#### 7.12.3 UE RF requirements with FR2 band

[**R4-2319760**](file:///D:\RAN4%23109\Docs\R4-2319760.zip) **Rel18 Cat F draft CR for 38.101-3 Correct some minor typos for NR\_CADC\_R18\_yBDL\_xBUL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Decision: Revised to R4-2321847 (from R4-2319760).**

[**R4-2321847**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321847.zip) **Rel18 Cat F draft CR for 38.101-3 Correct some minor typos for NR\_CADC\_R18\_yBDL\_xBUL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2320319**](file:///D:\RAN4%23109\Docs\R4-2320319.zip) **draft CR 38.101-3 corrections NR CA 4 bands combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 corrections NR CA 4 bands combinations with FR2

**Decision: Revised to R4-2321872 (from R4-2320319).**

**[R4-2321872](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321872.zip) draft CR 38.101-3 corrections NR CA 4 bands combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 corrections NR CA 4 bands combinations with FR2

**Decision: Endorsed.**

### 7.13 Rel-18 Band combinations for SA NR supplementary uplink (SUL), NSA NR SUL, NSA NR SUL with UL sharing from the UE perspective (ULSUP)

#### 7.13.1 Rapporteur input (WID/TR/big CR)

[**R4-2319852**](file:///D:\RAN4%23109\Docs\R4-2319852.zip) **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: Endorsed.**

[**R4-2319853**](file:///D:\RAN4%23109\Docs\R4-2319853.zip) **Draft TR 37.718-00-00 v0.7.0**

*Type: draft TR For: Agreement  
 37.718-00-00 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2319854**](file:///D:\RAN4%23109\Docs\R4-2319854.zip) **Big CR on Introduction of completed SUL band combinations into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1925 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

#### 7.13.2 UE RF requirements

[**R4-2319616**](file:///D:\RAN4%23109\Docs\R4-2319616.zip) **Draft CR on TS 38.101-1 for delta RIB special values for SUL band combination**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, CHTTL*

**Decision: Endorsed.**

### 7.14 NR CA band combinations with two SUL cells in Rel-18

#### 7.14.1 Rapporteur input (WID/TR/big CR)

**CR**

[**R4-2318928**](file:///D:\RAN4%23109\Docs\R4-2318928.zip) **CR for 38.101-1 Add delta RIB requirements for CA\_n78C\_n84A-n89A**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1870 rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Revised to** [**R4-2321683**](file:///D:\RAN4%23109\Docs\R4-2321683.zip) **(from** [**R4-2318928**](file:///D:\RAN4%23109\Docs\R4-2318928.zip)**).**

**[R4-2321683](file:///D:\\RAN4%23109\\Docs\\R4-2321683.zip) CR for 38.101-1 Add delta RIB requirements for CA\_n78C\_n84A-n89A**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1870 rev Cat: B (Rel-18)  
  
 Source: CMCC*

*Capture ZTE endorsed CR 19617.*

**Decision: Agreed.**

#### 7.14.2 UE RF requirements

**Draft CR**

[**R4-2319617**](file:///D:\RAN4%23109\Docs\R4-2319617.zip) **Draft CR for TS 38.101-1 to correct SUL band combination with inter-band CA for two SUL cells**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

### 7.15 Rel-18 band combinations for concurrent operation of NR/LTE Uu bands/band combinations and one NR/LTE V2X PC5 band

#### 7.15.1 Rapporteur input (WID/TR/big CR)

**CR**

[**R4-2318329**](file:///D:\RAN4%23109\Docs\R4-2318329.zip) **CR on release independent for concurrent operation of NR/LTE Uu bands/band combinations and one NR/LTE V2X PC5 band**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0127 rev Cat: B (Rel-18)  
  
 Source: CATT*

**Abstract:**

Resubmission of endorsed draftCR

**Decision: Agreed.**

#### 7.15.2 UE RF requirements (resubmitted CR)

### 7.16 High-power UE operation for fixed-wireless/vehicle-mounted use cases in LTE bands and NR bands

#### 7.16.1 Rapporteur input (WID/TR/big CR)

**TR**

[**R4-2318526**](file:///D:\RAN4%23109\Docs\R4-2318526.zip) **FWA TR**

*Type: draft TR For: Agreement  
 37.829 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

**Revised WID**

[**R4-2318527**](file:///D:\RAN4%23109\Docs\R4-2318527.zip) **FWA WID**

*Type: WID revised For: Endorsement  
 Source: Nokia*

**Decision: Withdrawn.**

**Big CR**

[**R4-2318528**](file:///D:\RAN4%23109\Docs\R4-2318528.zip) **FWA Big CR**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1843 rev Cat: B (Rel-18)  
  
 Source: Nokia*

**Decision: Withdrawn.**

#### 7.16.2 UE RF requirements

**TP**

[**R4-2318387**](file:///D:\RAN4%23109\Docs\R4-2318387.zip) **TP to TR 37.829: System level simulation results for coexistence study on 31dBm UE Power Class for NR Band n25**

*Type: pCR For: Approval  
 37.829 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides a text proposal to record the simulation results into annex C in TR 37.829.

**Decision: Approved.**

[**R4-2318388**](file:///D:\RAN4%23109\Docs\R4-2318388.zip) **TP to TR 37.829: System level simulation results for coexistence study on 31dBm UE Power Class for NR Band n66**

*Type: pCR For: Approval  
 37.829 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides a text proposal to record the simulation results into annex D in TR 37.829.

**Decision: Approved.**

**Draft CR**

[**R4-2318529**](file:///D:\RAN4%23109\Docs\R4-2318529.zip) **draftCR for 38.101-1 addition of PC1 operation for n41**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1844 rev Cat: B (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Abstract:**

Note: Change request number on CR coversheet for TDoc [R4-2318529](file:///D:\RAN4%23109\Docs\R4-2318529.zip) is missing. The CR number on the CR coversheet should be value: 1844.

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

[**R4-2320414**](file:///D:\RAN4%23109\Docs\R4-2320414.zip) **draftCR for 38.101-1 addition of PC1 operation for n41**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, T-Mobile US*

*CHTTL: do we need relaxation for band n8?*

*Qualcomm: Further check it for AMPR region.*

*Nokia:this is no matter of reduce.*

**Decision: Not pursued.**

**[R4-2321700](file:///D:\\RAN4%23109\\Docs\\R4-2321700.zip) draftCR for 38.101-1 addition of PC1 operation for n41**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Decision: Withdrawn.**

### 7.17 High power for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL with power class PC2 and PC1.5

#### 7.17.1 Rapporteur input (WID/TR/big CR)

**Revised WID**

[**R4-2320304**](file:///D:\RAN4%23109\Docs\R4-2320304.zip) **Revised WID on PC1.5 and PC2 EN-DC combinations with xLTE bands + yNR bands**

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

**Abstract:**

Revised WID on PC1.5 and PC2 EN-DC combinations with xLTE bands + yNR bands

**Decision: Endorsed.**

**Big CR**

[**R4-2320305**](file:///D:\RAN4%23109\Docs\R4-2320305.zip) **big CR 38.101-3 new combinations Rel-18 EN-DC HPUE**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1086 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-3 new combinations Rel-18 EN-DC HPUE

**Decision: Revised to** [**R4-2321701**](file:///D:\RAN4%23109\Docs\R4-2321701.zip) **(from** [**R4-2320305**](file:///D:\RAN4%23109\Docs\R4-2320305.zip)**).**

[**R4-2321701**](file:///D:\RAN4%23109\Docs\R4-2321701.zip) **big CR 38.101-3 new combinations Rel-18 EN-DC HPUE**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1086 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-3 new combinations Rel-18 EN-DC HPUE

**Decision: Agreed.**

**TR**

[**R4-2320306**](file:///D:\RAN4%23109\Docs\R4-2320306.zip) **TR 38.898 v0.7.0 Rel-18 High power UE for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL**

*Type: draft TR For: Agreement  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TR 38.898 v0.7.0 Rel-18 High power UE for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL

**Decision: Agreed.**

#### 7.17.2 UE RF requirements

**TP**

[**R4-2318267**](file:///D:\RAN4%23109\Docs\R4-2318267.zip) **TP for TR38.898 PC2 ENDC for FR1 2BLTE1BNR and 1BLTE2BNR**

*Type: pCR For: Approval  
 38.898 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp., LG Electronics*

**Abstract:**

Addition of PC2 ENDC for FR1 2BLTE1BNR and 1BLTE2BNR. The author found typos and requested a revision.

Qualcomm: MSD values need be revised and for DC\_8A\_n28A-n77A, there is mis-alignement between PC3 and PC2.

**Decision: Revised to** [**R4-2321702**](file:///D:\RAN4%23109\Docs\R4-2321702.zip) **(from** [**R4-2318267**](file:///D:\RAN4%23109\Docs\R4-2318267.zip)**).**

[**R4-2321702**](file:///D:\RAN4%23109\Docs\R4-2321702.zip) **TP for TR38.898 PC2 ENDC for FR1 2BLTE1BNR and 1BLTE2BNR**

*Type: pCR For: Approval  
 38.898 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp., LG Electronics*

**Abstract:**

Addition of PC2 ENDC for FR1 2BLTE1BNR and 1BLTE2BNR. The author found typos and requested a revision.

Qualcomm: MSD values need be revised and for DC\_8A\_n28A-n77A, there is mis-alignement between PC3 and PC2.

**Decision: Approved.**

[**R4-2319773**](file:///D:\RAN4%23109\Docs\R4-2319773.zip) **TP for TR 38.898 HPUE DC\_3\_n41-n77**

*Type: pCR For: Approval  
 38.898 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI, Qualcomm*

**Decision: Approved.**

[**R4-2319774**](file:///D:\RAN4%23109\Docs\R4-2319774.zip) **TP for TR 38.898 HPUE DC\_3-28\_n41**

*Type: pCR For: Approval  
 38.898 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI, Qualcomm*

**Decision: Approved.**

[**R4-2319775**](file:///D:\RAN4%23109\Docs\R4-2319775.zip) **TP for TR 38.898 HPUE DC\_3-28\_n77**

*Type: pCR For: Approval  
 38.898 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI, Qualcomm*

**Decision: Approved.**

**Draft CR**

[**R4-2318259**](file:///D:\RAN4%23109\Docs\R4-2318259.zip) **Draft CR for TS38.101-3 HP-ENDC for FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Endorsed.**

[**R4-2319770**](file:///D:\RAN4%23109\Docs\R4-2319770.zip) **Rel18 Cat F draft CR for 38.101-3 Add the missing PC2 note to HPUE DC\_18A\_n28A-n77A and DC\_41A\_n28A-n77A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung, KDDI*

**Abstract:**

PC2 for DC\_18A\_n28A-n77A and DC\_41A\_n28A-n77A have been endorsed in RAN4#108 as [R4-2311969](file:///D:\RAN4%23109\Docs\R4-2311969.zip) and [R4-2314629](file:///D:\RAN4%23109\Docs\R4-2314629.zip), while the note is unfortunately missing in the latest spec. The draft CR add the missing note back.

Skyworks: In Japan HPUE is not allowed. I wonder if it is clear that those combinations do not cover that range. It may not need specifical note but we need make it clear for test purpose. There is a test point to configure the frequency range and we need note or change test point.

KDDI: In Japan especiall for band n18 we did not test the MSD. We do not have MSD issue.

**Decision: Endorsed.**

### 7.18 High power UE for FR1 for NR\_CA\_R18\_intra with power class 2 and 1.5 on TDD band(s)

#### 7.18.1 Rapporteur input (WID/TR/big CR)

#### 7.18.2 UE RF requirements with PC2 and PC1.5

**Revised WID**

[**R4-2320407**](file:///D:\RAN4%23109\Docs\R4-2320407.zip) **WID on HPUE\_NR\_FR1\_TDD\_intra\_CA\_R18**

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

**Abstract:**

Inclusion of requests from CMCC

**Decision: Endorsed.**

### 7.19 High power UE (power class 1.5) for NR TDD bands

#### 7.19.1 Rapporteur input (WID/TR/big CR)

[**R4-2318751**](file:///D:\RAN4%23109\Docs\R4-2318751.zip) **On A-MPR for NS\_50 with PC1.5**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**CR**

[**R4-2318914**](file:///D:\RAN4%23109\Docs\R4-2318914.zip) **CR for TS 38.101-1 to introduce indication of modified MPR behaviour for band n34 and n40**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1868 rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Agreed.**

#### 7.19.2 UE RF requirements

### 7.20 High power UE for FR1 NR inter-band CA/DC or SUL band combination with y DL-x UL and PCm (m<3) and high power on TDD

#### 7.20.1 Rapporteur input (WID/TR/big CR)

**Revised WID**

[**R4-2319255**](file:///D:\RAN4%23109\Docs\R4-2319255.zip) **Revised WID for HPUE\_NR\_CADC\_SUL\_R18 RAN4#109**

*Type: WID revised For: Endorsement  
 Source: China Telecom*

**Abstract:**

for email approval

**Decision: Endorsed.**

**Big CR**

[**R4-2319256**](file:///D:\RAN4%23109\Docs\R4-2319256.zip) **Big CR to 38.101-1 new combinations for Rel-18 NR HPUE Inter-band**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1880 rev Cat: B (Rel-18)  
  
 Source: China Telecom*

**Abstract:**

for email approval

**Decision: Agreed.**

**TR**

**[R4-2320676](file:///D:\\RAN4%23109\\Docs\\R4-2320676.zip) TR for High power UE for FR1 NR inter-band CA/DC or NR SUL band combination with y (1<y<=6) bands DL and x (x=1, 2) bands UL and power class m (m<3) and high power on TDD band(s)**

*Type: draft TR For: Agreement  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, China Telecom*

**Decision: Agreed.**

#### 7.20.2 UE RF requirements with PC2 and PC1.5

**TPs**

[**R4-2318266**](file:///D:\RAN4%23109\Docs\R4-2318266.zip) **TP for TR38.899 PC2 NRCA for FR1 2DL 1or2UL and PC1.5 NRCA for FR1 2DL and 1UL**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp., LG Electronics*

**Abstract:**

Addition of PC2 NRCA for FR1 2DL 1or2UL and PC1.5 NRCA for FR1 2DL and 1UL. The author found typos in this contribution and requested a revision.

Qualcomm: for CA\_n3-n79, the numbers need be re-calculated.

Huawei: some MSD values are not correct.

**Decision: Revised to** [**R4-2321704**](file:///D:\RAN4%23109\Docs\R4-2321704.zip) **(from** [**R4-2318266**](file:///D:\RAN4%23109\Docs\R4-2318266.zip)**).**

[**R4-2321704**](file:///D:\RAN4%23109\Docs\R4-2321704.zip) **TP for TR38.899 PC2 NRCA for FR1 2DL 1or2UL and PC1.5 NRCA for FR1 2DL and 1UL**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp., LG Electronics*

**Abstract:**

Addition of PC2 NRCA for FR1 2DL 1or2UL and PC1.5 NRCA for FR1 2DL and 1UL. The author found typos in this contribution and requested a revision.

**Decision: Approved.**

[**R4-2319769**](file:///D:\RAN4%23109\Docs\R4-2319769.zip) **TP for TR 38.899 to include HPUE CA\_n71-n78**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Approved.**

[**R4-2319771**](file:///D:\RAN4%23109\Docs\R4-2319771.zip) **TP for HPUE CA\_n1-n3-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI, Qualcomm*

**Decision: Approved.**

[**R4-2319772**](file:///D:\RAN4%23109\Docs\R4-2319772.zip) **TP for HPUE CA\_n1-n28-n41 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI, LGE*

**Decision: Revised to** [**R4-2321705**](file:///D:\RAN4%23109\Docs\R4-2321705.zip) **(from** [**R4-2319772**](file:///D:\RAN4%23109\Docs\R4-2319772.zip)**).**

[**R4-2321705**](file:///D:\RAN4%23109\Docs\R4-2321705.zip) **TP for HPUE CA\_n1-n28-n41 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI, LGE*

**Decision: Approved.**

[**R4-2320313**](file:///D:\RAN4%23109\Docs\R4-2320313.zip) **TP for 38.899 adding PC2 non-contiguous UL to CA\_n5-n78**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility*

**Abstract:**

TP for 38.899 adding PC2 non-contiguous UL to CA\_n5-n78

**Decision: Approved.**

[**R4-2320657**](file:///D:\RAN4%23109\Docs\R4-2320657.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for adding UL CA\_n77(2A) to CA\_n3A-n28A-n77(2A) for PC2 HPUE in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

*CHTTL: the content is mixed with the existing ones. Some newly added MSD is not needed.*

*Huawei: Share the similar view. We should not mix the MSD for two band and three band combiantions. We can just simplify this and confirm no additional requirements. No further analysis is needed.*

**Decision: Revised to** [**R4-2321707**](file:///D:\RAN4%23109\Docs\R4-2321707.zip) **(from** [**R4-2320657**](file:///D:\RAN4%23109\Docs\R4-2320657.zip)**).**

[**R4-2321707**](file:///D:\RAN4%23109\Docs\R4-2321707.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for adding UL CA\_n77(2A) to CA\_n3A-n28A-n77(2A) for PC2 HPUE in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI, Samsung, Qualcomm*

**Decision: Approved.**

[**R4-2320658**](file:///D:\RAN4%23109\Docs\R4-2320658.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for adding CA\_n77(2A) to CA\_n3A-n41A-n77(2A) for PC2 HPUE in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Withdrawn.**

[**R4-2320663**](file:///D:\RAN4%23109\Docs\R4-2320663.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for PC2 HPUE CA\_n18-n41 with 2UL in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

*Huawei: this should be NR-DC.*

*CHTTL: the format is the old one.*

**Decision: Revised to** [**R4-2321708**](file:///D:\RAN4%23109\Docs\R4-2321708.zip) **(from** [**R4-2320663**](file:///D:\RAN4%23109\Docs\R4-2320663.zip)**).**

[**R4-2321708**](file:///D:\RAN4%23109\Docs\R4-2321708.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for PC2 HPUE CA\_n18-n41 with 2UL in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI, Samsung, Qualcomm*

*Huawei: this should be NR-DC.*

*CHTTL: the format is the old one.*

**Decision: Approved.**

[**R4-2320665**](file:///D:\RAN4%23109\Docs\R4-2320665.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for PC2 HPUE CA\_n18-n77 with 2UL in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

*Huawei: some typo. EN-DC is used. We will agree on single value. We also need MSD value for PC3.*

*KDDI: for PC3 and PC2, Skyworks kindly provided the discussion paper last meeting. This one is only to address for CA\_n18-n77. For this one, we introduce the value provided by Skyworks, LGE and Murata. The final value should be determined offline.*

**Decision: Revised to** [**R4-2321709**](file:///D:\RAN4%23109\Docs\R4-2321709.zip) **(from** [**R4-2320665**](file:///D:\RAN4%23109\Docs\R4-2320665.zip)**).**

[**R4-2321709**](file:///D:\RAN4%23109\Docs\R4-2321709.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for PC2 HPUE CA\_n18-n77 with 2UL in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI, Samsung, LGE, Murata, Skyworks*

**Decision: Approved.**

[**R4-2320678**](file:///D:\RAN4%23109\Docs\R4-2320678.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for HPUE CA\_n3-n18-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

*Huawei: it depends on the conclusion of two bands. We should return to.*

**Decision: Revised to R4-2321978 (from R4-2320678).**

[**R4-2321978**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321978.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for HPUE CA\_n3-n18-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI, Samsung, LGE*

*Huawei: it depends on the conclusion of two bands. We should return to.*

**Decision: Approved.**

[**R4-2320679**](file:///D:\RAN4%23109\Docs\R4-2320679.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for HPUE CA\_n18-n28-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

*CHTTL: similar comment as before. We do not need add a lot of MSDs for three bands. Some MSD can be covered by two band already.*

*KDDI: we want to make sure if two band MSDs have been determined and for three-band case we only need to check new ones which are not covered by two band case.*

*Skyworks: maybe confusion. For three band, you only consider two-uplink band.*

**Decision: Revised to** [**R4-2321710**](file:///D:\RAN4%23109\Docs\R4-2321710.zip) **(from** [**R4-2320679**](file:///D:\RAN4%23109\Docs\R4-2320679.zip)**).**

[**R4-2321710**](file:///D:\RAN4%23109\Docs\R4-2321710.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for HPUE CA\_n18-n28-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI, Samsung, Murata*

**Decision: Approved.**

**Draft CRs/CRs**

[**R4-2318258**](file:///D:\RAN4%23109\Docs\R4-2318258.zip) **Draft CR for TS38.101-1 HP-NRCA for FR1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

HPUE NR CA 3DL and 4DL combinations with PC2 and PC1.5 include single UL PC2/PC1.5 on band n77 are added.

HPUE NR CA 3DL and 4DL combinations with PC2 and PC1.5 include single UL PC2/PC1.5 on band n79 are added.

Additions of PC2 3DL and 4DL new band combi

Apple: for two band and three band combiantions, we use note to indicate either PC2 or PC1.5 support. For four band combiantions, we still need such note for PC2 and PC1.5. I wonder if we can have general note to say if the lower order supports then the higher order band combination can support.

Skyworks: support Apple comment to have general notes.

AT&T: It definitly simplify things. But there would be no requests and will impact the UE. We should consider which combo requires high power UE.

Samsung: Generaly we support Apple. We spent a lot of times to request. We also need more time to consider the general note approach. We can discuss until next meeting.

Mediatek: we need make sure all the fall-back can support HPUE. When we introduces such higher order combination, we need check all the fall back.

CHTTL: share the similar view as AT&T.

Huawei: We appreciate Apple proposal. But for product engineer, they may feel confusion. We need cross-check all the fallbacks can support HPUE.

Apple: there is another aspect about the signalling aspects. When we signal the band combinations, we only signal the higher order band combinations. In such way, we will create the complicated feature set.

Huawei: as rapporteur, we need check if all the combinations have been completed.

**Decision: Revised to R4-2321979 (from R4-2318258).**

[**R4-2321979**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321979.zip) **Draft CR for TS38.101-1 HP-NRCA for FR1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Abstract:**

**Decision: Endorsed.**

[**R4-2318802**](file:///D:\RAN4%23109\Docs\R4-2318802.zip) **DraftCR to 38.101-1 for Rel-18 NR HPUE Inter-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung, Nokia*

**Decision: Endorsed.**

[**R4-2318933**](file:///D:\RAN4%23109\Docs\R4-2318933.zip) **Draft CR for TS 38.101-1 to update NR CA HPUE requirement**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

*Huawei: Clause 6 needs be updated for two-band power class.*

**Decision: Revised to R4-2321980 (from R4-2318933).**

[**R4-2321980**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321980.zip) **Draft CR for TS 38.101-1 to update NR CA HPUE requirement**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

*Huawei: Clause 6 needs be updated for two-band power class.*

**Decision: Endorsed.**

[**R4-2319257**](file:///D:\RAN4%23109\Docs\R4-2319257.zip) **Draft CR for 38.101-1 to introduce HPUE NR CA configuration CA\_n78C\_n80A-n84A and CA\_n78C\_n81A-n84A.**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1881 rev Cat: B (Rel-18)  
  
 Source: China Telecom*

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

[**R4-2319289**](file:///D:\RAN4%23109\Docs\R4-2319289.zip) **Draft CR for 38.101-1 to introduce HPUE NR CA configuration CA\_n78C\_n80A-n84A and CA\_n78C\_n81A-n84A.**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: China Telecom*

*CHTTL: Note 2 is old one. We need change it.*

*Huawei: have similar view. We can align it with NR-CA note. We are not sure if we need it for SUL.*

**Decision: Endorsed.**

[**R4-2320315**](file:///D:\RAN4%23109\Docs\R4-2320315.zip) **draft CR 38.101-1 correcting NR CA HPUE typos**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-1 correcting NR CA HPUE typos

**Decision: Revised to** [**R4-2321706**](file:///D:\RAN4%23109\Docs\R4-2321706.zip) **(from** [**R4-2320315**](file:///D:\RAN4%23109\Docs\R4-2320315.zip)**).**

[**R4-2321706**](file:///D:\RAN4%23109\Docs\R4-2321706.zip) **draft CR 38.101-1 correcting NR CA HPUE typos**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-1 correcting NR CA HPUE typos

**Decision: Endorsed.**

[**R4-2320444**](file:///D:\RAN4%23109\Docs\R4-2320444.zip) **CR for 38.101-1: HPUE Band Combination Corrections**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1953 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

[**R4-2320636**](file:///D:\RAN4%23109\Docs\R4-2320636.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] Draft CR for TS 38,101-1: Addition of inter-band PC2 CA Combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: KDDI Corporation*

*Huawei: reading the cover sheet, is it not clear that MSD analysis is completed. In the future, the proponents need clarification whether TP is approved or no MSD analysis is needed.*

*KDDI: we can add the necessary information. One CC case has no MSD issue. For two band case, all the MSD issues have been solved by the approved TPs.*

*CHTTL: one CC uplink PC2 may impact harmonic mixing requirement. KDDI has already covered in two uplink and two downlink.*

**Decision: Revised to** [**R4-2321711**](file:///D:\RAN4%23109\Docs\R4-2321711.zip) **(from** [**R4-2320636**](file:///D:\RAN4%23109\Docs\R4-2320636.zip)**).**

**[R4-2321711](file:///D:\\RAN4%23109\\Docs\\R4-2321711.zip) [HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] Draft CR for TS 38,101-1: Addition of inter-band PC2 CA Combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: KDDI, Samsung, Qualcomm*

**Decision: Endorsed.**

### 7.21 High power UE for FR1 for inter-band NR\_CADC\_R18\_yBDL\_xBUL with power class 2 on single carrier uplink on FDD band

#### 7.21.1 Rapporteur input (WID/TR/big CR)

[**R4-2318270**](file:///D:\RAN4%23109\Docs\R4-2318270.zip) **Revised WID Rel-18 High power UE (power class 2) for FR1 NR FDD band in UL of NR inter-band CADC combinations**

*Type: WID revised For: Endorsement  
 Source: China Unicom*

**Decision: Endorsed.**

[**R4-2318271**](file:///D:\RAN4%23109\Docs\R4-2318271.zip) **BigCR for High power UE for inter-band CA with power class 2 on single carrier uplink on FDD band**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1820 rev Cat: B (Rel-18)  
  
 Source: China Unicom*

**Decision: Agreed.**

[**R4-2318272**](file:///D:\RAN4%23109\Docs\R4-2318272.zip) **TR 38.850 v1.2.0 HPUE\_FR1\_FDD\_NR\_CADC\_R18**

*Type: draft TR For: Agreement  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: China Unicom*

**Decision: Agreed.**

#### 7.21.2 UE RF requirements

### 7.22 High power UE for FR1 for FDD single band(s) with PC2

#### 7.22.1 Rapporteur input (WID/TR/big CR)

[**R4-2318273**](file:///D:\RAN4%23109\Docs\R4-2318273.zip) **Revised WID on High power UE for FR1 for FDD single band(s) with PC2**

*Type: WID revised For: Endorsement  
 Source: China Unicom*

**Decision: Endorsed.**

[**R4-2318274**](file:///D:\RAN4%23109\Docs\R4-2318274.zip) **BigCR for High power UE for FDD single band PC2**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1821 rev Cat: B (Rel-18)  
  
 Source: China Unicom*

**Decision: Agreed.**

[**R4-2318275**](file:///D:\RAN4%23109\Docs\R4-2318275.zip) **TR 38.896 v1.2.0 HPUE\_NR\_FR1\_FDD\_R18**

*Type: draft TR For: Agreement  
 38.896 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: China Unicom*

**Decision: Withdrawn.**

#### 7.22.2 UE RF requirements (resubmitted CR)

[**R4-2318253**](file:///D:\RAN4%23109\Docs\R4-2318253.zip) **RSD of PC2 n13 and n14**

*Type: other For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

[**R4-2318749**](file:///D:\RAN4%23109\Docs\R4-2318749.zip) **A-MPR discussion for FDD HPUE NS\_06**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318750**](file:///D:\RAN4%23109\Docs\R4-2318750.zip) **A-MPR discussion for FDD HPUE NS\_07**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318752**](file:///D:\RAN4%23109\Docs\R4-2318752.zip) **View on full band duplexer in band n28**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2319779**](file:///D:\RAN4%23109\Docs\R4-2319779.zip) **Verification of PC2 NS17 A-MPR with measurements**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide our measurement results for full allocation and lowest channel position at 718MHz against NS\_17 requirements and evaluate the need for PC2 and PC3 A-MPR assuming a full band n28 duplexer.

**Decision: Noted.**

[**R4-2320652**](file:///D:\RAN4%23109\Docs\R4-2320652.zip) **PC2 A-MPR for bands n7, n13 and n28**

*Type: other For: Approval  
 Source: Qualcomm Inc.*

**Decision: Noted.**

[**R4-2320668**](file:///D:\RAN4%23109\Docs\R4-2320668.zip) **PC2 A-MPR for band n28**

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

**Decision: Noted.**

[**R4-2320669**](file:///D:\RAN4%23109\Docs\R4-2320669.zip) **PC2 A-MPR for NS\_46**

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

**Decision: Noted.**

**Draft CRs/CRs**

[**R4-2318355**](file:///D:\RAN4%23109\Docs\R4-2318355.zip) **CR to R18 TS38.101-1 to introduce PC2 UTRA ACLR**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1822 rev Cat: B (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Revised to** [**R4-2321712**](file:///D:\RAN4%23109\Docs\R4-2321712.zip) **(from** [**R4-2318355**](file:///D:\RAN4%23109\Docs\R4-2318355.zip)**).**

[**R4-2321712**](file:///D:\RAN4%23109\Docs\R4-2321712.zip) **CR to R18 TS38.101-1 to introduce PC2 UTRA ACLR**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1822 rev Cat: B (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Agreed.**

[**R4-2319808**](file:///D:\RAN4%23109\Docs\R4-2319808.zip) **CR to R18 TS38.101-1 to Correct NS17 and NS18 emission requirement table**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1924 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

3MHz channel not in right range for NS17. 25MHzmissing for NS18

Huawei: we understand the intention. But the region is below the typical part B for n28. The A-MPR requirement may be needed. We need study whether A-MPR is needed. If UE changes to part B, 3MHz has impact on the UE implementation.

Nokia: we provided the A-MPR evaluations before.

Skyworks: at least in my CR, A-MPR was agreed according to Nokia input.

Qualcomm: This has been discussed in the early release. We need double-check whether the A-MPR is applied. We need come back to NS-17 in the next meeting.

**Decision: Not pursued.**

[**R4-2320653**](file:///D:\RAN4%23109\Docs\R4-2320653.zip) **DraftCR for Adding PC2 requirements for band n7**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Qualcomm Inc.*

*Nokia: this is n7. A-MPR needs some study.*

*Qualcomm: to Nokia, A-MPR has been discussed in the open issue a minutes ago.*

**Decision: Not pursued.**

[**R4-2321713**](file:///D:\RAN4%23109\Docs\R4-2321713.zip) **DraftCR for Adding PC2 requirements for band n7**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Withdrawn.**

[**R4-2320670**](file:///D:\RAN4%23109\Docs\R4-2320670.zip) **DraftCR for Adding PC2 requirements for band n5**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, China Unicom*

*Nokia: the co-existence study is needed for public safety.*

*Huawei: n5 has been included in this basket WI for a long time. We did not identify any A-MPR needs be specified for it. Companies just provided the analysis of REFENS.*

*AT&T: Support Nokia. We do need addressing the protection of public safety.*

*Verizon: n5 is global band and UE need roaming. Somehow we need additional study how to protect the public safety.*

*Nokia: To Huawei, it comes from history. LTE B5 was defined long time ago and at that time no FCC public safety was considered. But later on the public safety was considered for other overlapping band.*

**Decision: Not pursued.**

[**R4-2320671**](file:///D:\RAN4%23109\Docs\R4-2320671.zip) **DraftCR for Adding PC2 requirements for band n8**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, China Unicom*

*Qualcomm: it is rather big change. Some editorial changes are needed.*

*Huawei: to Qualcomm, carrier spacing thing is for PC3 requirements. For PC2, the requirements apply for both 15KHz and 30KHz SCS. For the 15MHz, with this new change, the regional PC3 requirements have been maintained. We can further check offline.*

*Qualcomm: for A-MPR region, it is better to fix PC3 requirement.*

**Decision: Revised to** [**R4-2321714**](file:///D:\RAN4%23109\Docs\R4-2321714.zip) **(from** [**R4-2320671**](file:///D:\RAN4%23109\Docs\R4-2320671.zip)**).**

**[R4-2321714](file:///D:\\RAN4%23109\\Docs\\R4-2321714.zip) DraftCR for Adding PC2 requirements for band n8**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, China Unicom, CHTTL*

*Qualcomm: it is rather big change. Some editorial changes are needed.*

*Huawei: to Qualcomm, carrier spacing thing is for PC3 requirements. For PC2, the requirements apply for both 15KHz and 30KHz SCS. For the 15MHz, with this new change, the regional PC3 requirements have been maintained. We can further check offline.*

*Qualcomm: for A-MPR region, it is better to fix PC3 requirement.*

**Decision: Endorsed.**

### 7.23 Rel-18 downlink interruption for NR and EN-DC band combinations at dynamic Tx switching

#### 7.23.1 Rapporteur input (WID/TR/big CR)

**CRs**

[**R4-2320248**](file:///D:\RAN4%23109\Docs\R4-2320248.zip) **CR to R16 38.307 Release independent requirements for 2CC 1Tx-2Tx switching**

*Type: CR For: Agreement  
 38.307 v16.14.0 CR-0140 rev Cat: B (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

Introduce release independent requirements for 2CC 1Tx-2Tx switching.

CHTTL: this is Rel-16 CRs. Maybe only the Rel-18 CR is needed.

CTC: we think the Release independent spec depends on from which release the feature will be supported. The is the general issue how to introduce the release independency. This is not aligned across the releases.

**Decision: Not pursued.**

**[R4-2320249](file:///D:\\RAN4%23109\\Docs\\R4-2320249.zip) CR to R17 38.307 Release independent requirements for 3CC 1Tx-2Tx switching and 2CC or 3CC 2Tx-2Tx switching**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0141 rev Cat: B (Rel-17)  
  
 Source: China Telecom*

**Abstract:**

Introduce release independent requirements for 3CC 1Tx-2Tx switching and 2CC or 3CC 2Tx-2Tx switching

**Decision: Not pursued.**

**[R4-2321799](file:///D:\\RAN4%23109\\Docs\\R4-2321799.zip) CR to R17 38.307 Release independent requirements for 3CC 1Tx-2Tx switching and 2CC or 3CC 2Tx-2Tx switching**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0141 rev Cat: B (Rel-17)  
  
 Source: China Telecom*

**Abstract:**

Introduce release independent requirements for 3CC 1Tx-2Tx switching and 2CC or 3CC 2Tx-2Tx switching

**Decision: Withdrawn.**

[**R4-2321800**](file:///D:\RAN4%23109\Docs\R4-2321800.zip) **CR to 38.307 Release independent requirements for 1Tx-2Tx switching and 2Tx-2Tx switching**

*Type: CR        For: Agreement  
38.307 v17.10.0       CR-xxxx  rev  Cat: B (Rel-18)  
  
 Source: China Telecom*

**Decision: Agreed.**

#### 7.23.2 UE RF requirements

### 7.24 Additional NR bands for UL-MIMO in Rel-18

#### 7.24.1 Rapporteur input (WID/TR/big CR)

**Big CRs**

[**R4-2320072**](file:///D:\RAN4%23109\Docs\R4-2320072.zip) **TS 38.101-1 big CR for NR\_bands\_UL\_MIMO\_R18**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1941 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321684**](file:///D:\RAN4%23109\Docs\R4-2321684.zip) **(from** [**R4-2320072**](file:///D:\RAN4%23109\Docs\R4-2320072.zip)**).**

[**R4-2321684**](file:///D:\RAN4%23109\Docs\R4-2321684.zip) **TS 38.101-1 big CR for NR\_bands\_UL\_MIMO\_R18**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1941 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**Revised WID**

[**R4-2320073**](file:///D:\RAN4%23109\Docs\R4-2320073.zip) **Revised WID: Additional NR bands for UL-MIMO in Rel-18**

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

**Decision: Endorsed.**

#### 7.24.2 UE RF requirements

**Draft CR**

[**R4-2320074**](file:///D:\RAN4%23109\Docs\R4-2320074.zip) **Draft CR for 38.101-1 PC2 and PC3 UL-MIMO configurations for SUL band n86**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Bell Mobility, TELUS*

**Decision: Endorsed.**

### 7.25 Adding new NR FDD bands for RedCap in Rel-18

#### 7.25.1 Rapporteur input(WID/TR/big CR)

#### 7.25.2 UE RF requirements

**CR**

[**R4-2320550**](file:///D:\RAN4%23109\Docs\R4-2320550.zip) **CR for adding RedCap UE for release independent feature**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0143 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Adding Redcap as release independent feature

Huawei: SUL requirements should be included.

Chair: Only Rel-18 CR is needed for this WI.

**Decision: Not pursued.**

**[R4-2321923](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321923.zip) CR for adding RedCap UE for release independent feature**

*Type: CR For: Agreement  
 38.307 v18.x.0 CR-xxxx rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

Adding Redcap as release independent feature

**Decision: Agreed.**

### 7.26 Adding new channel bandwidth(s) support to existing NR bands

#### 7.26.1 Rapporteur input (WID/TR/big CR)

**Revised WID**

[**R4-2319584**](file:///D:\RAN4%23109\Docs\R4-2319584.zip) **Revised Basket WID on adding channel bandwidth support to existing NR bands**

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

**Abstract:**

This contribution is a revision of the Rel-18 basket WI for adding new channel BW in existing NR bands

**Decision: Withdrawn.**

**Big CR**

[**R4-2319585**](file:///D:\RAN4%23109\Docs\R4-2319585.zip) **Big CR to TS 38.104: Adding channel BW support in existing NR bands**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0538 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This big CR will capture all draft CRs endorsed in RAN4#109 meeting

**Decision: Agreed.**

[**R4-2319586**](file:///D:\RAN4%23109\Docs\R4-2319586.zip) **Big CR to TS 38.101-1: Adding channel BW support in existing NR bands**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1908 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This big CR will capture all draft CRs endorsed in RAN4#109 meeting

**Decision: Agreed.**

#### 7.26.2 UE RF requirements

[**R4-2320996**](file:///D:\RAN4%23109\Docs\R4-2320996.zip) **n8 PC3 30MHz REFSENS**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2318433**](file:///D:\RAN4%23109\Docs\R4-2318433.zip) **n8 30MHz DL REFSENS and PC2 RSD**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**Draft CRs**

[**R4-2320321**](file:///D:\RAN4%23109\Docs\R4-2320321.zip) **draft CR 38.101-1 corrections table 5.3.5-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-1 corrections table 5.3.5-1

**Decision: Endorsed.**

[**R4-2320677**](file:///D:\RAN4%23109\Docs\R4-2320677.zip) **DraftCR for Adding 30MHz BW for band n8**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, China Unicom*

*Huawei: need capture the tentavie values and the agreement for BCS.*

**Decision: Revised to** [**R4-2321685**](file:///D:\RAN4%23109\Docs\R4-2321685.zip) **(from** [**R4-2320677**](file:///D:\RAN4%23109\Docs\R4-2320677.zip)**).**

**[R4-2321685](file:///D:\\RAN4%23109\\Docs\\R4-2321685.zip) DraftCR for Adding 30MHz BW for band n8**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, China Unicom*

*Huawei: need capture the tentavie values and the agreement for BCS.*

**Decision: Endorsed.**

[**R4-2321686**](file:///D:\RAN4%23109\Docs\R4-2321686.zip) **Draft 38.104 CR for adding 30MHz BW for band n8**

*Type: draftCR For: Endorsement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-18)  
  
 Source:*

**Decision: Endorsed.**

#### 7.26.3 BS RF requirements

### 7.27 Simultaneous Rx/Tx inter-band combinations for NR CA/DC, NR SUL and LTE/NR DC in Rel-18

#### 7.27.1 Rapporteur input (WID/TR/big CR)

**Revised WID**

[**R4-2319508**](file:///D:\RAN4%23109\Docs\R4-2319508.zip) **Revised WID on Simultaneous Rx-Tx basket**

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

**Decision: Endorsed.**

**Big CR**

**[R4-2319509](file:///D:\\RAN4%23109\\Docs\\R4-2319509.zip) Big CR to 38.101-1 on simultaneous Rx-Tx basket**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1907 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321901 (from R4-2319509).**

**[R4-2321901](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321901.zip) Big CR to 38.101-1 on simultaneous Rx-Tx basket**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1907 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2322010 (from R4-2321901).**

[**R4-2322010**](ftp://10.10.10.10/ftp/tsg_ran/WG4_Radio/TSGR4_109/Inbox/R4-2322010.zip) **Big CR to 38.101-1 on simultaneous Rx-Tx basket**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1907 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**TR**

[**R4-2319553**](file:///D:\RAN4%23109\Docs\R4-2319553.zip) **Draft TR 38.894**

*Type: draft TR For: Agreement  
 38.894 v0.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Device Co., Ltd*

**Decision: Withdrawn.**

[**R4-2321687**](file:///D:\RAN4%23109\Docs\R4-2321687.zip) **Draft TR 38.894**

*Type: draft TR For: Agreement  
 38.894 v0.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei*

**Decision: Agreed.**

#### 7.27.2 Identification of simultaneous Rx/Tx capability for band combinations and UE RF requirements

[**R4-2319761**](file:///D:\RAN4%23109\Docs\R4-2319761.zip) **Discussion on Simultaneous RxTx Note handling for 38.101-3**

*Type: discussion For: Discussion  
 38.101-3 v CR- rev Cat: (Rel-18)  
  
 Source: Samsung*

**Decision: Noted.**

[**R4-2320020**](file:///D:\RAN4%23109\Docs\R4-2320020.zip) **Discussion on Simultaneous Rx/Tx**

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

**Decision: Noted.**

[**R4-2320758**](file:///D:\RAN4%23109\Docs\R4-2320758.zip) **Simultaneous RxTx and missing MSD test points**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**Draft CRs/CRs**

[**R4-2319510**](file:///D:\RAN4%23109\Docs\R4-2319510.zip) **draft CR to 38.101-1: Removal of the non-simultaneous Note for CA\_n40-n41**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2318422**](file:///D:\RAN4%23109\Docs\R4-2318422.zip) **CR on Simultaneous RXTX 38101-3-gh0\_s00-05**

*Type: CR For: Agreement  
 38.101-3 v16.17.0 CR-1035 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Not pursued.**

[**R4-2318423**](file:///D:\RAN4%23109\Docs\R4-2318423.zip) **CR on Simultaneous RXTX 38101-3-hb0\_s00-05**

*Type: CR For: Agreement  
 38.101-3 v17.11.0 CR-1036 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Abstract:**

Note: The version of Rel-17 have updated to 17.11.2.

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

[**R4-2318424**](file:///D:\RAN4%23109\Docs\R4-2318424.zip) **CR on Simultaneous RXTX 38101-3-i30\_s00-05**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1037 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Not pursued.**

[**R4-2321688**](file:///D:\RAN4%23109\Docs\R4-2321688.zip) **CR on Simultaneous RXTX 38101-3-i30\_s00-05**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1037 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Withdrawn.**

[**R4-2318762**](file:///D:\RAN4%23109\Docs\R4-2318762.zip) **CR on Simultaneous RXTX 38101-3-hb2\_s00-05**

*Type: CR For: Agreement  
 38.101-3 v17.11.2 CR-1048 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Withdrawn.**

### 7.28 4Rx support for NR FR1 bands (<2.6GHz) in Rel-18

#### 7.28.1 Rapporteur input (WID/TR/big CR)

**Revised WID**

[**R4-2320112**](file:///D:\RAN4%23109\Docs\R4-2320112.zip) **Revised WID: 4Rx support for NR FR1 bands (<2.6GHz) in Rel-18**

*Type: WID revised For: Endorsement  
 Source: ZTE Corporation*

**Decision: Endorsed.**

**CR**

[**R4-2320113**](file:///D:\RAN4%23109\Docs\R4-2320113.zip) **CR to reflect the completed 4Rx support for NR FR1 bands (<2.6GHz) into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1946 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

*Chair: because there are new requests, the basket WI should be exteneded.*

**Decision: Withdrawn.**

#### 7.28.2 UE RF requirements

### 7.29 3Tx NR inter-band UL Carrier Aggregation (CA) and EN-DC

#### 7.29.1 Rapporteur input (WID/TR/big CR)

**TR**

[**R4-2319899**](file:///D:\RAN4%23109\Docs\R4-2319899.zip) **TR 38.880 for 3Tx band combinations**

*Type: draft TR For: Agreement  
 38.880 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

[**R4-2320017**](file:///D:\RAN4%23109\Docs\R4-2320017.zip) **TR 38.880 skeleton for 3Tx band combinations**

*Type: other For: Approval  
 38.880 v CR- rev Cat: (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

**Big CRs**

[**R4-2321731**](file:///D:\RAN4%23109\Docs\R4-2321731.zip) **Big CR for 3Tx NR inter-band UL CA and EN-DC basket WI 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-xxxx rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

[**R4-2321732**](file:///D:\RAN4%23109\Docs\R4-2321732.zip) **Big CR for 3Tx NR inter-band UL CA and EN-DC basket WI 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-xxxx rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

**Revised WID**

[**R4-2321733**](file:///D:\RAN4%23109\Docs\R4-2321733.zip) **Revised WID for 3Tx NR inter-band UL CA and EN-DC basket W**

*Type: WID revised For: Endorsement  
 Source: OPPO*

**Decision: Endorsed.**

#### 7.29.2 UE RF requirements with PC2 and PC1.5

**TPs**

[**R4-2318719**](file:///D:\RAN4%23109\Docs\R4-2318719.zip) **TP for TR 38.880 DC\_7A\_n78A with 3Tx**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2321757**](file:///D:\RAN4%23109\Docs\R4-2321757.zip) **(from** [**R4-2318719**](file:///D:\RAN4%23109\Docs\R4-2318719.zip)**).**

[**R4-2321757**](file:///D:\RAN4%23109\Docs\R4-2321757.zip) **TP for TR 38.880 DC\_7A\_n78A with 3Tx**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Approved.**

[**R4-2318720**](file:///D:\RAN4%23109\Docs\R4-2318720.zip) **TP for TR 38.880 DC\_8A\_n78A**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2321758**](file:///D:\RAN4%23109\Docs\R4-2321758.zip) **(from** [**R4-2318720**](file:///D:\RAN4%23109\Docs\R4-2318720.zip)**).**

[**R4-2321758**](file:///D:\RAN4%23109\Docs\R4-2321758.zip) **TP for TR 38.880 DC\_8A\_n78A**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Approved.**

[**R4-2318721**](file:///D:\RAN4%23109\Docs\R4-2318721.zip) **TP for TR 38.880 DC\_20A\_n78A**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2321759**](file:///D:\RAN4%23109\Docs\R4-2321759.zip) **(from** [**R4-2318721**](file:///D:\RAN4%23109\Docs\R4-2318721.zip)**).**

[**R4-2321759**](file:///D:\RAN4%23109\Docs\R4-2321759.zip) **TP for TR 38.880 DC\_20A\_n78A**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Approved.**

[**R4-2318722**](file:///D:\RAN4%23109\Docs\R4-2318722.zip) **TP for TR 38.880 DC\_28A\_n78A**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2321760**](file:///D:\RAN4%23109\Docs\R4-2321760.zip) **(from** [**R4-2318722**](file:///D:\RAN4%23109\Docs\R4-2318722.zip)**).**

[**R4-2321760**](file:///D:\RAN4%23109\Docs\R4-2321760.zip) **TP for TR 38.880 DC\_28A\_n78A**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Approved.**

[**R4-2318724**](file:///D:\RAN4%23109\Docs\R4-2318724.zip) **TP for TR 38.880 DC\_41A\_n78A**

*Type: pCR For: Approval  
 38.880 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Approved.**

[**R4-2318804**](file:///D:\RAN4%23109\Docs\R4-2318804.zip) **TP for TR 38.880: 3Tx inter-band CA\_n2-n77**

*Type: pCR For: Approval  
 38.880 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: Verizon, Samsung, Nokia*

**Decision: Revised to** [**R4-2321753**](file:///D:\RAN4%23109\Docs\R4-2321753.zip) **(from** [**R4-2318804**](file:///D:\RAN4%23109\Docs\R4-2318804.zip)**).**

[**R4-2321753**](file:///D:\RAN4%23109\Docs\R4-2321753.zip) **TP for TR 38.880: 3Tx inter-band CA\_n2-n77**

*Type: pCR For: Approval  
 38.880 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: Verizon, Samsung, Nokia, AT&T*

**Decision: Approved.**

[**R4-2320445**](file:///D:\RAN4%23109\Docs\R4-2320445.zip) **TP for TR 38.880: Input for CA\_n25A-n41A**

*Type: pCR For: Approval  
 38.880 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

*Nokia: note 4 implies TDD+TDD.*

**Decision: Revised to** [**R4-2321761**](file:///D:\RAN4%23109\Docs\R4-2321761.zip) **(from** [**R4-2320445**](file:///D:\RAN4%23109\Docs\R4-2320445.zip)**).**

[**R4-2321761**](file:///D:\RAN4%23109\Docs\R4-2321761.zip) **TP for TR 38.880: Input for CA\_n25A-n41A**

*Type: pCR For: Approval  
 38.880 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

*Nokia: note 4 implies TDD+TDD.*

**Decision: Approved.**

[**R4-2320872**](file:///D:\RAN4%23109\Docs\R4-2320872.zip) **TP for TR 38.880: Input for CA\_n41A-n66A**

*Type: pCR For: Approval  
 38.880 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

*Nokia: note 4 implies TDD+TDD.*

**Decision: Revised to** [**R4-2321762**](file:///D:\RAN4%23109\Docs\R4-2321762.zip) **(from** [**R4-2320872**](file:///D:\RAN4%23109\Docs\R4-2320872.zip)**).**

**[R4-2321762](file:///D:\\RAN4%23109\\Docs\\R4-2321762.zip) TP for TR 38.880: Input for CA\_n41A-n66A**

*Type: pCR For: Approval  
 38.880 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Approved.**

### 7.30 Enhancement for 700/800/900MHz band combinations

#### 7.30.1 Rapporteur input (Big CR/resubmitted CR)

**Big CR**

[**R4-2318402**](file:///D:\RAN4%23109\Docs\R4-2318402.zip) **TS 38.101-1 big CR for NR\_700800900\_combo\_enh**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1828 rev Cat: B (Rel-18)  
  
 Source: CATT*

*Skyworks: do we have CR for CA\_n26 and CA\_26(2A)?*

*Huawei: two combinations are missing. In this meeting we provide the draft CRs.*

**Decision: Revised to** [**R4-2321679**](file:///D:\RAN4%23109\Docs\R4-2321679.zip) **(from** [**R4-2318402**](file:///D:\RAN4%23109\Docs\R4-2318402.zip)**).**

**[R4-2321679](file:///D:\\RAN4%23109\\Docs\\R4-2321679.zip) TS 38.101-1 big CR for NR\_700800900\_combo\_enh**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1828 rev Cat: B (Rel-18)  
  
 Source: CATT, China Telecom*

**Decision: Agreed.**

#### 7.30.2 UE RF requirements and related transmission schemes

##### 7.30.2.1 CA configuration of CA\_n5-n8

**CR**

[**R4-2318994**](file:///D:\RAN4%23109\Docs\R4-2318994.zip) **CR for capturing the output for 2UL/2DL CA\_n5-n8**

*Type: CR For: Agreement  
 38.872 v18.2.0 CR-0004 rev Cat: B (Rel-18)  
  
 Source: vivo*

**Abstract:**

Note: Revision number wrong on CR coversheet for TDoc [R4-2318994](file:///D:\RAN4%23109\Docs\R4-2318994.zip) have value 0 instead - or blank.

Huawei: the CR is not based on the latest version of TR.

**Decision: Revised to** [**R4-2321680**](file:///D:\RAN4%23109\Docs\R4-2321680.zip) **(from** [**R4-2318994**](file:///D:\RAN4%23109\Docs\R4-2318994.zip)**).**

**[R4-2321680](file:///D:\\RAN4%23109\\Docs\\R4-2321680.zip) CR for capturing the output for 2UL/2DL CA\_n5-n8**

*Type: CR For: Agreement  
 38.872 v18.2.0 CR-0004 rev Cat: B (Rel-18)  
  
 Source: vivo*

**Abstract:**

Note: Revision number wrong on CR coversheet for TDoc [R4-2318994](file:///D:\RAN4%23109\Docs\R4-2318994.zip) have value 0 instead - or blank.

**Decision: Agreed.**

##### 7.30.2.2 CA configuration of CA\_n5-n105 and CA\_n5-n28-n105

[**R4-2318419**](file:///D:\RAN4%23109\Docs\R4-2318419.zip) **MSD analysis for CA\_n5-n28-n105**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2319887**](file:///D:\RAN4%23109\Docs\R4-2319887.zip) **Discussion on RF requirements for CA\_n5-n28-n105**

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

**Decision: Noted.**

[**R4-2320242**](file:///D:\RAN4%23109\Docs\R4-2320242.zip) **MSD for CA\_n5A-n28A-n105A**

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

**Abstract:**

MSD analysis for n105DL is provided in this contribution

**Decision: Noted.**

**Draft CR**

[**R4-2319888**](file:///D:\RAN4%23109\Docs\R4-2319888.zip) **Draft CR for 38.101-1 to introduce CA\_n5-n28-n105**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Spark NZ*

*Huawei: we can revise it to update the MSD values.*

**Decision: Revised to** [**R4-2321681**](file:///D:\RAN4%23109\Docs\R4-2321681.zip) **(from** [**R4-2319888**](file:///D:\RAN4%23109\Docs\R4-2319888.zip)**).**

**[R4-2321681](file:///D:\\RAN4%23109\\Docs\\R4-2321681.zip) Draft CR for 38.101-1 to introduce CA\_n5-n28-n105**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Spark NZ, Skyworks Solutions Inc., Qualcomm France, Apple*

*Huawei: we can revise it to update the MSD values.*

**Decision: Endorsed.**

##### 7.30.2.3 CA configuration of CA\_n28-n105

##### 7.30.2.4 CA configuration of CA\_n26-n28

[**R4-2318463**](file:///D:\RAN4%23109\Docs\R4-2318463.zip) **Adding DTV protection requirements for n5-n28 and n26-n28**

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

**Abstract:**

Discussion paper to add emission requirements for CA\_n5-n28 and CA\_n26-n28 to protect DTV system in Japan.

**Decision: Noted.**

**Draft CR**

[**R4-2318464**](file:///D:\RAN4%23109\Docs\R4-2318464.zip) **Draft CR 38.101-1 to add DTV protection requirements for CA\_n5-n28 and CA\_n26-n28**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: NTT DOCOMO, INC., KDDI Corporation*

**Abstract:**

Draft CR to add emission requirements for CA\_n5-n28 and CA\_n26-n28 to protect DTV system in Japan.

**Decision: Endorsed.**

##### 7.30.2.5 CA configuration of CA\_n26(2A)

[**R4-2318434**](file:///D:\RAN4%23109\Docs\R4-2318434.zip) **MSD analysis for UL CA\_n26(2A)**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2319885**](file:///D:\RAN4%23109\Docs\R4-2319885.zip) **Discussion on RF requirements for CA\_n26(2A)**

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

**Decision: Noted.**

[**R4-2320244**](file:///D:\RAN4%23109\Docs\R4-2320244.zip) **Considerations for UL CA\_n26(2A)**

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

**Abstract:**

Analysis and proposals on UL CA\_n26(2A) are provided in this paper.

**Decision: Noted.**

[**R4-2320799**](file:///D:\RAN4%23109\Docs\R4-2320799.zip) **CA\_n26(2A)**

*Type: other For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

[**R4-2320997**](file:///D:\RAN4%23109\Docs\R4-2320997.zip) **CA\_n26(2A) MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**Draft CR**

[**R4-2319886**](file:///D:\RAN4%23109\Docs\R4-2319886.zip) **Draft CR for 38.101-1 to introduce UL CA\_n26(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

*Skyworks: revise it to capture the agreement.*

*Qualcomm: the wording needs be improved.*

**Decision: Revised to** [**R4-2321682**](file:///D:\RAN4%23109\Docs\R4-2321682.zip) **(from** [**R4-2319886**](file:///D:\RAN4%23109\Docs\R4-2319886.zip)**).**

**[R4-2321682](file:///D:\\RAN4%23109\\Docs\\R4-2321682.zip) Draft CR for 38.101-1 to introduce UL CA\_n26(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

*Skyworks: revise it to capture the agreement.*

*Qualcomm: the wording needs be improved.*

**Decision: Endorsed.**

##### 7.30.2.6 Other configurations

**Draft CR**

[**R4-2319889**](file:///D:\RAN4%23109\Docs\R4-2319889.zip) **Draft CR for 38.101-1 to introduce CA\_n8-n20-n28**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

#### 7.30.3 Release independency

[**R4-2318313**](file:///D:\RAN4%23109\Docs\R4-2318313.zip) **Discussion on the release independent for WI NR\_700800900\_combo\_enh**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**CRs**

[**R4-2318314**](file:///D:\RAN4%23109\Docs\R4-2318314.zip) **Release independent CR for NR\_700800900\_combo\_enh**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0126 rev Cat: B (Rel-18)  
  
 Source: CATT*

**Decision: Not pursued.**

#### 7.30.4 Moderator summary and conclusions

[**R4-2318121**](file:///D:\RAN4%23109\Docs\R4-2318121.zip) **Topic summary for [109][115] NR\_700800900\_combo\_enh**

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

**Abstract:**

[109][100] Main Session AI 7.30

**2nd Round:**

Chair: The WI is completed.

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 7.31 Introduction of the satellite L-/S-band

#### 7.31.1 General aspects and Rapporteur input (WID/TR/big CR)

**TR**

[**R4-2318061**](file:///D:\RAN4%23109\Docs\R4-2318061.zip) **TR 38.741 for the NTN L-/S-band**

*Type: draft TR For: Agreement  
 38.741 v0.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Apple, Globalstar*

**Abstract:**

Placeholder TR for implementing TPs agreed at RAN4#109 meeting.

**Decision: Agreed.**

#### 7.31.2 UE RF requirements

[**R4-2318358**](file:///D:\RAN4%23109\Docs\R4-2318358.zip) **Verification of n254 ECC and FCC worst case A-MPR with measurements**

*Type: other For: Approval  
 38.101-5 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide our measurement results for the worst-case allocation and channel position against the emission requirements that are common to the ECC and FCC.

**Conclusion:** The content will be captured in the revised TP.

**Decision: Noted.**

[**R4-2318406**](file:///D:\RAN4%23109\Docs\R4-2318406.zip) **RF requirements for the NTN L-/S-band**

*Type: discussion For: Discussion  
 Source: Apple, Globalstar*

**Decision: Noted.**

[**R4-2319935**](file:///D:\RAN4%23109\Docs\R4-2319935.zip) **on the remaining issue for NTN LS band**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**TPs**

[**R4-2318407**](file:///D:\RAN4%23109\Docs\R4-2318407.zip) **TP for the TR 38.741 (additional A-MPR results)**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: Apple, Globalstar*

**Decision: Revised to** [**R4-2321807**](file:///D:\RAN4%23109\Docs\R4-2321807.zip) **(from** [**R4-2318407**](file:///D:\RAN4%23109\Docs\R4-2318407.zip)**).**

[**R4-2321807**](file:///D:\RAN4%23109\Docs\R4-2321807.zip) **TP for the TR 38.741 (additional A-MPR results)**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: Apple, Globalstar*

**Decision: Approved.**

[**R4-2318408**](file:///D:\RAN4%23109\Docs\R4-2318408.zip) **TP for the TR 38.741 (summarised A-MPR values)**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: Apple, Globalstar*

**Decision: Revised to** [**R4-2321808**](file:///D:\RAN4%23109\Docs\R4-2321808.zip) **(from** [**R4-2318408**](file:///D:\RAN4%23109\Docs\R4-2318408.zip)**).**

[**R4-2321808**](file:///D:\RAN4%23109\Docs\R4-2321808.zip) **TP for the TR 38.741 (summarised A-MPR values)**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: Apple, Globalstar, Qualcomm, Skyworks Solutions Inc.*

**Decision: Approved.**

[**R4-2318405**](file:///D:\RAN4%23109\Docs\R4-2318405.zip) **TP for the TR 38.741 (editorial corrections for terms, symbols and acronyms )**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: Apple, Globalstar*

*Qualcomm: remove RSRP..*

*Huawei: GEO and LEO are missing.*

**Decision: Revised to** [**R4-2321805**](file:///D:\RAN4%23109\Docs\R4-2321805.zip) **(from** [**R4-2318405**](file:///D:\RAN4%23109\Docs\R4-2318405.zip)**).**

[**R4-2321805**](file:///D:\RAN4%23109\Docs\R4-2321805.zip) **TP for the TR 38.741 (editorial corrections for terms, symbols and acronyms )**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: Apple, Globalstar*

**Decision: Approved.**

[**R4-2319936**](file:///D:\RAN4%23109\Docs\R4-2319936.zip) **TP to TR 38.741 on remaining issue for band n254**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: OPPO*

**Decision: Revised to** [**R4-2321806**](file:///D:\RAN4%23109\Docs\R4-2321806.zip) **(from** [**R4-2319936**](file:///D:\RAN4%23109\Docs\R4-2319936.zip)**).**

[**R4-2321806**](file:///D:\RAN4%23109\Docs\R4-2321806.zip) **TP to TR 38.741 on remaining issue for band n254**

*Type: pCR For: Approval  
 38.741 v0.2.1 CR- rev Cat: (Rel-18)  
  
 Source: OPPO, Apple Inc.*

**Decision: Approved.**

[**R4-2320649**](file:///D:\RAN4%23109\Docs\R4-2320649.zip) **TP to TR 38.741: A-MPR for LS-band**

*Type: other For: Approval  
 Source: Qualcomm Inc.*

**Decision: Approved.**

**CR**

[**R4-2321017**](file:///D:\RAN4%23109\Docs\R4-2321017.zip) **Introduction of the NTN L/S-band**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0054 rev Cat: B (Rel-18)  
  
 Source: Apple Inc., Globalstar Inc., ZTE Corp., OPPO, Xiaomi, CAICT*

*Qualcomm: need aligne the tables for regulation.*

**Decision: Revised to** [**R4-2321809**](file:///D:\RAN4%23109\Docs\R4-2321809.zip) **(from** [**R4-2321017**](file:///D:\RAN4%23109\Docs\R4-2321017.zip)**).**

[**R4-2321809**](file:///D:\RAN4%23109\Docs\R4-2321809.zip) **Introduction of the NTN L/S-band**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0054 rev Cat: B (Rel-18)  
  
 Source: Apple Inc., Globalstar Inc., ZTE Corp., OPPO, Xiaomi, CAICT*

**Decision: Agreed.**

[**R4-2318409**](file:///D:\RAN4%23109\Docs\R4-2318409.zip) **Introduction of the NTN L-/S-band to TS 38.101-5**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0038 rev Cat: B (Rel-18)  
  
 Source: Apple, Globalstar, ZTE Corp., OPPO, Xiaomi, CAICT*

**Abstract:**

Note: The CR coversheet does not have the CR number 0038 on coversheet.

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

#### 7.31.3 SAN RF requirements

**CRs**

[**R4-2318312**](file:///D:\RAN4%23109\Docs\R4-2318312.zip) **CR for TS 38.181, On introduction of the satellite L-/S-band**

*Type: CR For: Agreement  
 38.181 v17.2.0 CR-0012 rev Cat: B (Rel-18)  
  
 Source: CATT*

*Huawei: WI code should be -Perf.*

**Decision: Revised to** [**R4-2321810**](file:///D:\RAN4%23109\Docs\R4-2321810.zip) **(from** [**R4-2318312**](file:///D:\RAN4%23109\Docs\R4-2318312.zip)**).**

[**R4-2321810**](file:///D:\RAN4%23109\Docs\R4-2321810.zip) **CR for TS 38.181, On introduction of the satellite L-/S-band**

*Type: CR For: Agreement  
 38.181 v17.2.0 CR-0012 rev Cat: B (Rel-18)  
  
 Source: CATT*

*Huawei: WI code should be -Perf.*

**Decision: Agreed.**

[**R4-2319557**](file:///D:\RAN4%23109\Docs\R4-2319557.zip) **CR to TS38.108 Introduction of the satellite L-/S-band**

*Type: CR For: Agreement  
 38.108 v18.0.0 CR-0046 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation, Apple Inc., Globalstar Inc*

**Decision: Agreed.**

#### 7.31.4 RRM requirements

**CRs**

[**R4-2318410**](file:///D:\RAN4%23109\Docs\R4-2318410.zip) **Introduction of the NTN L-/S-band to TS 38.133**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3668 rev Cat: B (Rel-18)  
  
 Source: Apple, Globalstar, ZTE Corp*

**Abstract:**

Note: The CR coversheet does not have specification version 18.3.0 on coversheet.

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

[**R4-2321018**](file:///D:\RAN4%23109\Docs\R4-2321018.zip) **Introduction of the NTN L-/S-band to TS 38.133**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3950 rev Cat: B (Rel-18)  
  
 Source: Apple, Globalstar, ZTE Corp*

**Decision: Revised to** [**R4-2321811**](file:///D:\RAN4%23109\Docs\R4-2321811.zip) **(from** [**R4-2321018**](file:///D:\RAN4%23109\Docs\R4-2321018.zip)**).**

**[R4-2321811](file:///D:\\RAN4%23109\\Docs\\R4-2321811.zip) Introduction of the NTN L-/S-band to TS 38.133**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3950 rev Cat: B (Rel-18)  
  
 Source: Apple, Globalstar, ZTE Corp*

**Decision: Agreed.**

#### 7.31.5 Moderator summary and conclusions

[**R4-2318122**](file:///D:\RAN4%23109\Docs\R4-2318122.zip) **Topic summary for [109][116] LTE\_NR\_NTN\_LSband**

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

**Abstract:**

[109][100] Main Session AI 7.31

**2nd Round:**

Chair: The WI is completed.

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 7.32 New FDD Bands using the uplink from n28 and the downlink of n75 and n76

#### 7.32.1 UE RF requirements

**CRs**

[**R4-2320603**](file:///D:\RAN4%23109\Docs\R4-2320603.zip) **CR to TS38.101-1: Introduction of n109**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1955 rev Cat: B (Rel-18)  
  
 Source: Vodafone, Huawei, Skyworks Solutions, Murata Manufacturing Co Ltd*

**Decision: Revised to** [**R4-2321804**](file:///D:\RAN4%23109\Docs\R4-2321804.zip) **(from** [**R4-2320603**](file:///D:\RAN4%23109\Docs\R4-2320603.zip)**).**

[**R4-2321804**](file:///D:\RAN4%23109\Docs\R4-2321804.zip) **CR to TS38.101-1: Introduction of n109**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1955 rev Cat: B (Rel-18)  
  
 Source: Vodafone, Huawei, Skyworks Solutions, Murata Manufacturing Co Ltd*

**Decision: Agreed.**

[**R4-2318435**](file:///D:\RAN4%23109\Docs\R4-2318435.zip) **CR to 38.101-3 on introduction of band n109**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1038 rev Cat: B (Rel-18)  
  
 Source: Apple, Vodafone*

**Decision: Agreed.**

#### 7.32.2 BS RF requirements

**CRs**

38.xxx

[**R4-2320593**](file:///D:\RAN4%23109\Docs\R4-2320593.zip) **CR to TS38.104: Introduction of n109**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0544 rev Cat: B (Rel-18)  
  
 Source: VODAFONE*

*Nokia/Ericsson: note for CBW 40/50 is not correct.*

**Decision: Revised to** [**R4-2321689**](file:///D:\RAN4%23109\Docs\R4-2321689.zip) **(from** [**R4-2320593**](file:///D:\RAN4%23109\Docs\R4-2320593.zip)**).**

[**R4-2321689**](file:///D:\RAN4%23109\Docs\R4-2321689.zip) **CR to TS38.104: Introduction of n109**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0544 rev Cat: B (Rel-18)  
  
 Source: VODAFONE*

*Nokia/Ericsson: note for CBW 40/50 is not correct.*

**Decision: Agreed.**

[**R4-2318641**](file:///D:\RAN4%23109\Docs\R4-2318641.zip) **CR to TS38.141-1 Introduction of n109**

*Type: CR For: Agreement  
 38.141-1 v18.3.0 CR-0391 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: for preclusion of bands, there is no consistency. There is some manufacture declaration. Why do we need those.*

**Decision: Revised to** [**R4-2321690**](file:///D:\RAN4%23109\Docs\R4-2321690.zip) **(from** [**R4-2318641**](file:///D:\RAN4%23109\Docs\R4-2318641.zip)**).**

[**R4-2321690**](file:///D:\RAN4%23109\Docs\R4-2321690.zip) **CR to TS38.141-1 Introduction of n109**

*Type: CR For: Agreement  
 38.141-1 v18.3.0 CR-0391 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

**Decision: Agreed.**

[**R4-2318660**](file:///D:\RAN4%23109\Docs\R4-2318660.zip) **CR to TS38.141-2 Introduction of n109**

*Type: CR For: Agreement  
 38.141-2 v18.3.0 CR-0553 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comments.*

**Decision: Revised to** [**R4-2321691**](file:///D:\RAN4%23109\Docs\R4-2321691.zip) **(from** [**R4-2318660**](file:///D:\RAN4%23109\Docs\R4-2318660.zip)**).**

[**R4-2321691**](file:///D:\RAN4%23109\Docs\R4-2321691.zip) **CR to TS38.141-2 Introduction of n109**

*Type: CR For: Agreement  
 38.141-2 v18.3.0 CR-0553 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comments.*

**Decision: Agreed.**

[**R4-2320404**](file:///D:\RAN4%23109\Docs\R4-2320404.zip) **CR to 38.174 on introduction of Band n109**

*Type: CR For: Agreement  
 38.174 v18.2.0 CR-0084 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Vodafone*

**Decision: Agreed.**

[**R4-2319594**](file:///D:\RAN4%23109\Docs\R4-2319594.zip) **CR to TS 38.106 - Introduction of band n109**

*Type: CR For: Agreement  
 38.106 v18.2.0 CR-0042 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Vodafone*

**Abstract:**

This CR is introducing band n109 in TS 38.106

**Decision: Agreed.**

[**R4-2319595**](file:///D:\RAN4%23109\Docs\R4-2319595.zip) **CR to TS 38.115-1 - Introduction of band n109**

*Type: CR For: Agreement  
 38.115-1 v18.2.0 CR-0020 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Vodafone*

**Abstract:**

This CR is introducing band n109 in TS 38.115-1

**Decision: Agreed.**

[**R4-2320405**](file:///D:\RAN4%23109\Docs\R4-2320405.zip) **CR to 38.176-1 on introduction of Band n109**

*Type: CR For: Agreement  
 38.176-1 v18.2.0 CR-0038 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Vodafone*

**Decision: Agreed.**

[**R4-2320406**](file:///D:\RAN4%23109\Docs\R4-2320406.zip) **CR to 38.176-2 on introduction of Band n109**

*Type: CR For: Agreement  
 38.176-2 v18.2.0 CR-0041 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Vodafone*

**Decision: Agreed.**

37.xxx

[**R4-2318639**](file:///D:\RAN4%23109\Docs\R4-2318639.zip) **CR to TS 37.104 Introduction of n109**

*Type: CR For: Agreement  
 37.104 v18.3.0 CR-1000 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Revised to** [**R4-2321692**](file:///D:\RAN4%23109\Docs\R4-2321692.zip) **(from** [**R4-2318639**](file:///D:\RAN4%23109\Docs\R4-2318639.zip)**).**

[**R4-2321692**](file:///D:\RAN4%23109\Docs\R4-2321692.zip) **CR to TS 37.104 Introduction of n109**

*Type: CR For: Agreement  
 37.104 v18.3.0 CR-1000 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Agreed.**

[**R4-2319592**](file:///D:\RAN4%23109\Docs\R4-2319592.zip) **CR to TS 37.145-1 - Introduction of band n109**

*Type: CR For: Agreement  
 37.145-1 v18.3.0 CR-0332 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Vodafone*

**Abstract:**

This CR is introducing band n109 in TS 37.145-1

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Revised to** [**R4-2321693**](file:///D:\RAN4%23109\Docs\R4-2321693.zip) **(from** [**R4-2319592**](file:///D:\RAN4%23109\Docs\R4-2319592.zip)**).**

[**R4-2321693**](file:///D:\RAN4%23109\Docs\R4-2321693.zip) **CR to TS 37.145-1 - Introduction of band n109**

*Type: CR For: Agreement  
 37.145-1 v18.3.0 CR-0332 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Vodafone*

**Abstract:**

This CR is introducing band n109 in TS 37.145-1

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Agreed.**

[**R4-2319593**](file:///D:\RAN4%23109\Docs\R4-2319593.zip) **CR to TS 37.145-2 - Introduction of band n109**

*Type: CR For: Agreement  
 37.145-2 v18.3.0 CR-0368 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Vodafone*

**Abstract:**

This CR is introducing band n109 in TS 37.145-2

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Revised to** [**R4-2321694**](file:///D:\RAN4%23109\Docs\R4-2321694.zip) **(from** [**R4-2319593**](file:///D:\RAN4%23109\Docs\R4-2319593.zip)**).**

[**R4-2321694**](file:///D:\RAN4%23109\Docs\R4-2321694.zip) **CR to TS 37.145-2 - Introduction of band n109**

*Type: CR For: Agreement  
 37.145-2 v18.3.0 CR-0368 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Vodafone*

**Abstract:**

This CR is introducing band n109 in TS 37.145-2

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Agreed.**

[**R4-2320402**](file:///D:\RAN4%23109\Docs\R4-2320402.zip) **CR to 37.105 on introduction of Band n109**

*Type: CR For: Agreement  
 37.105 v18.2.0 CR-0280 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Vodafone*

**Decision: Agreed.**

[**R4-2320403**](file:///D:\RAN4%23109\Docs\R4-2320403.zip) **CR to 37.141 on introduction of Band n109**

*Type: CR For: Agreement  
 37.141 v18.3.1 CR-1079 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Vodafone*

**Decision: Agreed.**

36.xxx

[**R4-2318661**](file:///D:\RAN4%23109\Docs\R4-2318661.zip) **CR to TS36.104 Introduction of n109**

*Type: CR For: Agreement  
 36.104 v18.3.0 CR-4983 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Revised to** [**R4-2321695**](file:///D:\RAN4%23109\Docs\R4-2321695.zip) **(from** [**R4-2318661**](file:///D:\RAN4%23109\Docs\R4-2318661.zip)**).**

[**R4-2321695**](file:///D:\RAN4%23109\Docs\R4-2321695.zip) **CR to TS36.104 Introduction of n109**

*Type: CR For: Agreement  
 36.104 v18.3.0 CR-4983 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Agreed.**

[**R4-2318640**](file:///D:\RAN4%23109\Docs\R4-2318640.zip) **CR to TS36.141 Introduction of n109**

*Type: CR For: Agreement  
 36.141 v18.2.0 CR-1370 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Revised to** [**R4-2321696**](file:///D:\RAN4%23109\Docs\R4-2321696.zip) **(from** [**R4-2318640**](file:///D:\RAN4%23109\Docs\R4-2318640.zip)**).**

**[R4-2321696](file:///D:\\RAN4%23109\\Docs\\R4-2321696.zip) CR to TS36.141 Introduction of n109**

*Type: CR For: Agreement  
 36.141 v18.2.0 CR-1370 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Vodafone*

*Nokia: similar comment and we need alignment for the co-existence requirements.*

**Decision: Agreed.**

#### 7.32.3 RRM requirements

**CR**

[**R4-2319596**](file:///D:\RAN4%23109\Docs\R4-2319596.zip) **CR to TS 38.133 - Introduction of band n109**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3765 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Vodafone*

**Abstract:**

This CR is introducing band n109 in TS 38.133

**Decision: Agreed.**

#### 7.32.4 Moderator summary and conclusions

[**R4-2318123**](file:///D:\RAN4%23109\Docs\R4-2318123.zip) **Topic summary for [109][117] NR\_FDD\_ULn28\_DLn75\_n76**

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

**Abstract:**

[109][100] Main Session AI 7.32

**2nd Round:**

Chair: The WI is completed.

**Decision: Noted.**

### 7.33 Introduction of 900 MHz NR Band in the US

#### 7.33.1 UE RF requirements

**CRs**

[**R4-2318532**](file:///D:\RAN4%23109\Docs\R4-2318532.zip) **CR for 38.307 n106 and n8 overlapping bands**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0131 rev Cat: B (Rel-18)  
  
 Source: Nokia, Anterix*

**Decision: Agreed.**

[**R4-2318534**](file:///D:\RAN4%23109\Docs\R4-2318534.zip) **CR for 38.101-1: Introduction of n106**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1845 rev Cat: B (Rel-18)  
  
 Source: Nokia, Anterix, Huawei, Ericsson*

*Qualcomm had comments and some is old spec.*

**Decision: Revised to** [**R4-2321697**](file:///D:\RAN4%23109\Docs\R4-2321697.zip) **(from** [**R4-2318534**](file:///D:\RAN4%23109\Docs\R4-2318534.zip)**).**

**[R4-2321697](file:///D:\\RAN4%23109\\Docs\\R4-2321697.zip) CR for 38.101-1: Introduction of n106**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1845 rev Cat: B (Rel-18)  
  
 Source: Nokia, Anterix, Huawei, Ericsson*

*Qualcomm had comments and some is old spec.*

**Decision: Agreed.**

#### 7.33.2 BS RF requirements (resubmitted CR)

**CRs**

38.xxx

[**R4-2320951**](file:///D:\RAN4%23109\Docs\R4-2320951.zip) **CR to TS 38.104 on Introduction of Band n106**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0547 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Anterix*

**Decision: Agreed.**

[**R4-2320399**](file:///D:\RAN4%23109\Docs\R4-2320399.zip) **CR to 38.141-1 on introduction of Band n106**

*Type: CR For: Agreement  
 38.141-1 v18.3.0 CR-0400 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Anterix*

**Decision: Agreed.**

[**R4-2320400**](file:///D:\RAN4%23109\Docs\R4-2320400.zip) **CR to 38.141-2 on introduction of Band 106**

*Type: CR For: Agreement  
 38.141-2 v18.3.0 CR-0561 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Anterix*

**Decision: Agreed.**

[**R4-2319203**](file:///D:\RAN4%23109\Docs\R4-2319203.zip) **CR to TS38.174: introduction of band n106**

*Type: CR For: Agreement  
 38.174 v18.2.0 CR-0075 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

*Anterix: we can agree on the CR and update the WID for the specs.*

**Decision: Agreed.**

[**R4-2319204**](file:///D:\RAN4%23109\Docs\R4-2319204.zip) **CR to TS38.176-1: the introduction of band n106**

*Type: CR For: Agreement  
 38.176-1 v18.2.0 CR-0032 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319205**](file:///D:\RAN4%23109\Docs\R4-2319205.zip) **CR to TS38.176-2: introduction of band n106**

*Type: CR For: Agreement  
 38.176-2 v18.2.0 CR-0038 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319202**](file:///D:\RAN4%23109\Docs\R4-2319202.zip) **CR to TS38.115-1: introduction of band n106**

*Type: CR For: Agreement  
 38.115-1 v18.2.0 CR-0019 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

*Nokia: the LTE bands should be removed.*

*Ericsson: It should be Category A.*

**Decision: Revised to** [**R4-2321698**](file:///D:\RAN4%23109\Docs\R4-2321698.zip) **(from** [**R4-2319202**](file:///D:\RAN4%23109\Docs\R4-2319202.zip)**).**

[**R4-2321698**](file:///D:\RAN4%23109\Docs\R4-2321698.zip) **CR to TS38.115-1: introduction of band n106**

*Type: CR For: Agreement  
 38.115-1 v18.2.0 CR-0019 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

*Nokia: the LTE bands should be removed.*

*Ericsson: It should be Category A.*

**Decision: Agreed.**

[**R4-2320871**](file:///D:\RAN4%23109\Docs\R4-2320871.zip) **CR to 38.104 on introduction of Band n106**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0546 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Anterix*

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

37.xxx

[**R4-2320401**](file:///D:\RAN4%23109\Docs\R4-2320401.zip) **CR to 37.104 on introduction of Band n106**

*Type: CR For: Agreement  
 37.104 v18.3.0 CR-1008 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Anterix*

**Decision: Agreed.**

[**R4-2319590**](file:///D:\RAN4%23109\Docs\R4-2319590.zip) **CR to TS 37.105 - Introduction of band n106**

*Type: CR For: Agreement  
 37.105 v18.2.0 CR-0279 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This CR is introducing band n106 in TS 37.105

**Decision: Agreed.**

[**R4-2319201**](file:///D:\RAN4%23109\Docs\R4-2319201.zip) **CR to TS37.141: the introduction of band n106**

*Type: CR For: Agreement  
 37.141 v18.3.1 CR-1062 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2320869**](file:///D:\RAN4%23109\Docs\R4-2320869.zip) **CR to 37.145-1 on introduction of Band 106**

*Type: CR For: Agreement  
 37.145-1 v18.3.0 CR-0336 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Anterix*

**Decision: Agreed.**

[**R4-2320870**](file:///D:\RAN4%23109\Docs\R4-2320870.zip) **CR to 37.145-2 on introduction of Band 106**

*Type: CR For: Agreement  
 37.145-2 v18.3.0 CR-0372 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Anterix*

**Decision: Agreed.**

36.xxx

[**R4-2319199**](file:///D:\RAN4%23109\Docs\R4-2319199.zip) **CR to TS 36.104: the introduction of band n106**

*Type: CR For: Agreement  
 36.104 v18.3.0 CR-4984 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2321699**](file:///D:\RAN4%23109\Docs\R4-2321699.zip) **(from** [**R4-2319199**](file:///D:\RAN4%23109\Docs\R4-2319199.zip)**).**

[**R4-2321699**](file:///D:\RAN4%23109\Docs\R4-2321699.zip) **CR to TS 36.104: the introduction of band n106**

*Type: CR For: Agreement  
 36.104 v18.3.0 CR-4984 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319200**](file:///D:\RAN4%23109\Docs\R4-2319200.zip) **CR to TS 36.141: the introduction of band n106**

*Type: CR For: Agreement  
 36.141 v18.2.0 CR-1371 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 7.33.3 RRM requirements

**CR**

[**R4-2319295**](file:///D:\RAN4%23109\Docs\R4-2319295.zip) **CR to TS 38.133: Introduction of 900 MHz NR Band in the US**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3741 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 7.33.4 Moderator summary and conclusions

[**R4-2318124**](file:///D:\RAN4%23109\Docs\R4-2318124.zip) **Topic summary for [109][118] US\_900MHz**

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

**Abstract:**

[109][100] Main Session AI 7.33

**2nd round:**

Chair: this WI can be closed.

**Decision: Noted.**

### 7.34 Introduction of NR bands n31 and n72

#### 7.34.1 General aspects

**Revised WID**

[**R4-2318530**](file:///D:\RAN4%23109\Docs\R4-2318530.zip) **n31+n72 WID**

*Type: WID revised For: Endorsement  
 Source: Nokia*

**Decision: Endorsed.**

#### 7.34.2 Band definition and co-existence

#### 7.34.3 UE RF requirements (resubmitted CR)

**CR**

[**R4-2319591**](file:///D:\RAN4%23109\Docs\R4-2319591.zip) **CR to TS 38.101-1 - Introduction of bands n31 and n72**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1910 rev Cat: B (Rel-18)  
  
 Source: Ericsson. Nokia, ZTE*

**Abstract:**

This CR is introducing bands n31 and n72 in TS 38.101-1

**Decision: Agreed.**

[**R4-2319185**](file:///D:\RAN4%23109\Docs\R4-2319185.zip) **CR to TS36.101: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6026 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319194**](file:///D:\RAN4%23109\Docs\R4-2319194.zip) **CR to TS38.307: the introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0135 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 7.34.4 BS RF requirements and conformance testing (resubmitted CR)

**CRs**

38.xxx

[**R4-2318389**](file:///D:\RAN4%23109\Docs\R4-2318389.zip) **CR to TS 38.104 on introduction NR bands n31 and n72**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0525 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, ZTE Corporation, Ericsson*

**Abstract:**

Required changes to support NR bands n31 and n72.

**Decision: Agreed.**

[**R4-2318390**](file:///D:\RAN4%23109\Docs\R4-2318390.zip) **CR to TS 38.141-1 on introduction NR bands n31 and n72**

*Type: CR For: Agreement  
 38.141-1 v18.3.0 CR-0387 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, ZTE Corporation, Ericsson*

**Abstract:**

Required changes to support NR bands n31 and n72.

**Decision:** The document was **revised to** [**R4-2319943**](file:///D:\RAN4%23109\Docs\R4-2319943.zip).

[**R4-2319943**](file:///D:\RAN4%23109\Docs\R4-2319943.zip) **CR to TS 38.141-1 on introduction NR bands n31 and n72**

*Type: CR For: Agreement  
 38.141-1 v18.3.0 CR-0387 rev 1 Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, ZTE Corporation, Ericsson*

(Replaces [R4-2318390](file:///D:\RAN4%23109\Docs\R4-2318390.zip))

**Abstract:**

Required changes to support NR bands n31 and n72.

**Decision: Agreed.**

[**R4-2318391**](file:///D:\RAN4%23109\Docs\R4-2318391.zip) **CR to TS 38.141-2 on introduction NR bands n31 and n72**

*Type: CR For: Agreement  
 38.141-2 v18.3.0 CR-0551 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, ZTE Corporation, Ericsson*

**Abstract:**

Required changes to support NR bands n31 and n72.

**Decision: Agreed.**

[**R4-2319189**](file:///D:\RAN4%23109\Docs\R4-2319189.zip) **CR to TS38.106: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.106 v18.2.0 CR-0041 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319190**](file:///D:\RAN4%23109\Docs\R4-2319190.zip) **CR to TS38.115-1: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.115-1 v18.2.0 CR-0018 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319191**](file:///D:\RAN4%23109\Docs\R4-2319191.zip) **CR to TS38.174: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.174 v18.2.0 CR-0074 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319192**](file:///D:\RAN4%23109\Docs\R4-2319192.zip) **CR to TS38.176-1: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.176-1 v18.2.0 CR-0031 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319193**](file:///D:\RAN4%23109\Docs\R4-2319193.zip) **CR to TS38.176-2: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.176-2 v18.2.0 CR-0037 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

37.xxx

[**R4-2320397**](file:///D:\RAN4%23109\Docs\R4-2320397.zip) **CR to 37.104 on introduction of Band n31 and n72**

*Type: CR For: Agreement  
 37.104 v18.3.0 CR-1007 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2320398**](file:///D:\RAN4%23109\Docs\R4-2320398.zip) **CR to 37.141 on introduction of Band n31 and n72**

*Type: CR For: Agreement  
 37.141 v18.3.1 CR-1078 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2319186**](file:///D:\RAN4%23109\Docs\R4-2319186.zip) **CR to TS37.105: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 37.105 v18.2.0 CR-0278 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319187**](file:///D:\RAN4%23109\Docs\R4-2319187.zip) **CR to TS37.145-1: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 37.145-1 v18.3.0 CR-0331 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2319188**](file:///D:\RAN4%23109\Docs\R4-2319188.zip) **CR to TS37.145-2: introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 37.145-2 v18.3.0 CR-0367 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

36.xxx

[**R4-2320395**](file:///D:\RAN4%23109\Docs\R4-2320395.zip) **CR to 36.104 on introduction of Band n31 and n72**

*Type: CR For: Agreement  
 36.104 v18.3.0 CR-4985 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2320396**](file:///D:\RAN4%23109\Docs\R4-2320396.zip) **CR to 36.141 on introduction of Band n31 and n72**

*Type: CR For: Agreement  
 36.141 v18.2.0 CR-1373 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

#### 7.34.5 RRM core and performance requirements

**CR**

[**R4-2319778**](file:///D:\RAN4%23109\Docs\R4-2319778.zip) **CR to TS 38.133: Introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3770 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation, Nokia, Ericsson*

**Decision: Agreed.**

[**R4-2319296**](file:///D:\RAN4%23109\Docs\R4-2319296.zip) **CR to TS 38.133: Introduction of NR bands n31 and n72**

*Type: CR For: Agreement  
 38.133 v18.3.0 CR-3742 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation, Nokia, Ericsson*

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

#### 7.34.6 Moderator summary and conclusions

[**R4-2318125**](file:///D:\RAN4%23109\Docs\R4-2318125.zip) **Topic summary for [109][119] NR\_bands\_n31\_n72**

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

**Abstract:**

[109][100] Main Session AI 7.34

**2nd Round:**

Chair: The WI is completed.

**Decision: Noted.**

## 8 Rel-18 on-going non-spectrum related work items and study items for NR

### 8.1 Study on simplification of band combination specification for NR and LTE

#### 8.1.1 General aspects (TR)

**TR**

[**R4-2319604**](file:///D:\RAN4%23109\Docs\R4-2319604.zip) **TR 38.846 v1.4.0\_Study on simplification of band combination specification for NR and LTE**

*Type: draft TR For: Agreement  
 38.846 v1.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 8.1.2 Simplification of working procedure

[**R4-2320021**](file:///D:\RAN4%23109\Docs\R4-2320021.zip) **Addition of tripe beat rules for MSD analysis**

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

**Decision: Noted.**

**TPs**

[**R4-2319618**](file:///D:\RAN4%23109\Docs\R4-2319618.zip) **TP for TR 38.846: On bandwidth classes for NR band combinations**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

*Samsung: Ericsson propose to remove the interlacing for R1… The last sentence need be revised.*

**Decision: Revised to** [**R4-2321794**](file:///D:\RAN4%23109\Docs\R4-2321794.zip) **(from** [**R4-2319618**](file:///D:\RAN4%23109\Docs\R4-2319618.zip)**).**

[**R4-2321794**](file:///D:\RAN4%23109\Docs\R4-2321794.zip) **TP for TR 38.846: On bandwidth classes for NR band combinations**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

*Samsung: Ericsson propose to remove the interlacing for R1… The last sentence need be revised.*

**Decision: Approved.**

[**R4-2320022**](file:///D:\RAN4%23109\Docs\R4-2320022.zip) **TP to TR 38.846 Addition of Guidelines on Co-existence analysis for triple beat**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

While this is submitted to the TR WI the related discussion is treated in the FS\_SimBC WI agenda. The reason is to ensure the TR Rapporteur is aware of the TP.

**Decision: Revised to** [**R4-2321795**](file:///D:\RAN4%23109\Docs\R4-2321795.zip) **(from** [**R4-2320022**](file:///D:\RAN4%23109\Docs\R4-2320022.zip)**).**

[**R4-2321795**](file:///D:\RAN4%23109\Docs\R4-2321795.zip) **TP to TR 38.846 Addition of Guidelines on Co-existence analysis for triple beat**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

While this is submitted to the TR WI the related discussion is treated in the FS\_SimBC WI agenda. The reason is to ensure the TR Rapporteur is aware of the TP.

**Decision: Approved.**

[**R4-2320323**](file:///D:\RAN4%23109\Docs\R4-2320323.zip) **TP for 38.846 about that same UL configurations need to apply for all BCS's**

*Type: pCR For: Approval  
 38.846 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, T-Mobile US, Apple, Nokia*

**Abstract:**

TP for 38.846 about that same UL configurations need to apply for all BCS's

**Decision: Noted.**

[**R4-2320324**](file:///D:\RAN4%23109\Docs\R4-2320324.zip) **TP for 38.846 TP for 38.846 with some clarifications about rules for missing fallbacks**

*Type: pCR For: Approval  
 38.846 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP for 38.846 TP for 38.846 with some clarifications about rules for missing fallbacks

**Decision: Noted.**

#### 8.1.3 Simplification of specification and reduction of test burden

[**R4-2319556**](file:///D:\RAN4%23109\Docs\R4-2319556.zip) **On restricted frequency range for MSD requirements**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In RAN4#108b, a first contribution was provided [2] to address frequency range restriction issues in a TP to TR [1] for DC\_18-n77. In this contribution we further discuss frequency range restrictions and make proposals that are implemented in CR [3] for 3

**Decision: Noted.**

[**R4-2320025**](file:///D:\RAN4%23109\Docs\R4-2320025.zip) **Discussion on rules of Harmonic mixing MSD requirements**

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

**Decision: Noted.**

[**R4-2320819**](file:///D:\RAN4%23109\Docs\R4-2320819.zip) **On UL1-DL4 harmonic mixing**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide further background on the even harmonic mixing implementations aspects, its dependency versus DL frequency, and UL power class and make a proposal for cases to be investigated and if needed specified.

**Decision: Noted.**

[**R4-2320868**](file:///D:\RAN4%23109\Docs\R4-2320868.zip) **Improved table template for 1UL/CC and 2UL/CC MSD studies**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In RAN4#108b, a new table template covering all 1UL/CC and 2UL/CC MSD studies was discussed in [1], it also proposed a MSD investigation report table. In this contribution, we provide further details and a way forward to introduce these tables in the TP t

**Decision: Noted.**

[**R4-2320880**](file:///D:\RAN4%23109\Docs\R4-2320880.zip) **Considerations on spec structure for inter-band CA configuration tables**

*Type: other For: Approval  
 Source: ZTE*

**Decision: Noted.**

**TPs**

[**R4-2320026**](file:///D:\RAN4%23109\Docs\R4-2320026.zip) **TP to TR 38.846 Addition of Guidelines on Harmonic mixing MSD requirements**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to** [**R4-2321796**](file:///D:\RAN4%23109\Docs\R4-2321796.zip) **(from** [**R4-2320026**](file:///D:\RAN4%23109\Docs\R4-2320026.zip)**).**

[**R4-2321796**](file:///D:\RAN4%23109\Docs\R4-2321796.zip) **TP to TR 38.846 Addition of Guidelines on Harmonic mixing MSD requirements**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

[**R4-2320998**](file:///D:\RAN4%23109\Docs\R4-2320998.zip) **TP for TR38.846 Guidelines on Cross-band MSD test points for SUL**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Approved.**

[**R4-2320999**](file:///D:\RAN4%23109\Docs\R4-2320999.zip) **TP for TR38.846 Guidelines on Cross-band MSD with FDD UL-CA**

*Type: pCR For: Approval  
 38.846 v1.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Approved.**

**Draft CRs/CRs**

[**R4-2318473**](file:///D:\RAN4%23109\Docs\R4-2318473.zip) **CR to R18 TS38.101-1 to align frequency range restriction for MSD**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1835 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Note: CR coversheet WI code value missing a comma between the two WI codes: NR\_CADC\_R18\_2BDL\_xBUL-Core, NR\_CADC\_R18\_3BDL\_xBUL-Core. CR to clarify, align frequency range restrictions for MSD and remove operator specific ones

**Decision: Agreed.**

#### 8.1.4 Moderator summary and conclusions

[**R4-2318129**](file:///D:\RAN4%23109\Docs\R4-2318129.zip) **Topic summary for [109][123] FS\_SimBC**

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

**Abstract:**

[109][100] Main Session AI 8.1

**2nd Round:**

Chair: the SI can be closed.

**Decision: Noted.**

**New tdoc allocated**

[**R4-2321921**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321921.zip) **TP for TR 38.846: On spec structure for inter-band CA configuration tables**

*Type: pCR For: Approval  
 38.846 vx.y.z CR- rev Cat: (Rel-18)  
  
 Source: ZTE*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 8.2 Study on NR FR2 OTA testing enhancements

### 8.3 Further RF requirements enhancement for NR and EN-DC in FR1

#### 8.3.1 UE RF requirements

##### 8.3.1.1 General aspects (TR/big CR)

**Big CRs**

[**R4-2320059**](file:///D:\RAN4%23109\Docs\R4-2320059.zip) **draft TS 38.101-1 big CR for NR\_ENDC\_RF\_FR1\_enh2**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1940 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, vivo, NTT DOCOMO, INC., [ ]*

**Decision: Revised to R4-2321981 (from R4-2320059).**

[**R4-2321981**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321981.zip) **TS 38.101-1 big CR for NR\_ENDC\_RF\_FR1\_enh2**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1940 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, vivo, NTT DOCOMO, INC., [ ]*

**Decision: Agreed.**

[**R4-2319021**](file:///D:\RAN4%23109\Docs\R4-2319021.zip) **TS 38.101-3 big CR for NR\_ENDC\_RF\_FR1\_enh2**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1054 rev Cat: B (Rel-18)  
  
 Source: NTT DOCOMO, INC., Huawei, HiSilicon, vivo*

**Abstract:**

Resubmission of endorsed CR [R4-2317620](file:///D:\RAN4%23109\Docs\R4-2317620.zip) (same content)

**Decision: Revised to R4-2321982 (from R4-2319021).**

[**R4-2321982**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321982.zip) **TS 38.101-3 big CR for NR\_ENDC\_RF\_FR1\_enh2**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1054 rev Cat: B (Rel-18)  
  
 Source: NTT DOCOMO, INC., Huawei, HiSilicon, vivo*

**Abstract:**

Resubmission of endorsed CR [R4-2317620](file:///D:\RAN4%23109\Docs\R4-2317620.zip) (same content)

**Decision: Agreed.**

[**R4-2319022**](file:///D:\RAN4%23109\Docs\R4-2319022.zip) **TS 38.307 big CR for NR\_ENDC\_RF\_FR1\_enh2**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0134 rev Cat: B (Rel-18)  
  
 Source: NTT DOCOMO, INC., Huawei, HiSilicon, vivo*

**Abstract:**

Resubmission of endorsed CR [R4-2317619](file:///D:\RAN4%23109\Docs\R4-2317619.zip) (with small update)

**Decision: Agreed.**

**Withdrawn**

[**R4-2319729**](file:///D:\RAN4%23109\Docs\R4-2319729.zip) **Big CR for TS 38.101-1 RF requirements for NR\_ENDC\_RF\_FR1\_enh2**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1919 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, vivo, NTT DOCOMO, INC.,*

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

##### 8.3.1.2 4Tx UE RF requirements

[**R4-2318033**](file:///D:\RAN4%23109\Docs\R4-2318033.zip) **On interpretation of requirements for 4Tx coherent UL MIMO**

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

**Abstract:**

This contribution aims at having a common understanding on what RAN4 is supposed to introduced as coherent UL MIMO requirements for 4Tx.

**Decision: Noted.**

[**R4-2318778**](file:///D:\RAN4%23109\Docs\R4-2318778.zip) **Pcmax tolerance for 4 Tx**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

Discussion of 4 Tx Pcmax tolerance requirements

**Decision: Noted.**

[**R4-2318946**](file:///D:\RAN4%23109\Docs\R4-2318946.zip) **Remaining issues of 4Tx requirements**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319171**](file:///D:\RAN4%23109\Docs\R4-2319171.zip) **Discussion on remaining issues on 4TX requirements**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Abstract:**

This contribution had upload issues, but they were resolved.

**Decision: Revised to** [**R4-2321678**](file:///D:\RAN4%23109\Docs\R4-2321678.zip) **(from** [**R4-2319171**](file:///D:\RAN4%23109\Docs\R4-2319171.zip)**).**

[**R4-2321678**](file:///D:\RAN4%23109\Docs\R4-2321678.zip) **Discussion on remaining issues on 4TX requirements**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Abstract:**

This contribution had upload issues, but they were resolved.

**Decision: Noted.**

[**R4-2319730**](file:///D:\RAN4%23109\Docs\R4-2319730.zip) **On remaining UE RF requirements for 4Tx**

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

**Decision: Noted.**

**Draft CRs**

[**R4-2318813**](file:///D:\RAN4%23109\Docs\R4-2318813.zip) **draft CR on 4Tx MPR to remove square bracket**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is draft CR on 4Tx MPR to remove square bracket.

**Decision: Endorsed.**

[**R4-2319731**](file:///D:\RAN4%23109\Docs\R4-2319731.zip) **draft big CR for TS 38.101-1 4Tx requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321787**](file:///D:\RAN4%23109\Docs\R4-2321787.zip) **(from** [**R4-2319731**](file:///D:\RAN4%23109\Docs\R4-2319731.zip)**).**

[**R4-2321787**](file:///D:\RAN4%23109\Docs\R4-2321787.zip) **draft big CR for TS 38.101-1 4Tx requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, vivo, NTT DOCOMO, INC., Qualcomm, Samsung, LG Electronics, OPPO, Nokia, Skyworks Solutions Inc.*

**Decision: Endorsed.**

[**R4-2320901**](file:///D:\RAN4%23109\Docs\R4-2320901.zip) **Requirements for coherent UL MIMO**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1973 rev Cat: F (Rel-18)  
  
 Source: Qualcomm, InterDigital*

**Abstract:**

CR to add verbiage for multiple TXs

**Decision: Revised to** [**R4-2321788**](file:///D:\RAN4%23109\Docs\R4-2321788.zip) **(from** [**R4-2320901**](file:///D:\RAN4%23109\Docs\R4-2320901.zip)**).**

[**R4-2321788**](file:///D:\RAN4%23109\Docs\R4-2321788.zip) **Requirements for coherent UL MIMO**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1973 rev Cat: F (Rel-18)  
  
 Source: Qualcomm, InterDigital, Nokia*

**Abstract:**

CR to add verbiage for multiple TXs

**Decision: Agreed.**

**LS**

[**R4-2319405**](file:///D:\RAN4%23109\Docs\R4-2319405.zip) **LS on 2Tx-TxD capability and 4Tx-TxD capability**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung*

**Decision: Revised to** [**R4-2321789**](file:///D:\RAN4%23109\Docs\R4-2321789.zip) **(from** [**R4-2319405**](file:///D:\RAN4%23109\Docs\R4-2319405.zip)**).**

[**R4-2321789**](file:///D:\RAN4%23109\Docs\R4-2321789.zip) **LS on 2Tx-TxD capability and 4Tx-TxD capability**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung*

**Decision: Revised to R4-2321983 (from R4-2321789).**

[**R4-2321983**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321983.zip) **LS on 2Tx-TxD capability and 4Tx-TxD capability**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung*

Agreement:

* To support[txDiversity4Tx-r18] does not mean that the UE can always support [txDiversity2Tx-r18].

**Decision: Approved.**

**Treat** [**R4-2319441**](file:///D:\RAN4%23109\Docs\R4-2319441.zip) **in [125]**

[**R4-2319441**](file:///D:\RAN4%23109\Docs\R4-2319441.zip) **On new UE capability for TxD**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose to revert RAN4 proposed capabilties for TxD for 3Tx and 4Tx, not needed.

**Decision: Noted.**

**Treat** [**R4-2318034**](file:///D:\RAN4%23109\Docs\R4-2318034.zip) **in [125]**

[**R4-2318034**](file:///D:\RAN4%23109\Docs\R4-2318034.zip) **Relation between legacy TxD and new TxD capabilities**

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

**Abstract:**

This contribution aims at clarifying relation between legacy TxD and new TxD capabilities.

**Decision: Noted.**

##### 8.3.1.3 8Rx UE RF requirements (resubmitted CR)

[**R4-2318036**](file:///D:\RAN4%23109\Docs\R4-2318036.zip) **Handling of Delta TRxSRS indication in Rel-18**

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

**Abstract:**

This contribution shares our views on how to handle this issue in Rel-18 timeframe.

**Decision: Noted.**

[**R4-2318947**](file:///D:\RAN4%23109\Docs\R4-2318947.zip) **Remaining issues of 8Rx UE RF requirements**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319023**](file:///D:\RAN4%23109\Docs\R4-2319023.zip) **Remaining issues on 8Rx for Rel-18 RF FR1 enhancements**

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

**Decision: Noted.**

[**R4-2319810**](file:///D:\RAN4%23109\Docs\R4-2319810.zip) **Views on SRS insertion loss imbalance indication**

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

**Decision: Noted.**

[**R4-2319904**](file:///D:\RAN4%23109\Docs\R4-2319904.zip) **R18 FR1 8Rx SRS IL indication**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320075**](file:///D:\RAN4%23109\Docs\R4-2320075.zip) **On FR1 AS-SRS IL imbalance reporting**

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

**Decision: Noted.**

[**R4-2320114**](file:///D:\RAN4%23109\Docs\R4-2320114.zip) **Further discussion on 8RX for FWA**

*Type: discussion For: Discussion  
 Source: Spreadtrum Communications*

**Decision: Noted.**

[**R4-2320250**](file:///D:\RAN4%23109\Docs\R4-2320250.zip) **8RX UE RF requirements**

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

**Abstract:**

Considerations and proposals on 8RX UE RF requirements are provided in this contribution.

**Decision: Noted.**

[**R4-2320891**](file:///D:\RAN4%23109\Docs\R4-2320891.zip) **Considerations for Reporting Rx Insertion Losses**

*Type: discussion For: Approval  
 Source: Lenovo*

**Decision: Noted.**

**Draft CRs**

[**R4-2319020**](file:///D:\RAN4%23109\Docs\R4-2319020.zip) **draft CR for introduction of 8Rx UE RF requirements for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: NTT DOCOMO, INC.*

**Abstract:**

Further refinement to finalize CR.

Based on endorsed big CR [R4-2317791](file:///D:\RAN4%23109\Docs\R4-2317791.zip).

Qualcomm: we can improve the wording.

CHTTL: We have comments on the maintenance CRs. We prefer to remove “bands…”

**Decision: Revised to** [**R4-2321791**](file:///D:\RAN4%23109\Docs\R4-2321791.zip) **(from** [**R4-2319020**](file:///D:\RAN4%23109\Docs\R4-2319020.zip)**).**

[**R4-2321791**](file:///D:\RAN4%23109\Docs\R4-2321791.zip) **draft CR for introduction of 8Rx UE RF requirements for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: NTT DOCOMO, INC., CHTTL, Ericsson, Huawei, HiSilicon, Qualcomm Inc., Samsung, ZTE, OPPO, SGS Wireless, MediaTek Inc., Xiaomi, Nokia, Nokia Shanghai Bell, Spreadtrum Communications*

**Abstract:**

Further refinement to finalize CR.

Based on endorsed big CR [R4-2317791](file:///D:\RAN4%23109\Docs\R4-2317791.zip).

**Decision: Endorsed.**

[**R4-2320077**](file:///D:\RAN4%23109\Docs\R4-2320077.zip) **Draft CR for TS 38.101-1 UE behavior when actual ?TRxSRS reporting is configured**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

[**R4-2321792**](file:///D:\RAN4%23109\Docs\R4-2321792.zip) **Draft CR for TS 38.101-1 UE behavior when actual ?TRxSRS reporting is configured**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**LS**

[**R4-2320076**](file:///D:\RAN4%23109\Docs\R4-2320076.zip) **LS on the UE SRS IL imbalance issue**

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

**Decision: Revised to** [**R4-2321793**](file:///D:\RAN4%23109\Docs\R4-2321793.zip) **(from** [**R4-2320076**](file:///D:\RAN4%23109\Docs\R4-2320076.zip)**).**

[**R4-2321793**](file:///D:\RAN4%23109\Docs\R4-2321793.zip) **LS on the UE SRS IL imbalance issue**

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

Huawei: RAN4 has requirements for 8Rx antenna switching SRS, for which the maximum value is 7.3dB for PC3. The performance degradation needs be further discussed.

Qualcomm: we try hard during Rel-18. In RAN1, some companies state there is benefit.

Intel: Agree with Huawei and Qualcomm.

Ericsson: Agree with Huawei, Intel. UE are supposed to compensate the insertion loss when it transmits below the maximum output power.

Mediatek: some companies see the benefit while others do not see the benefit in RAN1.

OPPO: Agree with Mediatek comments.

**Conclusion:** There is no consensus for the issue about UE SRS IL imbalance for 8Rx in the RAN4 meeting in Rel-18.

Intel: We disagree with the conclusion.

**Decision: Noted.**

[**R4-2320251**](file:///D:\RAN4%23109\Docs\R4-2320251.zip) **[Draft] LS on UE SRS IL imbalance indication**

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

**Decision: Noted.**

[**R4-2320818**](file:///D:\RAN4%23109\Docs\R4-2320818.zip) **On SRS IL imbalance reporting for 8Rx for FR1**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

##### 8.3.1.4 Lower MSD for inter-band CA/EN-DC/DC combinations

[**R4-2320897**](file:///D:\RAN4%23109\Docs\R4-2320897.zip) **On MSD type all for future lower MSD capability**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

In this contribution, we provide further input on MSD type “all” but do recognize that more work may be needed to get a comprehensive solution.

**Decision: Noted.**

**TPs**

[**R4-2318444**](file:///D:\RAN4%23109\Docs\R4-2318444.zip) **TP on TR38.881 to update contents based on agreements**

*Type: pCR For: Approval  
 38.881 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Meta Ireland*

**Abstract:**

Based on agreed WFs, propose to use the agreed or proper values and comment instead of FFS, TBD in TR38.881

**Decision: Approved.**

[**R4-2319732**](file:///D:\RAN4%23109\Docs\R4-2319732.zip) **TR 38.881 v0.8.0**

*Type: draft TR For: Agreement  
 38.881 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**LS**

[**R4-2319733**](file:///D:\RAN4%23109\Docs\R4-2319733.zip) **draft LS on lower MSD**

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

**Abstract:**

Reserved LS to capture the agreements during the meeting to facilitate the discussion in RAN2.

Not available

**Decision: Withdrawn.**

###### 8.3.1.4.1 Study of approach for UE indication and signaling design

[**R4-2318777**](file:///D:\RAN4%23109\Docs\R4-2318777.zip) **Signalling for low MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

Discusses answers to LS sent by RAN2 on power class signalling

**Decision: Noted.**

[**R4-2318948**](file:///D:\RAN4%23109\Docs\R4-2318948.zip) **Remaining issues of lower MSD Signalling**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319445**](file:///D:\RAN4%23109\Docs\R4-2319445.zip) **[NR\_ENDC\_RF\_FR1\_enh2-Core]Discussion on the UE feature list for lowerMSD**

*Type: discussion For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Noted.**

[**R4-2319446**](file:///D:\RAN4%23109\Docs\R4-2319446.zip) **[NR\_ENDC\_RF\_FR1\_enh2-Core]Discussion on reply LS to LS R2-2311586 on power class indication in lower MSD capability**

*Type: discussion For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Noted.**

[**R4-2320602**](file:///D:\RAN4%23109\Docs\R4-2320602.zip) **Discussion on the remaining issues for the lower MSD capability**

*Type: discussion For: Approval  
 Source: CHTTL*

**Decision: Noted.**

[**R4-2320674**](file:///D:\RAN4%23109\Docs\R4-2320674.zip) **Discussion on the power class indication in lower-MSD capability**

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

**Decision: Noted.**

**LS**

[**R4-2318035**](file:///D:\RAN4%23109\Docs\R4-2318035.zip) **On LS reply to R2-2311579 on handling Power Class and lower MSD capability**

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

**Abstract:**

This contribution addresses questions enclosed in R2-2311579.

**Decision: Noted.**

[**R4-2318436**](file:///D:\RAN4%23109\Docs\R4-2318436.zip) **Views on RAN2 LS on power class indication in lower MSD capability**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318893**](file:///D:\RAN4%23109\Docs\R4-2318893.zip) **Discussion on reply LS on lower MSD signaling for inter-band CA or DC**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2318949**](file:///D:\RAN4%23109\Docs\R4-2318949.zip) **[Draft] Reply LS on power class indication in lower MSD capability**

*Type: LS out For: Approval  
 to RAN2  
 Source: vivo*

**Decision: Noted.**

[**R4-2319105**](file:///D:\RAN4%23109\Docs\R4-2319105.zip) **[Draft] Reply LS on power class indication in lower MSD capability**

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

**Decision: Noted.**

[**R4-2319408**](file:///D:\RAN4%23109\Docs\R4-2319408.zip) **Reply LS on power class indication in lower MSD capability**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung*

**Decision: Noted.**

[**R4-2319905**](file:///D:\RAN4%23109\Docs\R4-2319905.zip) **R18 reply LS on power class reporting in low MSD**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320675**](file:///D:\RAN4%23109\Docs\R4-2320675.zip) **Reply LS on the power class indication in lower-MSD capability**

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

**Decision: Revised to** [**R4-2321784**](file:///D:\RAN4%23109\Docs\R4-2321784.zip) **(from** [**R4-2320675**](file:///D:\RAN4%23109\Docs\R4-2320675.zip)**).**

**[R4-2321784](file:///D:\\RAN4%23109\\Docs\\R4-2321784.zip) Reply LS on the power class indication in lower-MSD capability**

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

**Decision: Revised to R4-2321997 (from R4-2321784).**

[**R4-2321997**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321997.zip) **Reply LS on the power class indication in lower-MSD capability**

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

**Decision: Approved.**

###### 8.3.1.4.2 UE RF requirements for lower MSD

**Draft CRs**

[**R4-2320672**](file:///D:\RAN4%23109\Docs\R4-2320672.zip) **DraftCR for introduction of lower-MSD requirements for inter-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Samsung, Skyworks, MediaTek, NTT DOCOMO Inc., OPPO, Xiaomi*

**Decision: Revised to** [**R4-2321785**](file:///D:\RAN4%23109\Docs\R4-2321785.zip) **(from** [**R4-2320672**](file:///D:\RAN4%23109\Docs\R4-2320672.zip)**).**

[**R4-2321785**](file:///D:\RAN4%23109\Docs\R4-2321785.zip) **DraftCR for introduction of lower-MSD requirements for inter-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Samsung, Skyworks, MediaTek, NTT DOCOMO Inc., OPPO, Xiaomi, Vivo, Nokia, Qualcomm*

**Decision: Endorsed.**

[**R4-2320673**](file:///D:\RAN4%23109\Docs\R4-2320673.zip) **DraftCR for introduction of lower-MSD requirements for inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Samsung, Skyworks, MediaTek, NTT DOCOMO Inc., OPPO, Xiaomi*

**Decision: Revised to** [**R4-2321786**](file:///D:\RAN4%23109\Docs\R4-2321786.zip) **(from** [**R4-2320673**](file:///D:\RAN4%23109\Docs\R4-2320673.zip)**).**

**[R4-2321786](file:///D:\\RAN4%23109\\Docs\\R4-2321786.zip) DraftCR for introduction of lower-MSD requirements for inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Samsung, Skyworks, MediaTek, NTT DOCOMO Inc., OPPO, Xiaomi, Vivo, Nokia, Qualcomm*

**Decision: Endorsed.**

#### 8.3.2 RRM performance requirements

##### 8.3.2.1 RLM test cases to support 8Rx

#### 8.3.3 Demodulation and CSI requirements

#### 8.3.4 Moderator summary and conclusions

[**R4-2318130**](file:///D:\RAN4%23109\Docs\R4-2318130.zip) **Topic summary for [109][124] FR1\_enh2\_part1**

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

**Abstract:**

[109][100] Main Session AI 8.3, 8.3.1.1, 8.3.1.4

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321735**](file:///D:\RAN4%23109\Docs\R4-2321735.zip) **Ad hoc minutes for lower MSD and 4Tx**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2318131**](file:///D:\RAN4%23109\Docs\R4-2318131.zip) **Topic summary for [109][125] FR1\_enh2\_part2**

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

**Abstract:**

[109][100] Main Session AI 8.3.1.2

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2318132**](file:///D:\RAN4%23109\Docs\R4-2318132.zip) **Topic summary for [109][126] FR1\_enh2\_part3**

*Type: other For: Information  
 Source: Moderator (NTT DoCoMo)*

**Abstract:**

[109][100] Main Session AI 8.3.1.3

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321756**](file:///D:\RAN4%23109\Docs\R4-2321756.zip) **WF on UE RF requirement for 8Rx**

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

**Decision: Revised to** [**R4-2321790**](file:///D:\RAN4%23109\Docs\R4-2321790.zip) **(from** [**R4-2321756**](file:///D:\RAN4%23109\Docs\R4-2321756.zip)**).**

[**R4-2321790**](file:///D:\RAN4%23109\Docs\R4-2321790.zip) **WF on UE RF requirement for 8Rx**

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

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

**2nd Round:**

Chair: The RF core part can be closed.

### 8.4 NR Channel raster enhancement

#### 8.4.1 UE and BS channel raster

##### 8.4.1.1 Channel raster for TN

[**R4-2318411**](file:///D:\RAN4%23109\Docs\R4-2318411.zip) **On specification options for enhanced channel raster**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318710**](file:///D:\RAN4%23109\Docs\R4-2318710.zip) **Discussion on optionality of enhanced channel raster**

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

**Decision: Noted.**

[**R4-2318823**](file:///D:\RAN4%23109\Docs\R4-2318823.zip) **Channel Raster Enhancements**

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

**Decision: Noted.**

[**R4-2318929**](file:///D:\RAN4%23109\Docs\R4-2318929.zip) **Discussion on the bands that mandatory support of new channel raster**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2319433**](file:///D:\RAN4%23109\Docs\R4-2319433.zip) **Specification changes for support of the enhanced channel raster**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose specification changes for implementation of the enhanced channel raster

**Decision: Noted.**

[**R4-2319676**](file:///D:\RAN4%23109\Docs\R4-2319676.zip) **Necessary specification changes for introduction of 10 KHz channel raster**

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

**Decision: Noted.**

**Draft CRs/CRs**

[**R4-2318711**](file:///D:\RAN4%23109\Docs\R4-2318711.zip) **DraftCR to TS 38.101-1 on system parameters for supporting enhanced channel raster**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2319165**](file:///D:\RAN4%23109\Docs\R4-2319165.zip) **Introduction of an enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1877 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to** [**R4-2321749**](file:///D:\RAN4%23109\Docs\R4-2321749.zip) **(from** [**R4-2319165**](file:///D:\RAN4%23109\Docs\R4-2319165.zip)**).**

[**R4-2321749**](file:///D:\RAN4%23109\Docs\R4-2321749.zip) **Introduction of an enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1877 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

[**R4-2319196**](file:///D:\RAN4%23109\Docs\R4-2319196.zip) **CR to TS38.104: Introduction of an enhanced channel raster**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0536 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2321750**](file:///D:\RAN4%23109\Docs\R4-2321750.zip) **(from** [**R4-2319196**](file:///D:\RAN4%23109\Docs\R4-2319196.zip)**).**

**[R4-2321750](file:///D:\\RAN4%23109\\Docs\\R4-2321750.zip) CR to TS38.104: Introduction of an enhanced channel raster**

*Type: CR For: Agreement  
 38.104 v18.3.0 CR-0536 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

##### 8.4.1.2 Channel raster for NTN

[**R4-2318412**](file:///D:\RAN4%23109\Docs\R4-2318412.zip) **Enhanced channel raster for NTN bands**

*Type: discussion For: Discussion  
 Source: Apple, Ligado Networks, Inmarsat, Viasat, Globalstar, Thales, Hughes/Echostar*

**Decision: Noted.**

**CRs**

[**R4-2318413**](file:///D:\RAN4%23109\Docs\R4-2318413.zip) **Introduction of the enhanced channel raster to TS 38.101-5**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0039 rev Cat: B (Rel-18)  
  
 Source: Apple Inc., Inmarsat, Viasat, Globalstar*

**Decision: Agreed.**

[**R4-2319677**](file:///D:\RAN4%23109\Docs\R4-2319677.zip) **CR to TS 38.108: Introduction of an enhanced channel raster**

*Type: CR For: Agreement  
 38.108 v18.0.0 CR-0048 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321751**](file:///D:\RAN4%23109\Docs\R4-2321751.zip) **(from** [**R4-2319677**](file:///D:\RAN4%23109\Docs\R4-2319677.zip)**).**

**[R4-2321751](file:///D:\\RAN4%23109\\Docs\\R4-2321751.zip) CR to TS 38.108: Introduction of an enhanced channel raster**

*Type: CR For: Agreement  
 38.108 v18.0.0 CR-0048 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

#### 8.4.2 UE capability

[**R4-2319197**](file:///D:\RAN4%23109\Docs\R4-2319197.zip) **Discussion on UE capability for enhanced channel raster**

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

**Decision: Noted.**

[**R4-2319434**](file:///D:\RAN4%23109\Docs\R4-2319434.zip) **The UE capability for support of the enhanced channel raster**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose a description of the capability and the required support of the feature

**Decision: Noted.**

#### 8.4.3 Moderator summary and conclusions

[**R4-2318133**](file:///D:\RAN4%23109\Docs\R4-2318133.zip) **Topic summary for [109][127] NR\_channel\_raster\_enh**

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

**Abstract:**

[109][100] Main Session AI 8.4

2nd Round:

Chair: The WI can be completed.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321752**](file:///D:\RAN4%23109\Docs\R4-2321752.zip) **WF on NR\_channel\_raster\_enh**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 8.5 Low NR band 4Rx for handheld UE and 3Tx for inter-band UL CA and EN-DC

#### 8.5.1 Enhancements for 4Rx at low frequency band (<1GHz)

**CR**

[**R4-2319910**](file:///D:\RAN4%23109\Docs\R4-2319910.zip) **R18 38101-1 CR for low band 4Rx**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1935 rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

#### 8.5.2 Enhancements of 3Tx for band combinations with two bands

**CR**

[**R4-2319908**](file:///D:\RAN4%23109\Docs\R4-2319908.zip) **R18 38101-1 CR for 3Tx inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1934 rev Cat: B (Rel-18)  
  
 Source: OPPO, Samsung, Apple, Huawei, LGE, ZTE, Xiaomi, vivo*

**Decision: Revised to** [**R4-2321763**](file:///D:\RAN4%23109\Docs\R4-2321763.zip) **(from** [**R4-2319908**](file:///D:\RAN4%23109\Docs\R4-2319908.zip)**).**

[**R4-2321763**](file:///D:\RAN4%23109\Docs\R4-2321763.zip) **R18 38101-1 CR for 3Tx inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1934 rev Cat: B (Rel-18)  
  
 Source: OPPO, Samsung, Apple, Huawei, LGE, ZTE, Xiaomi, vivo, CHTTL*

**Decision: Agreed.**

[**R4-2319909**](file:///D:\RAN4%23109\Docs\R4-2319909.zip) **R18 38101-3 CR for 3Tx inter-band ENDC**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1080 rev Cat: B (Rel-18)  
  
 Source: OPPO, Samsung, Apple, Huawei, LGE, ZTE, Xiaomi, vivo*

*CHTTL: apply Note 6 to DC\_3A-n78A.*

**Decision: Revised to** [**R4-2321764**](file:///D:\RAN4%23109\Docs\R4-2321764.zip) **(from** [**R4-2319909**](file:///D:\RAN4%23109\Docs\R4-2319909.zip)**).**

**[R4-2321764](file:///D:\\RAN4%23109\\Docs\\R4-2321764.zip) R18 38101-3 CR for 3Tx inter-band ENDC**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1080 rev Cat: B (Rel-18)  
  
 Source: OPPO, Samsung, Apple, Huawei, LGE, ZTE, Xiaomi, vivo, CHTTL*

**Decision: Agreed.**

##### 8.5.2.1 Tx requirements for band combinations with 3Tx (big CR/resubmitted CR)

[**R4-2318951**](file:///D:\RAN4%23109\Docs\R4-2318951.zip) **Views on draft CR for new TxD capability adaptation**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

**CR**

[**R4-2320092**](file:///D:\RAN4%23109\Docs\R4-2320092.zip) **Release independent for 3Tx band combination**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0139 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

The CR is the resubmitted endorsed draft CR [R4-2317624](file:///D:\RAN4%23109\Docs\R4-2317624.zip)

Flag R4-23200902 (R4-2318245). Good to clarify the text. However, the inner allocation should be determined by the the maximum swath of the RB allocation (essentially BW\_channel,CA/3) such that the 3rd order IM falls inside the wanted channel(s) no matter the allocation within the N\_RBalloc. Hence the BWgap should be that in between the two adjacent resource grids, which is also consistent with the formula for N\_RBalloc

Flag R4-2320902. For clarificatoin, after the changes, which of the following actually means: Gap between highest allocated RB and lovest allocated RB or the higest possible RB and lowest possible RB in CC1 and CC2?

**Decision: Revised to** [**R4-2321765**](file:///D:\RAN4%23109\Docs\R4-2321765.zip) **(from** [**R4-2320092**](file:///D:\RAN4%23109\Docs\R4-2320092.zip)**).**

**[R4-2321765](file:///D:\\RAN4%23109\\Docs\\R4-2321765.zip) Release independent for 3Tx band combination**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0139 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Abstract:**

The CR is the resubmitted endorsed draft CR [R4-2317624](file:///D:\RAN4%23109\Docs\R4-2317624.zip)

**Decision: Agreed.**

##### 8.5.2.2 Rx requirements for band combinations with 3Tx (big CR/resubmitted CR)

[**R4-2318725**](file:///D:\RAN4%23109\Docs\R4-2318725.zip) **MSD due to IMD5 in CA\_n25-n77 and CA\_n5-n77**

*Type: discussion For: Discussion  
 Source: Huawei Technologies France*

**Decision: Noted.**

[**R4-2319907**](file:///D:\RAN4%23109\Docs\R4-2319907.zip) **R18 3T4R MSD analysis**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

#### 8.5.3 Moderator summary and conclusions

[**R4-2318120**](file:///D:\RAN4%23109\Docs\R4-2318120.zip) **Topic summary for [109][114] NR\_3Tx-4Rx\_WI**

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

**Abstract:**

[109][100] Main Session AI 7.28, 7.29, AI 8.5

**2nd round:**

Chair: this WI can be closed.

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.6 NR RF requirements enhancement for FR2, Phase 3

#### 8.6.1 General aspects (TR/big CR)

**TR**

[**R4-2319135**](file:///D:\RAN4%23109\Docs\R4-2319135.zip) **TR38.891 v 0.8.0 for NR RF requirements enhancement for frequency range 2 (FR2), Phase 3**

*Type: draft TR For: Agreement  
 38.891 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Xiaomi,Nokia*

**Decision: Agreed.**

#### 8.6.2 UL 256QAM (resubmitted CR)

[**R4-2318392**](file:///D:\RAN4%23109\Docs\R4-2318392.zip) **Proposals on UE RF requirements for FR2-1 UL 256QAM**

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

**Abstract:**

This contribution provides proposals on UE RF requirements for FR2-1 UL 256QAM according to the agreed WF and the related discussion.

**Decision: Noted.**

[**R4-2318769**](file:///D:\RAN4%23109\Docs\R4-2318769.zip) **Intra-band CA MPR for FR2 UL256QAM**

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

**Abstract:**

Proposal for CA MPR based on pattern established for 64QAM.

**Decision: Noted.**

[**R4-2318875**](file:///D:\RAN4%23109\Docs\R4-2318875.zip) **Discussion on UL 256 QAM**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2318979**](file:///D:\RAN4%23109\Docs\R4-2318979.zip) **Discussion on remaining issue on FR2 UL 256QAM**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319015**](file:///D:\RAN4%23109\Docs\R4-2319015.zip) **Discussion on FR2-1 UL 256QAM**

*Type: discussion For: Discussion  
 Source: MediaTek (Shenzhen) Inc.*

**Decision: Noted.**

[**R4-2319290**](file:///D:\RAN4%23109\Docs\R4-2319290.zip) **Discussion for FR2-1 UL256QAM MPR**

*Type: discussion For: Discussion  
 Source: LG Electronics France*

**Decision: Noted.**

[**R4-2319442**](file:///D:\RAN4%23109\Docs\R4-2319442.zip) **Discussion on intra-band CA MPR for FR2-1 UL 256QAM**

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

**Decision: Noted.**

[**R4-2319675**](file:///D:\RAN4%23109\Docs\R4-2319675.zip) **On FR2 UL 256QAM for intra-band CA**

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

**Decision: Noted.**

[**R4-2320820**](file:///D:\RAN4%23109\Docs\R4-2320820.zip) **On MPR requirements for UL 256QAM for FR2-1**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

**TPs**

[**R4-2318873**](file:///D:\RAN4%23109\Docs\R4-2318873.zip) **TP for TR 38.891 to capture the simulation results of MPR and introduce the general description for FR2 UL 256 QAM**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Xiaomi*

**Decision: Revised to** [**R4-2321717**](file:///D:\RAN4%23109\Docs\R4-2321717.zip) **(from** [**R4-2318873**](file:///D:\RAN4%23109\Docs\R4-2318873.zip)**).**

[**R4-2321717**](file:///D:\RAN4%23109\Docs\R4-2321717.zip) **TP for TR 38.891 to capture the simulation results of MPR and introduce the general description for FR2 UL 256 QAM**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Xiaomi*

**Decision: Approved.**

[**R4-2318876**](file:///D:\RAN4%23109\Docs\R4-2318876.zip) **TP for TR 38.891 to correct some simulation results for phase noise profile**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Xiaomi*

**Decision: Approved.**

**Draft CRs/CRs**

[**R4-2318874**](file:///D:\RAN4%23109\Docs\R4-2318874.zip) **CR for Rel-18 38.101-2 to introduce FR2-1 UL 256 QAM RF requirements**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0666 rev Cat: B (Rel-18)  
  
 Source: Xiaomi, Nokia, vivo, LG Electronics, ZTE, Qualcomm, Sony, MediaTek, Huawei, Apple, Ericsson*

**Decision: Revised to** [**R4-2321718**](file:///D:\RAN4%23109\Docs\R4-2321718.zip) **(from** [**R4-2318874**](file:///D:\RAN4%23109\Docs\R4-2318874.zip)**).**

[**R4-2321718**](file:///D:\RAN4%23109\Docs\R4-2321718.zip) **CR for Rel-18 38.101-2 to introduce FR2-1 UL 256 QAM RF requirements**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0666 rev Cat: B (Rel-18)  
  
 Source: Xiaomi, Nokia, vivo, LG Electronics, ZTE, Qualcomm, Sony, MediaTek, Huawei, Apple, Ericsson*

**Decision: Agreed.**

[**R4-2318980**](file:///D:\RAN4%23109\Docs\R4-2318980.zip) **draft CR for introducing CA MPR for FR2-1 UL 256 QAM**

*Type: draftCR For: Endorsement  
 38.101-2 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Not pursued.**

[**R4-2319027**](file:///D:\RAN4%23109\Docs\R4-2319027.zip) **Draft CR for Rel-18 TS 38.101-2 to specify FR2-1 UL256 QAM intra-band CA MPR requirements**

*Type: draftCR For: Endorsement  
 38.101-2 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: MediaTek (Shenzhen) Inc.*

**Decision: Not pursued.**

[**R4-2319025**](file:///D:\RAN4%23109\Docs\R4-2319025.zip) **Draft CR for Rel-18 TS 38.101-2 to specify FR2-1 UL256 QAM intra-band CA MPR requirements**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0679 rev Cat: F (Rel-18)  
  
 Source: MediaTek (Shenzhen) Inc.*

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

#### 8.6.3 Beam correspondence requirements for RRC\_INACTIVE and initial access

##### 8.6.3.1 Beam correspondence requirement applicability

[**R4-2318878**](file:///D:\RAN4%23109\Docs\R4-2318878.zip) **Discussion on beam correspondence requirements for RRC\_INACTIVE and initial access**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2318981**](file:///D:\RAN4%23109\Docs\R4-2318981.zip) **Further evaluation on the impact of power tolerence**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319269**](file:///D:\RAN4%23109\Docs\R4-2319269.zip) **Discussion on PRACH requirements handling**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**TPs**

[**R4-2318483**](file:///D:\RAN4%23109\Docs\R4-2318483.zip) **Text Proposal for TR 38.891 on Beam Correspondence Requirements**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2318633**](file:///D:\RAN4%23109\Docs\R4-2318633.zip) **TP for TR 38.891: Specification impact**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Apple*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2318982**](file:///D:\RAN4%23109\Docs\R4-2318982.zip) **TP for TR 38.891 on impact of power control tolerance**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

*Qualcomm: I do not think we should use asymmetric distribution.*

*Sony: We have similar concern as Qualcomm. We are not comfortable to capture the tolerance in the TR.*

*OPPO: Vivo inputs can be captured as companies input.*

*Apple: we also think that it is better to mention that it is company input in the TP.*

**Decision: Revised to** [**R4-2321719**](file:///D:\RAN4%23109\Docs\R4-2321719.zip) **(from** [**R4-2318982**](file:///D:\RAN4%23109\Docs\R4-2318982.zip)**).**

[**R4-2321719**](file:///D:\RAN4%23109\Docs\R4-2321719.zip) **TP for TR 38.891 on impact of power control tolerance**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo, Apple, Nokia*

**Decision: Approved.**

**Draft CRs/CRs**

[**R4-2318466**](file:///D:\RAN4%23109\Docs\R4-2318466.zip) **Draft CR for beam correspondence for IDLE and INACTIVE**

*Type: draftCR For: Endorsement  
 38.101-2 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2318632**](file:///D:\RAN4%23109\Docs\R4-2318632.zip) **On beam correspondence requriement for EN-DC/NE-DC**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1046 rev Cat: B (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2319195**](file:///D:\RAN4%23109\Docs\R4-2319195.zip) **Draft CR to TS38.101-2 introduction of beam correspondence requirement for RRC\_INACTIVE and initial access**

*Type: draftCR For: Endorsement  
 38.101-2 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320637**](file:///D:\RAN4%23109\Docs\R4-2320637.zip) **Introducing beam correspondence requirement for initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0688 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

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

[**R4-2320638**](file:///D:\RAN4%23109\Docs\R4-2320638.zip) **Introducing beam correspondence requirement for initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0689 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to** [**R4-2321720**](file:///D:\RAN4%23109\Docs\R4-2321720.zip) **(from** [**R4-2320638**](file:///D:\RAN4%23109\Docs\R4-2320638.zip)**).**

[**R4-2321720**](file:///D:\RAN4%23109\Docs\R4-2321720.zip) **Introducing beam correspondence requirement for initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0689 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Apple, CMCC, Huawei, HiSilicon, OPPO, Qualcomm, Samsung, Sony, Vivo, Xiaomi, ZTE Corporation*

**Decision: Revised to R4-2321984 (from R4-2321720).**

**[R4-2321984](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321984.zip) Introducing beam correspondence requirement for initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0689 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Apple, CMCC, Huawei, HiSilicon, OPPO, Qualcomm, Samsung, Sony, Vivo, Xiaomi, ZTE Corporation*

**Decision: Agreed.**

**[R4-2320969](file:///D:\\RAN4%23109\\Docs\\R4-2320969.zip) On beam correspondence requriement for EN-DC/NE-DC**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0690 rev Cat: B (Rel-18)  
  
 Source: Apple*

**Decision: Merged (with R4-23xxxxx).**

**Withdrawn**

[**R4-2318486**](file:///D:\RAN4%23109\Docs\R4-2318486.zip) **Introducing beam correspondence requirement for initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0680 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Note: The specification number on the CR coversheet for TDoc [R4-2318486](file:///D:\RAN4%23109\Docs\R4-2318486.zip) should be 38.101-2 and the revision number value on CR coversheet value is <Rev#>.

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

[**R4-2318631**](file:///D:\RAN4%23109\Docs\R4-2318631.zip) **On beam correspondence requriement in IA**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0664 rev Cat: B (Rel-18)  
  
 Source: Apple*

**Abstract:**

Note: The CR number on CR coversheet is not 0664.

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

##### 8.6.3.2 UE beam type and DRX implications

**TP**

[**R4-2318484**](file:///D:\RAN4%23109\Docs\R4-2318484.zip) **Text Proposal for TR 38.891 on Implementation impact to UE**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

*Qualcomm: not sure if TRS will be mandatorily configured in the network. Need more discussions.*

*Vivo: We share the similar view. There is no sufficient discussion for TRS.*

*Nokia: TRS can be used as similar signalling compared to SSB.*

**Decision: Approved.**

##### 8.6.3.3 Beam correspondence test issues

**TP**

[**R4-2318485**](file:///D:\RAN4%23109\Docs\R4-2318485.zip) **Text Proposal for TR 38.891 on UE testing impacts**

*Type: pCR For: Approval  
 38.891 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Withdrawn.**

#### 8.6.4 BS demodulation requirements

#### 8.6.5 Moderator summary and conclusions

[**R4-2318134**](file:///D:\RAN4%23109\Docs\R4-2318134.zip) **Topic summary for [109][128] FR2\_enh\_req\_Ph3\_part1**

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

**Abstract:**

[109][100] Main Session AI 8.6, 8.6.1, 8.6.3

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321721**](file:///D:\RAN4%23109\Docs\R4-2321721.zip) **WF on UE RF requirements for FR2 enhancements**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Withdrawn.**

**Discussions of issues and conclusions in the first round**

[**R4-2318135**](file:///D:\RAN4%23109\Docs\R4-2318135.zip) **Topic summary for [109][129] FR2\_enh\_req\_Ph3\_part2**

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

**Abstract:**

[109][100] Main Session AI 8.6.2

**Decision: Noted.**

**2nd round:**

Chair: the RF core part of WI is completed.

**Discussions of issues and conclusions in the first round**

### 8.7 Requirement for NR FR2 multi-Rx chain DL reception

#### 8.7.1 UE RF requirements for simultaneous DL reception with up to 4 layer MIMO

##### 8.7.1.1 General aspects (TR/Big CR)

[**R4-2318685**](file:///D:\RAN4%23109\Docs\R4-2318685.zip) **On associated UE capability for RF requirement**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**TR**

[**R4-2318501**](file:///D:\RAN4%23109\Docs\R4-2318501.zip) **TR 38.751v1.2.0 for UE RF requirement for NR FR2 multi-Rx chain DL reception**

*Type: draft TR For: Agreement  
 38.751 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo Japan KK*

**Decision: Agreed.**

**Big CR**

[**R4-2318770**](file:///D:\RAN4%23109\Docs\R4-2318770.zip) **Feature CR for FR2 multi-Rx**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0665 rev Cat: B (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Skeleton carried over from last meeting, but modified to reflect single AoA of specification.

Samsung: using simultaneous mTRP for UE spec is some kind of misleading.

Apple: we try to figure out what is the best wording. We can use the wording in the WID. We should have something as fall back option.

Samsung: About this issue, it is related to multiple Tx. We should align between reception and transmission.

Qualcomm: mTRP, can we use multi-TCI?

**Decision: Revised to** [**R4-2321722**](file:///D:\RAN4%23109\Docs\R4-2321722.zip) **(from** [**R4-2318770**](file:///D:\RAN4%23109\Docs\R4-2318770.zip)**).**

[**R4-2321722**](file:///D:\RAN4%23109\Docs\R4-2321722.zip) **Feature CR for FR2 multi-Rx**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0665 rev Cat: B (Rel-18)  
  
 Source: Qualcomm Incorporated, Vivo, Samsung, Sony, Apple*

**Abstract:**

Skeleton carried over from last meeting, but modified to reflect single AoA of specification.

**Decision: Agreed.**

**TP**

[**R4-2318687**](file:///D:\RAN4%23109\Docs\R4-2318687.zip) **TP on NTC vs. ETC for TR 38.751**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Apple*

*Qualcomm: suggest some wording change.*

**Decision: Revised to** [**R4-2321723**](file:///D:\RAN4%23109\Docs\R4-2321723.zip) **(from** [**R4-2318687**](file:///D:\RAN4%23109\Docs\R4-2318687.zip)**).**

[**R4-2321723**](file:///D:\RAN4%23109\Docs\R4-2321723.zip) **TP on NTC vs. ETC for TR 38.751**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Apple*

*Qualcomm: suggest some wording change.*

**Decision: Approved.**

[**R4-2318688**](file:///D:\RAN4%23109\Docs\R4-2318688.zip) **TP on Annex <A>:Simulation results for TR 38.751**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Apple*

*Qualcomm: why to remove the part related to EIS?*

*Apple: there is no agreement related to EIS before. We propose to include only part to understand where we come from and what to be specified.*

*Vivo: We agree with Apple. We dropped EIS based method. We create the requirement based on functionality. It is better to recored EIS based discussion in TR.*

**Decision: Revised to** [**R4-2321724**](file:///D:\RAN4%23109\Docs\R4-2321724.zip) **(from** [**R4-2318688**](file:///D:\RAN4%23109\Docs\R4-2318688.zip)**).**

**[R4-2321724](file:///D:\\RAN4%23109\\Docs\\R4-2321724.zip) TP on Annex <A>:Simulation results for TR 38.751**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Apple*

**Decision: Approved.**

##### 8.7.1.2 UE RF requirements

[**R4-2318361**](file:///D:\RAN4%23109\Docs\R4-2318361.zip) **Further views on multi-Rx chain DL reception in FR2**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

[**R4-2318492**](file:///D:\RAN4%23109\Docs\R4-2318492.zip) **Further views/Proposal on UE RF requirements for FR2-1 multi-Rx chain DL reception**

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

**Decision: Noted.**

[**R4-2318686**](file:///D:\RAN4%23109\Docs\R4-2318686.zip) **RF requirement for NR FR2 multi-Rx chain DL reception**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318771**](file:///D:\RAN4%23109\Docs\R4-2318771.zip) **On UE RF requirements for 2AoA FR2 DL MIMO**

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

**Abstract:**

For perspective, we identify the significant margins a UE already enjoys due to conservative RAN4 assumptions pertaining to spherical coverage calibration and SINR calculation

**Decision: Noted.**

[**R4-2318812**](file:///D:\RAN4%23109\Docs\R4-2318812.zip) **UE RF requirements for simultaneous DL reception**

*Type: discussion For: Discussion  
 Source: LG Electronics*

**Abstract:**

It discusses UE RF requirements for simultaneous DL reception.

**Decision: Noted.**

[**R4-2318983**](file:///D:\RAN4%23109\Docs\R4-2318983.zip) **Discussion on remaining issue on FR2 multi-Rx RF requirement**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319267**](file:///D:\RAN4%23109\Docs\R4-2319267.zip) **Multi-RX DL 2AoA spherical coverage simulation and requirements**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2319565**](file:///D:\RAN4%23109\Docs\R4-2319565.zip) **Discussion on UE RF requirements for simultaneous DL reception**

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

**Decision: Noted.**

[**R4-2320078**](file:///D:\RAN4%23109\Docs\R4-2320078.zip) **On UE RF requirement for FR2 multi-Rx chain DL reception**

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

**Decision: Noted.**

**TP**

[**R4-2318984**](file:///D:\RAN4%23109\Docs\R4-2318984.zip) **TP to 38.751 on further evaluation of gain difference between V-pol and H-pol**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

*Vivo: capture the Qualcomm results.*

*Samsung: also consider the latest results submitted.*

**Decision: Revised to** [**R4-2321725**](file:///D:\RAN4%23109\Docs\R4-2321725.zip) **(from** [**R4-2318984**](file:///D:\RAN4%23109\Docs\R4-2318984.zip)**).**

[**R4-2321725**](file:///D:\RAN4%23109\Docs\R4-2321725.zip) **TP to 38.751 on further evaluation of gain difference between V-pol and H-pol**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Approved.**

[**R4-2318985**](file:///D:\RAN4%23109\Docs\R4-2318985.zip) **TP to 38.751 on RF requirement construction**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Revised to** [**R4-2321726**](file:///D:\RAN4%23109\Docs\R4-2321726.zip) **(from** [**R4-2318985**](file:///D:\RAN4%23109\Docs\R4-2318985.zip)**).**

**[R4-2321726](file:///D:\\RAN4%23109\\Docs\\R4-2321726.zip) TP to 38.751 on RF requirement construction**

*Type: pCR For: Approval  
 38.751 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Approved.**

#### 8.7.2 RRM core requirements for simultaneous DL reception from different directions

#### 8.7.3 RRM performance requirements

#### 8.7.4 Demodulation performance and CSI requirements

#### 8.7.5 Moderator summary and conclusions

[**R4-2318136**](file:///D:\RAN4%23109\Docs\R4-2318136.zip) **Topic summary for [109][130] FR2\_multiRx\_UERF\_part1**

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

**Abstract:**

[109][100] Main Session AI 8.7.1

**2nd Round:**

Chair: all the RF work for core part of WI is completed.

**Decision: Noted.**

**New tdoc allocated**

[**R4-2321828**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321828.zip) **Ad hoc minutes on FR2\_multiRx\_UERF**

*Type: other For: Approval  
 Source: Qualcomm*

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.8 Even Further RRM enhancement for NR and MR-DC

### 8.9 Further enhancements on NR and MR-DC measurement gaps and measurements without gaps

### 8.10 Completion of specification support for bandwidth part operation without restriction in NR

### 8.11 Support of intra-band non-collocated EN-DC/NR-CA deployment

**Revised WID**

[**R4-2318260**](file:///D:\RAN4%23109\Docs\R4-2318260.zip) **Revised WID: Support of intra-band non-collocated EN-DC/NR-CA deployment**

*Type: WID revised For: Endorsement  
 Source: KDDI Corporation*

*Mediatek: we need change CA to LTE-CA.*

*Chair: the other part except for the proposal of clarification of LTE-CA is agreeable.*

**Decision: Noted.**

**Big CR**

[**R4-2318262**](file:///D:\RAN4%23109\Docs\R4-2318262.zip) **big CR 38.101-1 for intra-band non-collocated EN-DC/NR-CA deployment**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1819 rev Cat: B (Rel-18)  
  
 Source: KDDI Corporation*

**Abstract:**

This tdoc# is a reservation by the moderator, considering that RAN4 might need to revise the agreed formal CR based on the results of this RAN4 Nov. meeting.

**Decision: Withdrawn.**

[**R4-2318264**](file:///D:\RAN4%23109\Docs\R4-2318264.zip) **big CR 38.101-3 for intra-band non-collocated EN-DC/NR-CA deployment**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1033 rev Cat: B (Rel-18)  
  
 Source: KDDI Corporation*

**Abstract:**

This tdoc# is a reservation by the moderator, considering that RAN4 might need to revise the agreed formal CR based on the results of this RAN4 Nov. meeting.

**Decision: Withdrawn.**

#### 8.11.1 UE RF architecture and RF requirements

[**R4-2318634**](file:///D:\RAN4%23109\Docs\R4-2318634.zip) **Remaining issue for RF core requirement**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2319555**](file:///D:\RAN4%23109\Docs\R4-2319555.zip) **Discussion on UE RF of non-collocated NR-CA**

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

**Decision: Noted.**

**Draft CR/CRs**

[**R4-2319410**](file:///D:\RAN4%23109\Docs\R4-2319410.zip) **Rel-18 CR for 38.101-1 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1886 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia*

*Huawei: the CR needs wait for RAN2 decision. Based on RAN2, the CR archeticure of type 1 and type 2 will be completely changed.*

*Apple: We need hold CR until RAN2 decision. It seems that KDDI has different proposal in RAN2.*

*KDDI: I find it is late for RAN4 to discuss.*

*Apple: the key issue is when network needs to indicate to UE. In last RAN4 meeting, we thought it is more efficient. Network only needs indicate when network is non-collocated. But RAN2 think that it can be indicated for collocated case.*

*Qualcomm: This is for only UE for non-collocated. The signalling is only use for optimization.*

*Apple: From network perspective, for what case network make indication.*

*Huawei: we think in the another way around. It should be type 2 as default.*

*Apple: Agree with Huawei.*

**Decision: Revised to R4-2321907 (from R4-2319410).**

[**R4-2321907**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321907.zip) **Rel-18 CR for 38.101-1 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1886 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia, Huawei, Cybercore, Apple*

**Decision: Revised to R4-2321994 (from R4-2321907).**

[**R4-2321994**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321994.zip) **Rel-18 CR for 38.101-1 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1886 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia, Huawei, Cybercore, Apple*

**Decision: Revised to R4-2322004 (from R4-2321994).**

[**R4-2322004**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2322004.zip) **Rel-18 CR for 38.101-1 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1886 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia, Huawei, Cybercore, Apple*

**Decision: Agreed.**

[**R4-2319411**](file:///D:\RAN4%23109\Docs\R4-2319411.zip) **Rel-18 CR for 38.101-3 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1055 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia*

**Decision: Revised to R4-2321908 (from R4-2319411).**

**[R4-2321908](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321908.zip) Rel-18 CR for 38.101-3 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1055 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia, Huawei, Cybercore, Apple*

**Decision: Revised to R4-2321995 (from R4-2321908).**

[**R4-2321995**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321995.zip) **Rel-18 CR for 38.101-3 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1055 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia, Huawei, Cybercore, Apple*

**Decision: Agreed.**

[**R4-2322005**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2322005.zip) **Rel-18 CR for 38.101-3 New BS signalling implementation for non-collocated scenario**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1055 rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI, ZTE, Mediatek, Nokia, Huawei, Cybercore, Apple*

**Decision: Withdrawn.**

#### 8.11.2 RRM Core requirement

#### 8.11.3 RRM performance requirements

#### 8.11.4 Demodulation performance requirements

#### 8.11.5 Moderator summary and conclusions

[**R4-2318137**](file:///D:\RAN4%23109\Docs\R4-2318137.zip) **Topic summary for [109][131] NonCol\_intraB**

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

**Abstract:**

[109][100] Main Session AI 8.11.1

**2nd Round**

Chair: the RF core part of WI is completed.

**Decision: Noted.**

New tdoc allocated

[**R4-2321957**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321957.zip) **WF on NonCol\_intraB**

*Type: other For: Approval  
 Source: KDDI*

**Decision: Noted.**

[**R4-2321958**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321958.zip) **LS on new BS signalling for non-collocated EN-DC and NR CA**

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

*Qualcomm: we should align RAN4 spec with the signalling.*

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.12 Enhanced NR support for high speed train scenario in frequency range 2

[**R4-2319941**](file:///D:\RAN4%23109\Docs\R4-2319941.zip) **Feature list proposals for HST FR2 enhancements**

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

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

#### 8.12.1 RRM core requirement maintenance

#### 8.12.2 RRM performance requirements

#### 8.12.3 Demodulation performance requirements

#### 8.12.4 Moderator summary and conclusions

### 8.13 Air-to-ground network for NR

#### 8.13.1 General aspects (TR/big CR)

**TR**

[**R4-2319706**](file:///D:\RAN4%23109\Docs\R4-2319706.zip) **Draft TR 38.876 ATG**

*Type: draft TR For: Agreement  
 38.876 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: CMCC*

**Decision: Agreed.**

#### 8.13.2 FR1 co-existence evaluation for ATG network

**TP**

[**R4-2318921**](file:///D:\RAN4%23109\Docs\R4-2318921.zip) **TP for TR 38.876 to add non-synchronized calibration part for ATG TR**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: CMCC*

**Decision: Approved.**

##### 8.13.2.1 Co-existence scenario and network layout

**TP**

[**R4-2319726**](file:///D:\RAN4%23109\Docs\R4-2319726.zip) **TP to TR 38.876 Updated non-synchronized scenarios network layout model**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

In this document, we formulate the agreed non-synchronized scenarios network layout model to be added in TR 38.876.

**Decision: Approved.**

##### 8.13.2.2 Co-existence system parameters and modeling

**TP**

[**R4-2319727**](file:///D:\RAN4%23109\Docs\R4-2319727.zip) **TP to TR 38.876 Addition of co-existence simulation results for ATG non-synchronized scenarios**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

In this document, we formulate the co-existence simulation results for non-synchronized scenarios in sub-clause 6.4.2, summary of co-existence study for non-synchronized scenarios in 6.5.2 and the simulation data for non-synchronized scenarios in Annex C.

**Decision: Approved.**

##### 8.13.2.3 Co-existence simulation results

[**R4-2319728**](file:///D:\RAN4%23109\Docs\R4-2319728.zip) **Final simulation results for ATG non-synchronized scenarios**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

In this document, we present our final co-existence simulation results for non-synchronized scenarios for both non-subarray and subarray antenna models. We focus on the results using the Free Space Pathloss channel model between TN BS and ATG BS.

**Decision: Noted.**

#### 8.13.3 UE RF requirements

**TP**

[**R4-2318920**](file:///D:\RAN4%23109\Docs\R4-2318920.zip) **TP for TR 38.876 to add conclusion part and update omni-directional terminology and other description**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: CMCC*

**Decision: Revised to R4-2321911 (from R4-2318920).**

[**R4-2321911**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321911.zip) **TP for TR 38.876 to add conclusion part and update omni-directional terminology and other description**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: CMCC*

**Decision: Approved.**

**Big CR**

[**R4-2318922**](file:///D:\RAN4%23109\Docs\R4-2318922.zip) **Big CR for TS 38.101-1 for NR ATG**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1869 rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Revised to R4-2321919 (from R4-2318922).**

[**R4-2321919**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321919.zip) **Big CR for TS 38.101-1 for NR ATG**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1869 rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Agreed.**

**Draft CR/CR**

[**R4-2318917**](file:///D:\RAN4%23109\Docs\R4-2318917.zip) **Draft CR for TS 38.101-1 to update omni-directional and antenna array terminology**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: CMCC*

**Decision: Endorsed.**

##### 8.13.3.1 Tx requirements

[**R4-2319883**](file:///D:\RAN4%23109\Docs\R4-2319883.zip) **Discussion on how to specify SEM requirements for ATG UE**

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

**Decision: Noted.**

**TP**

[**R4-2319881**](file:///D:\RAN4%23109\Docs\R4-2319881.zip) **TP for TR 38.876 to maintain the Tx RF requirements for ATG UE**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321912 (from R4-2319881).**

[**R4-2321912**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321912.zip) **TP for TR 38.876 to maintain the Tx RF requirements for ATG UE**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**Draft CRs/CRs**

[**R4-2318638**](file:///D:\RAN4%23109\Docs\R4-2318638.zip) **CR on output power dynamics and Tx signal qulity for ATG UE**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Apple*

Ericsson: no need to add note to request two tests.

CMCC: OK.

Qualcomm: why to preclude pi/2 BPSK.

ZTE: no one proposed it before.

Qualcomm: Pi/2 BPSK is default supported by NR.

**Decision: Revised to R4-2321913 (from R4-2318638).**

[**R4-2321913**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321913.zip) **CR on output power dynamics and Tx signal qulity for ATG UE**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Apple*

Agreement: Pi/2 PBSK plus the power boosting is not supported in Rel-18.

**Decision: Endorsed.**

[**R4-2319884**](file:///D:\RAN4%23109\Docs\R4-2319884.zip) **Draft CR for TS 38.101-1 to introduce ATG UE RF requirements part 1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321914 (from R4-2319884).**

[**R4-2321914**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321914.zip) **Draft CR for TS 38.101-1 to introduce ATG UE RF requirements part 1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2320326**](file:///D:\RAN4%23109\Docs\R4-2320326.zip) **draft CR to TS 38.101-1: clause 6.5J,7.1J,7.2J**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321915 (from R4-2320326).**

**[R4-2321915](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321915.zip) draft CR to TS 38.101-1: clause 6.5J,7.1J,7.2J**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

##### 8.13.3.2 Rx requirements

**TPs**

[**R4-2319798**](file:///D:\RAN4%23109\Docs\R4-2319798.zip) **TP to TR 38.876 on intermodulation characteristics**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

In the last RAN4 meeting, several agreements concerning the ATG UE Rx part were approved in [1]. This paper proposed TP to TR 38.876 on the intermodulation characteristics, i.e., 7.1.3.9.

**Decision: Approved.**

[**R4-2319882**](file:///D:\RAN4%23109\Docs\R4-2319882.zip) **TP for TR 38.876 to introduce some Rx requirements**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2320376**](file:///D:\RAN4%23109\Docs\R4-2320376.zip) **TP to TR 38.876 on ATG UE Maximum input level**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2321916 (from R4-2320376).**

[**R4-2321916**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321916.zip) **TP to TR 38.876 on ATG UE Maximum input level**

*Type: pCR For: Approval  
 38.876 v0.6.0 CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Approved.**

**Draft CRs/CRs**

[**R4-2319797**](file:///D:\RAN4%23109\Docs\R4-2319797.zip) **Draft CR for TS 38.101-1 to introduce spurious response, intermodulation, and spurious emission for ATG UE for ATG UE**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

To add the spurious response, intermodulation, and spurious emission for ATG UE.

**Decision: Revised to R4-2321917 (from R4-2319797).**

[**R4-2321917**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321917.zip) **Draft CR for TS 38.101-1 to introduce spurious response, intermodulation, and spurious emission for ATG UE for ATG UE**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

To add the spurious response, intermodulation, and spurious emission for ATG UE.

**Decision: Endorsed.**

[**R4-2320377**](file:///D:\RAN4%23109\Docs\R4-2320377.zip) **Draft CR for TS 38.101-1 to introduce ATG UE RF Rx requirements - part 1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2321918 (from R4-2320377).**

**[R4-2321918](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321918.zip) Draft CR for TS 38.101-1 to introduce ATG UE RF Rx requirements - part 1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Qualcomm Incorporated*

Agreement: further discuss whether to introduce 1024QAM in maintenance phase.

**Decision: Endorsed.**

##### 8.13.3.3 Others

[**R4-2318919**](file:///D:\RAN4%23109\Docs\R4-2318919.zip) **ATG UERF feature list**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

#### 8.13.4 BS RF requirements

#### 8.13.5 BS RF conformance testing requirements

#### 8.13.6 RRM core requirements

#### 8.13.7 RRM performance requirements

#### 8.13.8 Demodulation performance requirements

#### 8.13.9 Moderator summary and conclusions

[**R4-2318138**](file:///D:\RAN4%23109\Docs\R4-2318138.zip) **Topic summary for [109][132] NR\_ATG\_UERF\_part1**

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

**Abstract:**

[109][100] Main Session AI 8.13, 8.13.1, 8.13.2

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2318139**](file:///D:\RAN4%23109\Docs\R4-2318139.zip) **Topic summary for [109][133] NR\_ATG\_UERF\_part2**

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

**Abstract:**

[109][100] Main Session AI 8.13.3

**Decision: Noted.**

**2nd Round:**

Chair: The RF core part work is completed for this WI.

**Discussions of issues and conclusions in the first round**

### 8.14 NR support for dedicated spectrum less than 5MHz for FR1

**Revised WID**

[**R4-2318723**](file:///D:\RAN4%23109\Docs\R4-2318723.zip) **Revised WID: NR support for dedicated spectrum less than 5MHz for FR1**

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

**Abstract:**

Revised WID to include TS 38.307, TS 38.423, and TS 38.473 in the list of impacted specifications.

Ericsson: add 37.141.

**Decision: Noted.**

#### 8.14.1 System parameter maintenance (resubmitted CR)

[**R4-2320648**](file:///D:\RAN4%23109\Docs\R4-2320648.zip) **UE features for NR less than 5 MHz**

*Type: other For: Approval  
 Source: Qualcomm Inc.*

*Huawei: it is up to RAN1 decision. Canot capture the note for 51-3.*

*Ericsson: disagree with Huawei. We should capture the agreement here.*

**Decision: Noted.**

**CR**

[**R4-2318564**](file:///D:\RAN4%23109\Docs\R4-2318564.zip) **CR to TS 38.101-1 on clarification of applicable SS raster entries for 3 MHz channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1850 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Qualcomm, Ericsson*

**Abstract:**

1) Clarify applicable SS raster entries for 12 and 20 PRB transmission bandwidth.

2) Delete the undefined term 'DCH'.

**Decision: Agreed.**

#### 8.14.2 UE RF requirement maintenance (resubmitted CR)

**Draft CR/CRs**

[**R4-2318531**](file:///D:\RAN4%23109\Docs\R4-2318531.zip) **CR for 38.307: Release independece of NR 3 MHz channel bandwidth**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0132 rev Cat: B (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2318565**](file:///D:\RAN4%23109\Docs\R4-2318565.zip) **CR to TS 38.124 on channel bandwidth for boundary between NR out of band and general spurious emission domain**

*Type: CR For: Agreement  
 38.124 v18.0.0 CR-0047 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Qualcomm*

**Abstract:**

Correct 91 (MHz) channel bandwidth to 90 (MHz).

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

[**R4-2318713**](file:///D:\RAN4%23109\Docs\R4-2318713.zip) **Draft CR to TS 38.101-1 on clarification of applicable SS raster entries for 3 MHz channel bandwidth**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

*Ericsson: no need to add max on top of max.*

*Qualcomm: no need.*

*Huawei: it is helpful to have it.*

*Mediatek: to Ericsson, the situation is different between BS and UE. From UE side, the bandwidth transmission is configured differently. The transient time, the RB needed be reduced during the transient time.*

*2nd Round:*

*Ericsson: it is needed.*

**Decision: Not pursued.**

[**R4-2318714**](file:///D:\RAN4%23109\Docs\R4-2318714.zip) **CR to TS 38.124 for introduction of 3 MHz channel bandwidth**

*Type: CR For: Agreement  
 38.124 v18.0.0 CR-0048 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Agreed.**

#### 8.14.3 BS RF requirement maintenance (resubmitted CR)

#### 8.14.4 RRM core requirement

#### 8.14.5 RRM performance requirements

#### 8.14.6 Demodulation performance requirements

#### 8.14.7 Moderator summary and conclusions

[**R4-2318140**](file:///D:\RAN4%23109\Docs\R4-2318140.zip) **Topic summary for [109][134] NR\_FR1\_lessthan\_5MHz\_BW**

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

**Abstract:**

[109][100] Main Session AI 8.14, 8.14.1, 8.14.2

**2nd Round:**

Chair: the RF core part work for this WI is completed.

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.15 Enhancement of TRP and TRS requirements and test methodologies

### 8.16 Enhancement of Multiple Input Multiple Output Over-the-Air test methodology and requirements for NR UEs

### 8.17 BS and UE EMC enhancements

### 8.18 NR demodulation performance evolution

### 8.19 Study on evolution of NR duplex operation

### 8.20 Study on low-power wake-up signal and receiver for NR

#### 8.20.1 General aspects

[**R4-2320548**](file:///D:\RAN4%23109\Docs\R4-2320548.zip) **On remaining issues for low-power wake-up receiver**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we present our view on WUR remaining issue.

**Decision: Noted.**

**TP**

[**R4-2318973**](file:///D:\RAN4%23109\Docs\R4-2318973.zip) **TP to TR 38.869 on LP-WUS RF summary**

*Type: pCR For: Approval  
 38.869 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Revised to** [**R4-2321819**](file:///D:\RAN4%23109\Docs\R4-2321819.zip) **(from** [**R4-2318973**](file:///D:\RAN4%23109\Docs\R4-2318973.zip)**).**

**[R4-2321819](file:///D:\\RAN4%23109\\Docs\\R4-2321819.zip) TP to TR 38.869 on LP-WUS RF summary**

*Type: pCR For: Approval  
 38.869 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo, Huawei*

**Decision: Approved.**

#### 8.20.2 Evaluation of Low power wake-up receiver architectures

[**R4-2318974**](file:///D:\RAN4%23109\Docs\R4-2318974.zip) **Discussions on low-power Wave-up Receiver architectures**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319734**](file:///D:\RAN4%23109\Docs\R4-2319734.zip) **Consideration on remaining issues on LP-WUS/WUR**

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

**Decision: Noted.**

[**R4-2320084**](file:///D:\RAN4%23109\Docs\R4-2320084.zip) **Further consideration on LP-WUS**

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

**Decision: Noted.**

[**R4-2320516**](file:///D:\RAN4%23109\Docs\R4-2320516.zip) **Evaluation of Low power wake-up receiver architectures**

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

**Decision: Noted.**

[**R4-2320817**](file:///D:\RAN4%23109\Docs\R4-2320817.zip) **LP WUR ACS with phase noise**

*Type: other For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

**TP**

[**R4-2320085**](file:///D:\RAN4%23109\Docs\R4-2320085.zip) **TP for TR 38.869\_Updates for guard band definition**

*Type: pCR For: Approval  
 38.869 v1.0.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320547**](file:///D:\RAN4%23109\Docs\R4-2320547.zip) **TP on WUR Noise figure**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we present our view on WUR Noise figure.

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320643**](file:///D:\RAN4%23109\Docs\R4-2320643.zip) **TP to TR 38.869: Low-power wake-up receiver RF aspects**

*Type: pCR For: Approval  
 38.869 v1.1.1 CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320662**](file:///D:\RAN4%23109\Docs\R4-2320662.zip) **TP to TR 38.869, Coverage aspects on WUR**

*Type: other For: Approval  
 Source: Sony Europe B.V.*

**Decision: Merged (with R4-23xxxxx).**

#### 8.20.3 Evaluation of wake-up signal designs

**TP**

**[R4-2318975](file:///D:\\RAN4%23109\\Docs\\R4-2318975.zip) TP to TR 38.869 on LP-WUS receiver architectures**

*Type: pCR For: Approval  
 38.869 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo, CMCC*

**Decision: Revised to** [**R4-2321820**](file:///D:\RAN4%23109\Docs\R4-2321820.zip) **(from** [**R4-2318975**](file:///D:\RAN4%23109\Docs\R4-2318975.zip)**).**

[**R4-2321820**](file:///D:\RAN4%23109\Docs\R4-2321820.zip) **TP to TR 38.869 on LP-WUS receiver architectures**

*Type: pCR For: Approval  
 38.869 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo, CMCC*

**Decision: Revised to R4-2321904 (from R4-2321820).**

**[R4-2321904](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321904.zip) TP to TR 38.869 on LP-WUS receiver architectures**

*Type: pCR For: Approval  
 38.869 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo, CMCC, Qualcomm, Ericsson, ZTE, Sony, Nokia, Murata, Huawei*

**Decision: Approved.**

[**R4-2320546**](file:///D:\RAN4%23109\Docs\R4-2320546.zip) **TP on ADC impairment**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we present our view on WUR ADC impairment.

**Decision: Merged (with R4-23xxxxx).**

#### 8.20.4 Review of outcome of RAN1 studies related to RRM

#### 8.20.5 Moderator summary and conclusions

[**R4-2318141**](file:///D:\RAN4%23109\Docs\R4-2318141.zip) **Topic summary for [109][135] FS\_NR\_LPWUS**

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

**Abstract:**

[109][100] Main Session AI 8.20, 8.20.1, 8.20.2, 8.20.3

**2nd Round:**

Chair: RF part is completed for this SI.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321737**](file:///D:\RAN4%23109\Docs\R4-2321737.zip) **Ad hoc minutes for [109][135] FS\_NR\_LPWUS**

*Type: other For: Approval  
 Source: Vivo*

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.21 Study on Artificial Intelligence (AI)/Machine Learning (ML) for NR air interface

[**R4-2319644**](file:///D:\RAN4%23109\Docs\R4-2319644.zip) **AI future study and work considerations**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discusison on fuure progression of AI work

**Decision: Noted.**

#### 8.21.1 General aspects (RAN4 part of TR)

[**R4-2318250**](file:///D:\RAN4%23109\Docs\R4-2318250.zip) **Discussion on general aspects of AIML for NR air interface**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2318281**](file:///D:\RAN4%23109\Docs\R4-2318281.zip) **General aspects on AIML for NR air interface**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2318478**](file:///D:\RAN4%23109\Docs\R4-2318478.zip) **General aspects discussions for NR AI/ML**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

[**R4-2318579**](file:///D:\RAN4%23109\Docs\R4-2318579.zip) **On general aspects for AI/ML**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318935**](file:///D:\RAN4%23109\Docs\R4-2318935.zip) **AI/ML general**

*Type: discussion For: Approval  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

[**R4-2319075**](file:///D:\RAN4%23109\Docs\R4-2319075.zip) **On general aspects for AI/ML**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2319824**](file:///D:\RAN4%23109\Docs\R4-2319824.zip) **On General Aspects for AI/ML in Air Interface**

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

**Decision: Noted.**

[**R4-2320184**](file:///D:\RAN4%23109\Docs\R4-2320184.zip) **Discussion on General Aspects for RAN4 R-18 SI on AIML for NR air interface**

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

**Decision: Noted.**

[**R4-2320554**](file:///D:\RAN4%23109\Docs\R4-2320554.zip) **Discussion on general issues**

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

**Decision: Noted.**

[**R4-2320610**](file:///D:\RAN4%23109\Docs\R4-2320610.zip) **General aspects for AI/ML air interface**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**TPs**

[**R4-2318489**](file:///D:\RAN4%23109\Docs\R4-2318489.zip) **Proposed update for TR 38.843 with RAN4 part**

*Type: pCR For: Approval  
 38.843 v1.0.0 CR- rev Cat: (Rel-18)  
  
 Source: CAICT, Qualcomm, Ericsson*

**Decision: Revised to** [**R4-2321801**](file:///D:\RAN4%23109\Docs\R4-2321801.zip) **(from** [**R4-2318489**](file:///D:\RAN4%23109\Docs\R4-2318489.zip)**).**

[**R4-2321801**](file:///D:\RAN4%23109\Docs\R4-2321801.zip) **Proposed update for TR 38.843 with RAN4 part**

*Type: pCR For: Approval  
 38.843 v1.0.0 CR- rev Cat: (Rel-18)  
  
 Source: CAICT, Qualcomm, Ericsson*

**Decision: Approved.**

[**R4-2321803**](file:///D:\RAN4%23109\Docs\R4-2321803.zip) **Proposed update for TR 38.843 with RAN4 part**

*Type: pCR For: Approval  
 38.843 v1.0.0 CR- rev Cat: (Rel-18)  
  
 Source: CAICT, Qualcomm, Ericsson*

**Decision: Approved.**

[**R4-2319825**](file:///D:\RAN4%23109\Docs\R4-2319825.zip) **pCR Proposed Updates for TR 38.843 on Reference Block Diagrams fro Testing**

*Type: pCR For: Approval  
 38.843 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320183**](file:///D:\RAN4%23109\Docs\R4-2320183.zip) **RAN4 Input for TR 38.843**

*Type: pCR For: Approval  
 38.843 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei,HiSilicon*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320357**](file:///D:\RAN4%23109\Docs\R4-2320357.zip) **TP to 38.843 on RAN4 terminology for AI/ML discussion**

*Type: pCR For: Approval  
 38.843 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TP to TR38.843 v1.1.0 to capture RAN4 relevant terminology for AI/ML.

**Decision: Merged (with R4-23xxxxx).**

#### 8.21.2 Specific issues related to use case for AI/ML

[**R4-2318282**](file:///D:\RAN4%23109\Docs\R4-2318282.zip) **Discussion on specific issues related to use cases for AIML**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2318580**](file:///D:\RAN4%23109\Docs\R4-2318580.zip) **On RAN4 requirements for use cases for AI/ML**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318763**](file:///D:\RAN4%23109\Docs\R4-2318763.zip) **Specific issues related to use case for AI/ML**

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

**Decision: Noted.**

[**R4-2318847**](file:///D:\RAN4%23109\Docs\R4-2318847.zip) **Discussion on use case for AI**

*Type: discussion For: Discussion  
 38.133 v CR- rev Cat: (Rel-18)  
  
 Source: xiaomi*

**Decision: Noted.**

[**R4-2319076**](file:///D:\RAN4%23109\Docs\R4-2319076.zip) **Further discussion on use cases for AI/ML**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2319085**](file:///D:\RAN4%23109\Docs\R4-2319085.zip) **Discussion on use cases for AI/ML**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2319643**](file:///D:\RAN4%23109\Docs\R4-2319643.zip) **AI use cases**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on CSI, positioning and beam management use cases

**Decision: Noted.**

[**R4-2319938**](file:///D:\RAN4%23109\Docs\R4-2319938.zip) **On specific issues related to use case for AIML**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320185**](file:///D:\RAN4%23109\Docs\R4-2320185.zip) **Discussion on Specific Issues related to Use Case for AI/ML**

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

**Decision: Noted.**

[**R4-2320245**](file:///D:\RAN4%23109\Docs\R4-2320245.zip) **Discussion on RAN4 requirements in Rel-18 AI/ML**

*Type: other For: Approval  
 Source: Google Inc.*

**Decision: Noted.**

#### 8.21.3 Interoperability and testability aspect

[**R4-2318251**](file:///D:\RAN4%23109\Docs\R4-2318251.zip) **Discussion on interoperability and testability of AIML for NR air interface**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2318283**](file:///D:\RAN4%23109\Docs\R4-2318283.zip) **Discussion on interoperability and testing aspects**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2318479**](file:///D:\RAN4%23109\Docs\R4-2318479.zip) **Interoperability and testability aspects discussions for NR AI/ML**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

[**R4-2318581**](file:///D:\RAN4%23109\Docs\R4-2318581.zip) **On testability with AI/ML in air interface**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318764**](file:///D:\RAN4%23109\Docs\R4-2318764.zip) **Interoperability and testability aspect**

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

**Decision: Noted.**

[**R4-2318848**](file:///D:\RAN4%23109\Docs\R4-2318848.zip) **Discussion on interoperability and testability of AI/ML**

*Type: discussion For: Discussion  
 38.133 v CR- rev Cat: (Rel-18)  
  
 Source: xiaomi*

**Decision: Noted.**

[**R4-2318936**](file:///D:\RAN4%23109\Docs\R4-2318936.zip) **AI/ML interoperability**

*Type: discussion For: Approval  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

[**R4-2319077**](file:///D:\RAN4%23109\Docs\R4-2319077.zip) **Further discussion on interoperability and testability aspects for AI/ML**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2319086**](file:///D:\RAN4%23109\Docs\R4-2319086.zip) **Discussion on interoperability and testability for AI/ML**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2319642**](file:///D:\RAN4%23109\Docs\R4-2319642.zip) **AI interoperability and testing aspects**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on interoperability aspects

**Decision: Noted.**

[**R4-2319939**](file:///D:\RAN4%23109\Docs\R4-2319939.zip) **On testability issues for two-sided AIML model**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320186**](file:///D:\RAN4%23109\Docs\R4-2320186.zip) **Discussion on Interoperability and Testability Aspect**

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

**Decision: Noted.**

[**R4-2320416**](file:///D:\RAN4%23109\Docs\R4-2320416.zip) **Discussion on the interoperability and testability aspects of AIML RAN4 requirements**

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

**Decision: Noted.**

[**R4-2320555**](file:///D:\RAN4%23109\Docs\R4-2320555.zip) **Discussion on the Interoperability and testability aspects of AI/ML**

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

**Decision: Noted.**

[**R4-2320611**](file:///D:\RAN4%23109\Docs\R4-2320611.zip) **Interoperability and testability aspect of AI/ML for NR air interface**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

#### 8.21.4 Moderator summary and conclusions

[**R4-2318142**](file:///D:\RAN4%23109\Docs\R4-2318142.zip) **Topic summary for [109][136] FS\_NR\_AIML\_air**

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

**Abstract:**

[109][100] Main Session AI 8.21

2nd Round:

Chair: SI is completed.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321739**](file:///D:\RAN4%23109\Docs\R4-2321739.zip) **Ad hoc minutes for FS\_NR\_AIML\_air**

*Type: other For: Approval  
 Source: Qualcomm, CAICT*

**Decision: Revised to R4-2321996 (from R4-2321739).**

[**R4-2321996**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321996.zip) **Ad hoc minutes for FS\_NR\_AIML\_air**

*Type: other For: Approval  
 Source: Qualcomm, CAICT*

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.22 Expanded and improved NR positioning

#### 8.22.1 RF requirements

[**R4-2319809**](file:///D:\RAN4%23109\Docs\R4-2319809.zip) **Views on the guard period for SRS BW aggregation for positioning**

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

**Decision: Noted.**

[**R4-2320910**](file:///D:\RAN4%23109\Docs\R4-2320910.zip) **On the guard period for SRS BW aggregation for positioning**

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

**Decision: Noted.**

**LS**

[**R4-2318315**](file:///D:\RAN4%23109\Docs\R4-2318315.zip) **Reply LS on guard period for SRS and PRS bandwidth aggregation for positioning**

*Type: LS out For: Approval  
 to RAN1  
 Source: CATT*

**Decision: Revised to** [**R4-2321741**](file:///D:\RAN4%23109\Docs\R4-2321741.zip) **(from** [**R4-2318315**](file:///D:\RAN4%23109\Docs\R4-2318315.zip)**).**

**[R4-2321741](file:///D:\\RAN4%23109\\Docs\\R4-2321741.zip) Reply LS on guard period for SRS and PRS bandwidth aggregation for positioning**

*Type: LS out For: Approval  
 to RAN1  
 Source: CATT*

**Decision: Approved.**

#### 8.22.2 RRM core requirements

#### 8.22.3 RRM performance requirements

#### 8.22.4 Moderator summary and conclusions

[**R4-2318143**](file:///D:\RAN4%23109\Docs\R4-2318143.zip) **Topic summary for [109][137] NR\_pos\_enh2\_UERF**

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

**Abstract:**

[109][100] Main Session AI 8.22, 8.22.1

**2nd Round:**

Chair: The RF core part work for this WI is completed.

**Decision: Noted.**

**New tdocs allocated.**

[**R4-2321802**](file:///D:\RAN4%23109\Docs\R4-2321802.zip) **WF on SRS aggregation for positioning enhancement**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 8.23 Multi-carrier enhancements for NR

#### 8.23.1 General aspects

[**R4-2318416**](file:///D:\RAN4%23109\Docs\R4-2318416.zip) **On the remaining issues for UL Tx switching**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**LS**

[**R4-2318956**](file:///D:\RAN4%23109\Docs\R4-2318956.zip) **[Draft] Reply LS on Response LS on determination of switching period location in frequency domain based on band priority**

*Type: LS out For: Approval  
 to RAN1, cc RAN2  
 Source: vivo*

**Decision: Noted.**

#### 8.23.2 Switching time and other RF aspects up to 3 or 4 bands (resubmitted CR)

##### 8.23.2.1 UL Tx switching with single TAG

[**R4-2318248**](file:///D:\RAN4%23109\Docs\R4-2318248.zip) **UE capability clarifications**

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

**Decision: Noted.**

[**R4-2318491**](file:///D:\RAN4%23109\Docs\R4-2318491.zip) **Remaining issues and UE feature list for Rel-18 Tx switching**

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

**Decision: Noted.**

[**R4-2319032**](file:///D:\RAN4%23109\Docs\R4-2319032.zip) **Remaining issues for Rel-18 UL Tx switching**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319448**](file:///D:\RAN4%23109\Docs\R4-2319448.zip) **[NR\_MC\_enh-Core]Discussion on the UE feature list for MC\_enh**

*Type: discussion For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Noted.**

[**R4-2319507**](file:///D:\RAN4%23109\Docs\R4-2319507.zip) **Discussion on the length of switching period for the fallback band combinations**

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

**Decision: Noted.**

[**R4-2319906**](file:///D:\RAN4%23109\Docs\R4-2319906.zip) **R18 Tx switch capability for low order band combination**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320095**](file:///D:\RAN4%23109\Docs\R4-2320095.zip) **Remaining issues for Tx switching**

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

**Decision: Noted.**

**Draft CRs/CRs**

[**R4-2319110**](file:///D:\RAN4%23109\Docs\R4-2319110.zip) **CR for 38.101-1: Time mask for switching across three or four uplink bands**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1876 rev Cat: B (Rel-18)  
  
 Source: China Telecom, Huawei, Hisilicon, CMCC, Xiaomi, China Unicom, vivo, CATT, ZTE*

**Abstract:**

Re-submission of the CR [R4-2317608](file:///D:\RAN4%23109\Docs\R4-2317608.zip) endorsed in RAN4#108bis

**Decision: Agreed.**

[**R4-2319447**](file:///D:\RAN4%23109\Docs\R4-2319447.zip) **[NR\_MC\_enh-Core]CR for DL interruption note improvement**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1894 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Agreed.**

##### 8.23.2.2 UL Tx switching with multiple TAGs

[**R4-2318234**](file:///D:\RAN4%23109\Docs\R4-2318234.zip) **Release independence of DualTAG with TX switching**

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

**Decision: Noted.**

[**R4-2319435**](file:///D:\RAN4%23109\Docs\R4-2319435.zip) **3-4 band switching with dual TAG**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose to add provisions for supporting 3-4 band switching with dual TAG

**Decision: Noted.**

**CRs**

[**R4-2320680**](file:///D:\RAN4%23109\Docs\R4-2320680.zip) **Implementation of two-band Tx switching with dual TAG in an earlier release**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0144 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to add requirements for implementation of two-band TX switching in an earlier release

**Decision: Agreed.**

[**R4-2319436**](file:///D:\RAN4%23109\Docs\R4-2319436.zip) **Implementation of two-band Tx switching with dual TAG in an earlier release**

*Type: CR For: Agreement  
 38.307 v17.10.0 CR-0136 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to add requirements for implementation of two-band TX swtiching in an earlier release

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

#### 8.23.3 RRM core requirements maintenance

#### 8.23.4 RRM performance requirements

#### 8.23.5 Moderator summary and conclusions

[**R4-2318144**](file:///D:\RAN4%23109\Docs\R4-2318144.zip) **Topic summary for [109][138] NR\_MC\_enh\_UERF**

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

**Abstract:**

[109][100] Main Session AI 8.23, 8.23.1, 8.23.2

**2nd Round:**

Chair: the RF core part of WI is completed.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321754**](file:///D:\RAN4%23109\Docs\R4-2321754.zip) **CR for Tx switching with dual TAG**

*Type: CR For: Agreement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-1x)  
  
 Source: Ericsson*

**Decision: Agreed.**

[**R4-2321755**](file:///D:\RAN4%23109\Docs\R4-2321755.zip) **WF on NR\_MC\_enh\_UERF**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Noted.**

[**R4-2321985**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321985.zip) **WF on NR\_MC\_enh\_UERF**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Withdrawn.**

[**R4-2321986**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321986.zip) **LS on Rel-18 multi-carrier enhancement**

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

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 8.24 Further NR mobility enhancements

### 8.25 Dual Tx/Rx Multi-SIM for NR

### 8.26 NR NTN enhancement

#### 8.26.1 General aspects

#### 8.26.2 Co-existence study for above 10GHz bands

#### 8.26.3 SAN RF requirements

#### 8.26.4 SAN RF conformance testing requirements

#### 8.26.5 UE RF requirements

[**R4-2320900**](file:///D:\RAN4%23109\Docs\R4-2320900.zip) **Details on NTN UE terminal requirements based on different NTN UE types**

*Type: discussion For: Discussion  
 Source: THALES*

**Abstract:**

Discussion on antenna gain and transmission power for NTN VSAT NF=6dB class.

**Decision: Noted.**

**LS**

[**R4-2320551**](file:///D:\RAN4%23109\Docs\R4-2320551.zip) **LS on UE capability of PUSCH DMRS bundling for NR NTN**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we present our view on the PUSCH DMRS bundling for NR NTN coverage enhancement from RAN1 LS [1].

**Decision: Noted.**

**CR**

[**R4-2320903**](file:///D:\RAN4%23109\Docs\R4-2320903.zip) **Draft CR to TS 38.101-5: NTN UE in Ka-band**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0053 rev Cat: B (Rel-18)  
  
 Source: THALES*

**Abstract:**

Introduce NTN VSAT UE requirements for Ka-band into TS 38.101-5.

**Decision: Revised to R4-2321973 (from R4-2320903).**

**[R4-2321973](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321973.zip) Draft CR to TS 38.101-5: NTN UE in Ka-band**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0053 rev Cat: B (Rel-18)  
  
 Source: THALES*

**Abstract:**

Introduce NTN VSAT UE requirements for Ka-band into TS 38.101-5.

**Decision: Endorsed.**

##### 8.26.5.1 RF requirements

[**R4-2318426**](file:///D:\RAN4%23109\Docs\R4-2318426.zip) **On DMRS bundling with Doppler pre-compensation for NTN**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2319179**](file:///D:\RAN4%23109\Docs\R4-2319179.zip) **Discussions on NTN UE RF**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

In this paper, we will summarize the previous agreements in this topic and propose a potential UE types that satisfy all these agreements.

**Decision: Noted.**

[**R4-2319568**](file:///D:\RAN4%23109\Docs\R4-2319568.zip) **NTN enhancement: UE RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the NTN satellite UE RF requirements for NTN enhancements

**Decision: Noted.**

[**R4-2319892**](file:///D:\RAN4%23109\Docs\R4-2319892.zip) **Discussion on Ka band NTN UE**

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

**Decision: Noted.**

[**R4-2319893**](file:///D:\RAN4%23109\Docs\R4-2319893.zip) **Discussion on DMRS bundling**

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

**Decision: Noted.**

[**R4-2320332**](file:///D:\RAN4%23109\Docs\R4-2320332.zip) **Further discussion on UE RF requirements for NTN in Ka-band**

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

**Decision: Noted.**

[**R4-2320333**](file:///D:\RAN4%23109\Docs\R4-2320333.zip) **Joint contribution for NTN VSAT RF requirements in Ka-band**

*Type: other For: Approval  
 Source: ZTE Corporation , Thales, Samsung, Ericsson, Huawei*

**Decision: Noted.**

**Draft CRs/CRs**

UE RF

[**R4-2319181**](file:///D:\RAN4%23109\Docs\R4-2319181.zip) **Draft CR to TS 38.101-5: regulatory related RF requirements**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Abstract:**

To introduce regulatory related requirements into corresponding sections in TS 38.101-5

**Decision: Not pursued.**

[**R4-2321962**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321962.zip) **Draft CR to TS 38.101-5: regulatory related RF requirements**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Abstract:**

To introduce regulatory related requirements into corresponding sections in TS 38.101-5

**Decision: Withdrawn.**

[**R4-2319572**](file:///D:\RAN4%23109\Docs\R4-2319572.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clause 5**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 5

**Decision: Revised to R4-2321963 (from R4-2319572).**

[**R4-2321963**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321963.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clause 5**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 5

**Decision: Endorsed.**

[**R4-2319573**](file:///D:\RAN4%23109\Docs\R4-2319573.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.1**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 9.1

**Decision: Revised to R4-2321964 (from R4-2319573).**

[**R4-2321964**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321964.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.1**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 9.1

**Decision: Endorsed.**

[**R4-2319180**](file:///D:\RAN4%23109\Docs\R4-2319180.zip) **Draft CR to TS 38.101-5: sub-clause 9.2.1**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Abstract:**

To introduce content in chapter 9.2.1 in TS 38.101-5.

**Decision: Not pursued.**

[**R4-2321961**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321961.zip) **Draft CR to TS 38.101-5: sub-clause 9.2.1**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Abstract:**

To introduce content in chapter 9.2.1 in TS 38.101-5.

**Decision: Withdrawn.**

[**R4-2319574**](file:///D:\RAN4%23109\Docs\R4-2319574.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.2.2**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Verizon*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 9.2.2

**Decision: Endorsed.**

[**R4-2321965**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321965.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.2.2**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Verizon*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 9.2.2

**Decision: Withdrawn.**

[**R4-2319575**](file:///D:\RAN4%23109\Docs\R4-2319575.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.2.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 9.2.3

**Decision: Not pursued.**

[**R4-2321966**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321966.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.2.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 9.2.3

**Decision: Withdrawn.**

[**R4-2320337**](file:///D:\RAN4%23109\Docs\R4-2320337.zip) **Draft CR to TS 38.101-5 Clause 9.3 Output power dynamics**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321969 (from R4-2320337).**

[**R4-2321969**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321969.zip) **Draft CR to TS 38.101-5 Clause 9.3 Output power dynamics**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Not pursued.**

[**R4-2319891**](file:///D:\RAN4%23109\Docs\R4-2319891.zip) **Draft CR for 38.101-5 to introduce clause 10.1~10.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321968 (from R4-2319891).**

[**R4-2321968**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321968.zip) **Draft CR for 38.101-5 to introduce clause 10.1~10.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

[**R4-2320338**](file:///D:\RAN4%23109\Docs\R4-2320338.zip) **Draft CR to TS 38.101-5 Clause 10.4 Maximum input power requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321970 (from R4-2320338).**

[**R4-2321970**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321970.zip) **Draft CR to TS 38.101-5 Clause 10.4 Maximum input power requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Not pursued.**

[**R4-2320339**](file:///D:\RAN4%23109\Docs\R4-2320339.zip) **Draft CR to TS 38.101-5 Clause 10.6 Blocking requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321971 (from R4-2320339).**

[**R4-2321971**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321971.zip) **Draft CR to TS 38.101-5 Clause 10.6 Blocking requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Not pursued.**

[**R4-2319576**](file:///D:\RAN4%23109\Docs\R4-2319576.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 10.7**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 10.7

**Decision: Not pursued.**

[**R4-2321967**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321967.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 10.7**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 10.7

**Decision: Withdrawn.**

[**R4-2320340**](file:///D:\RAN4%23109\Docs\R4-2320340.zip) **Draft CR to TS 38.101-5 Annex: NTN VSAT related FRC**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2321972 (from R4-2320340).**

[**R4-2321972**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321972.zip) **Draft CR to TS 38.101-5 Annex: NTN VSAT related FRC**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Not pursued.**

DMRS bundling

[**R4-2318425**](file:///D:\RAN4%23109\Docs\R4-2318425.zip) **CR to 38.101-5 on the introduction of NTN DMRS bundling feature**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0040 rev Cat: B (Rel-18)  
  
 Source: Apple*

**Decision: Not pursued.**

[**R4-2319894**](file:///D:\RAN4%23109\Docs\R4-2319894.zip) **CR for 38.101-5 to introduce Phase continuity requirements for NTN UE DMRS bundling**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0049 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321977 (from R4-2319894).**

[**R4-2321977**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321977.zip) **CR for 38.101-5 to introduce Phase continuity requirements for NTN UE DMRS bundling**

*Type: CR For: Agreement  
 38.101-5 v18.3.0 CR-0049 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Postponed.**

[**R4-2320552**](file:///D:\RAN4%23109\Docs\R4-2320552.zip) **CR on DMRS bundling**

*Type: draftCR For: Endorsement  
 38.101-5 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

in this CR, we provide the DMRS bundling requirment updates in specificaiton

**Decision: Not pursued.**

##### 8.26.5.2 Release independent requirements

#### 8.26.6 RRM core requirements

#### 8.26.7 RRM performance requirements

#### 8.26.8 Demodulation performance requirements

#### 8.26.9 Moderator summary and conclusions

[**R4-2318145**](file:///D:\RAN4%23109\Docs\R4-2318145.zip) **Topic summary for [109][139] NR\_NTN\_enh\_UERF**

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

**Abstract:**

[109][100] Main Session AI 8.26.5

**2nd Round:**

Chair: the WI needs be extended.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321974**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321974.zip) **WF on NTN UE RF requirement**

*Type: other For: Approval  
 Source: ZTE, Samsung*

**Decision: Approved.**

[**R4-2321975**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321975.zip) **LS on NTN VSAT capability**

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

**Decision: Approved.**

[**R4-2321976**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321976.zip) **LS on UE capability of PUSCH DMRS bundling for NR-NTN**

*Type: LS out For: Approval  
 Source: Ericsson, Apple*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 8.27 Further NR coverage enhancements

#### 8.27.1 UE RF requirements

**LS**

[**R4-2318892**](file:///D:\RAN4%23109\Docs\R4-2318892.zip) **Discussion on reply LS on delta power class**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2320542**](file:///D:\RAN4%23109\Docs\R4-2320542.zip) **LS to RAN1\_2 on UE capability signaling**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we present our view on the needed signalling for transparent MPR reduction scheme.

**Decision: Noted.**

##### 8.27.1.1 Enhancement of increasing UE power high limit for CA and DC (resubmitted CR)

[**R4-2318268**](file:///D:\RAN4%23109\Docs\R4-2318268.zip) **Further discussion on delta\_Ppowerclass**

*Type: other For: Approval  
 Source: E-surfing Digital*

**Decision: Noted.**

[**R4-2318437**](file:///D:\RAN4%23109\Docs\R4-2318437.zip) **On ULFPTx dependency on Delta\_PPowerClass report**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318773**](file:///D:\RAN4%23109\Docs\R4-2318773.zip) **On power class fallback signaling**

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

**Abstract:**

Views on RAN2 LS seeking details of capability to be reported with delta(Ppowerclass)

**Decision: Noted.**

[**R4-2318957**](file:///D:\RAN4%23109\Docs\R4-2318957.zip) **Further Discussion of Delta\_powerclass reporting**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319406**](file:///D:\RAN4%23109\Docs\R4-2319406.zip) **Views on ?PPowerClass and ?PPowerClass,CA/?PPowerClass,EN-DC reporting**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2319911**](file:///D:\RAN4%23109\Docs\R4-2319911.zip) **R18 delta Ppowerclass reporting LS reply**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320079**](file:///D:\RAN4%23109\Docs\R4-2320079.zip) **On remaining issue for enhancements to increasing UE power high limit for CA and DC**

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

**Decision: Noted.**

[**R4-2320093**](file:///D:\RAN4%23109\Docs\R4-2320093.zip) **Discussion and reply LS on ?PPowerClass reporting**

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

**Decision: Noted.**

**CRs**

[**R4-2318030**](file:///D:\RAN4%23109\Docs\R4-2318030.zip) **Introduction of higherPowerLimit-r17 into NR CA of PC3+PC5 including UL Intra band CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1810 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, vivo, ZTE, Huawei, CHTTL, Samusng,Xiaomi*

**Abstract:**

This CR allows a UE to apply higherPowerLimit-r17 to PC3 NR CA consisting of PC3 band and PC5 band where one of the bands can be UL intra band contiguous CA.

Agreement:

* The CR is based on the assumptions that the default power class is per band power class in order to complete this WI. If there is new agreement coming from the discussions in the maintenance agenda, the new agreement can be captured by modifying the corresponding sections.

**Decision: Agreed.**

[**R4-2318031**](file:///D:\RAN4%23109\Docs\R4-2318031.zip) **Introduction of higherPowerLimit-r17 into EN-DC of PC3+PC5 including UL Intra band CA**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1030 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Samsung*

**Abstract:**

This is a CR based on the CR([R4-2315148](file:///D:\RAN4%23109\Docs\R4-2315148.zip)) endorsed in RAN4#108bis.

**Decision: Agreed.**

[**R4-2318100**](file:///D:\RAN4%23109\Docs\R4-2318100.zip) **Introduction of delta PPowerClass report**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1811 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

CR to introduce a NOTE about delta P power class report.

**Decision: Agreed.**

[**R4-2318101**](file:///D:\RAN4%23109\Docs\R4-2318101.zip) **Introduction of delta PPowerClass report**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1032 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

CR to add a NOTE to introduce a delta P power class report.

**Decision: Agreed.**

[**R4-2318959**](file:///D:\RAN4%23109\Docs\R4-2318959.zip) **CR of TS38.101-1 for Introducing new scenarios for increase higher power limit for CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1871 rev Cat: B (Rel-18)  
  
 Source: vivo, ZTE, Huawei, CHTTL, Samusng,Xiaomi*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320094**](file:///D:\RAN4%23109\Docs\R4-2320094.zip) **CR to TS38.101-3 for Introducing new scenarios for increase higher power limit for ENDC**

*Type: CR For: Agreement  
 38.101-3 v18.3.0 CR-1083 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation, vivo, Nokia, Nokia Shanghai Bell, Huawei, CHTTL, Xiaomi, Samsung*

**Abstract:**

This CR is the resubmitted endorsed draft CRs [R4-2316336](file:///D:\RAN4%23109\Docs\R4-2316336.zip)

**Decision: Agreed.**

**LS**

[**R4-2318032**](file:///D:\RAN4%23109\Docs\R4-2318032.zip) **Draft LS to R2-2311611 on UL power enhancements for CA and DC**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This paper addresses three questions enclosed in RAN2 LS of R2-2311611.

**Decision: Noted.**

[**R4-2318718**](file:///D:\RAN4%23109\Docs\R4-2318718.zip) **Draft reply LS on delta power class**

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

**Decision: Noted.**

[**R4-2318958**](file:///D:\RAN4%23109\Docs\R4-2318958.zip) **[Draft] Reply LS on the Reply of delta power class**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: vivo*

**Decision: Noted.**

[**R4-2319437**](file:///D:\RAN4%23109\Docs\R4-2319437.zip) **DRAFT Reply LS on delta power class**

*Type: LS out For: Approval  
 to RAN2  
 Source: Ericsson*

**Abstract:**

DRAFT LS reply to RAN2 on the delta power class

**Decision: Noted.**

[**R4-2320080**](file:///D:\RAN4%23109\Docs\R4-2320080.zip) **LS reply on further clarifications on enhancements to realize increasing UE power high limit for CA and DC**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321821**](file:///D:\RAN4%23109\Docs\R4-2321821.zip) **(from** [**R4-2320080**](file:///D:\RAN4%23109\Docs\R4-2320080.zip)**).**

**[R4-2321821](file:///D:\\RAN4%23109\\Docs\\R4-2321821.zip) LS reply on further clarifications on enhancements to realize increasing UE power high limit for CA and DC**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321825 (from R4-2321821).**

[**R4-2321825**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321825.zip) **LS reply on further clarifications on enhancements to realize increasing UE power high limit for CA and DC**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2321998 (from R4-2321825).**

[**R4-2321998**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321998.zip) **LS reply on further clarifications on enhancements to realize increasing UE power high limit for CA and DC**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

##### 8.27.1.2 Enhancement to reduce MPR/PAR (resubmitted CR)

[**R4-2318715**](file:///D:\RAN4%23109\Docs\R4-2318715.zip) **Further discussion on MPR reduction**

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

**Decision: Noted.**

[**R4-2318760**](file:///D:\RAN4%23109\Docs\R4-2318760.zip) **On coverage enhancement using transparent schemes**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318772**](file:///D:\RAN4%23109\Docs\R4-2318772.zip) **An approach to specify transparent UL enhancements for Rel-18**

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

**Abstract:**

This contribution provides the analysis as well as the explanation for companion draft feature CRs for Rel-18 coverage enhancement

**Decision: Noted.**

[**R4-2318805**](file:///D:\RAN4%23109\Docs\R4-2318805.zip) **Scope of transparent UL enhancements for Rel-18**

*Type: other For: Approval  
 Source: Qualcomm, Verizon, Ericsson, AT&T, T-Mobile, ZTE, Fujitsu, KDDI, NTT-Docomo*

**Abstract:**

This contribution provides the analysis as well as the explanation for companion draft feature CRs for Rel-18 coverage enhancement

**Decision: Noted.**

[**R4-2318962**](file:///D:\RAN4%23109\Docs\R4-2318962.zip) **Discussion on transparent schemes for coverage enhancement**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2320031**](file:///D:\RAN4%23109\Docs\R4-2320031.zip) **On completion of Rel-18 MPR-PAR objective**

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

**Decision: Noted.**

[**R4-2320081**](file:///D:\RAN4%23109\Docs\R4-2320081.zip) **On further enhancements to reduce MPR&PAR**

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

**Decision: Noted.**

[**R4-2320457**](file:///D:\RAN4%23109\Docs\R4-2320457.zip) **Proposal on power boosting regions for QPSK w/wo shaping**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

in this contribution, we propose boosting regions for QPSK DFT-s-OFDM with and without Shaping filter

**Decision: Noted.**

[**R4-2320543**](file:///D:\RAN4%23109\Docs\R4-2320543.zip) **RF spec impact for transparent MPR reduction scheme**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution, we present our view on the potential RF spec impact for transparent MPR reduction scheme.

**Decision: Noted.**

**Darft CRs/CRs**

[**R4-2318761**](file:///D:\RAN4%23109\Docs\R4-2318761.zip) **CR on Introducing Rel-18 Power Boost for QPSK and Pi/2 BPSK**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1858 rev Cat: B (Rel-18)  
  
 Source: Apple*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2318774**](file:///D:\RAN4%23109\Docs\R4-2318774.zip) **dCR on coverage enhancements using FDSS**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Proposal to enable power boosting using a mix of legacy DFT-s-QPSK and FDSS

**Decision: Merged (with R4-23xxxxx).**

[**R4-2318963**](file:///D:\RAN4%23109\Docs\R4-2318963.zip) **Draft CR1 for TS38.101-1 on coverage enhancement**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: vivo*

**Decision: Not pursued.**

[**R4-2318964**](file:///D:\RAN4%23109\Docs\R4-2318964.zip) **Draft CR2 for TS38.101-1 on coverage enhancement**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: vivo*

**Decision: Not pursued.**

[**R4-2320032**](file:///D:\RAN4%23109\Docs\R4-2320032.zip) **CR to 38.101 for introduction of MPR reduction**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1938 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2321826 (from R4-2320032).**

[**R4-2321826**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321826.zip) **CR to 38.101 for introduction of MPR reduction**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1938 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Qualcomm, Huawei, Ericsson, Apple, Vivo, Oppo, MediaTek*

Agreement: we can revist A-MPR values in the future meetings.

**Decision: Agreed.**

[**R4-2320082**](file:///D:\RAN4%23109\Docs\R4-2320082.zip) **Draft CR for TS 38.101-1 PC3 power boosting**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2320356**](file:///D:\RAN4%23109\Docs\R4-2320356.zip) **Draft CR for TS 38.101-1 PC3 power boosting**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Spreadtrum Communications*

**Decision: Not pursued.**

[**R4-2320544**](file:///D:\RAN4%23109\Docs\R4-2320544.zip) **CR for NR coverage enhancement Rel-18**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

In this contribution, RF spec updates on spectrum flatness is proposed

**Decision: Merged (with R4-23xxxxx).**

#### 8.27.2 BS demodulation performance requirements

#### 8.27.3 Moderator summary and conclusions

[**R4-2318146**](file:///D:\RAN4%23109\Docs\R4-2318146.zip) **Topic summary for [109][140] NR\_cov\_enh2\_part1**

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

**Abstract:**

[109][100] Main Session AI 8.27, 8.27.1.1

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321738**](file:///D:\RAN4%23109\Docs\R4-2321738.zip) **Ad hoc minutes for NR\_cov\_enh2\_part1**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2318147**](file:///D:\RAN4%23109\Docs\R4-2318147.zip) **Topic summary for [109][141] NR\_cov\_enh2\_part2**

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

**Abstract:**

[109][100] Main Session AI 8.27.1.2

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321827**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321827.zip) **WF on NR\_cov\_enh2\_part2**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2321960**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321960.zip) **LS on UE capabilities for MPR reduction**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

**2nd Round:**

Chari: The RF core part of WI is completed.

### 8.28 NR Network-controlled Repeaters

### 8.29 NR MIMO evolution for downlink and uplink

#### 8.29.1 UE RF requirements for simultaneous transmission with multi-panel (STxMP)

[**R4-2320083**](file:///D:\RAN4%23109\Docs\R4-2320083.zip) **On the RF requirement for STxMP**

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

**Decision: Noted.**

**CR**

[**R4-2319639**](file:///D:\RAN4%23109\Docs\R4-2319639.zip) **CR to introduce configured transmitted power for STxMP**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0684 rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Revised to** [**R4-2321727**](file:///D:\RAN4%23109\Docs\R4-2321727.zip) **(from** [**R4-2319639**](file:///D:\RAN4%23109\Docs\R4-2319639.zip)**).**

**[R4-2321727](file:///D:\\RAN4%23109\\Docs\\R4-2321727.zip) CR to introduce configured transmitted power for STxMP**

*Type: CR For: Agreement  
 38.101-2 v18.3.0 CR-0684 rev Cat: B (Rel-18)  
  
 Source: Samsung, Qualcomm, vivo, Huawei, Apple, Ericsson, Nokia, InterDigital*

**Decision: Agreed.**

##### 8.29.1.1 Configured transmitted power

[**R4-2318096**](file:///D:\RAN4%23109\Docs\R4-2318096.zip) **Remaining issues for Configured Power - STxMP mDCI case**

*Type: other For: Approval  
 Source: InterDigital, Inc.*

**Decision: Noted.**

[**R4-2318490**](file:///D:\RAN4%23109\Docs\R4-2318490.zip) **[NR\_MIMO\_evo\_DL\_UL] Considerations on RF requirements for STxMP**

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

**Decision: Noted.**

[**R4-2318682**](file:///D:\RAN4%23109\Docs\R4-2318682.zip) **TX Power requirement for STxMP**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2318768**](file:///D:\RAN4%23109\Docs\R4-2318768.zip) **On configured Tx power for STxMP in FR2**

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

**Abstract:**

Proposal for MPR, AMPR, PMPR

**Decision: Noted.**

[**R4-2318952**](file:///D:\RAN4%23109\Docs\R4-2318952.zip) **Further discussion of Configured transmitted power for STxMP in FR2**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319443**](file:///D:\RAN4%23109\Docs\R4-2319443.zip) **Discussion on configured transmitted power for STxMP**

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

**Decision: Noted.**

[**R4-2319638**](file:///D:\RAN4%23109\Docs\R4-2319638.zip) **Concluding configured transmitted power for STxMP**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2320821**](file:///D:\RAN4%23109\Docs\R4-2320821.zip) **On configured maximum output power for STxMP**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

**Draft CRs**

[**R4-2318953**](file:///D:\RAN4%23109\Docs\R4-2318953.zip) **Draft CR for Configured transmitted power for STxMP in FR2**

*Type: draftCR For: Endorsement  
 38.101-2 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: vivo*

*Not available.*

**Decision: Withdrawn.**

##### 8.29.1.2 Other UE RF requirements

[**R4-2318235**](file:///D:\RAN4%23109\Docs\R4-2318235.zip) **About coherence between PUSCH and 8-ports SRS with partial dropping**

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

**Decision: Noted.**

[**R4-2318739**](file:///D:\RAN4%23109\Docs\R4-2318739.zip) **The coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: other For: Approval  
 Source: InterDigital, Inc.*

**Abstract:**

This contribution we discussed the coherence definition in the context of 8Tx and 4Tx UL MIMO .

**Decision: Noted.**

[**R4-2318954**](file:///D:\RAN4%23109\Docs\R4-2318954.zip) **Discussion on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: other For: Approval  
 Source: vivo*

*Not available*

**Decision: Noted.**

[**R4-2319444**](file:///D:\RAN4%23109\Docs\R4-2319444.zip) **Discussion on coherence between PUSCH and 8-ports SRS with partial dropping**

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

**Decision: Noted.**

[**R4-2320243**](file:///D:\RAN4%23109\Docs\R4-2320243.zip) **Discussion on RF requirements for STxMP**

*Type: other For: Approval  
 Source: Google Inc.*

**Decision: Noted.**

**LS**

[**R4-2318236**](file:///D:\RAN4%23109\Docs\R4-2318236.zip) **LS Reply on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: LS out For: Approval  
 to RAN1  
 Source: Qualcomm Incorporated*

**Decision: Revised to** [**R4-2321728**](file:///D:\RAN4%23109\Docs\R4-2321728.zip) **(from** [**R4-2318236**](file:///D:\RAN4%23109\Docs\R4-2318236.zip)**).**

[**R4-2321728**](file:///D:\RAN4%23109\Docs\R4-2321728.zip) **LS Reply on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: LS out For: Approval  
 to RAN1  
 Source: Qualcomm Incorporated*

**Decision: Approved.**

[**R4-2318040**](file:///D:\RAN4%23109\Docs\R4-2318040.zip) **Draft LS reply to R1-2310645 on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: LS out For: Approval  
 to RAN1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution addresses questions enclosed in R1-2310645.

**Decision: Noted.**

[**R4-2318955**](file:///D:\RAN4%23109\Docs\R4-2318955.zip) **[Draft] Reply LS on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: LS out For: Approval  
 to RAN1  
 Source: vivo*

**Decision: Noted.**

[**R4-2319640**](file:///D:\RAN4%23109\Docs\R4-2319640.zip) **Reply LS on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: LS out For: Approval  
 to RAN1  
 Source: Samsung*

*Not available*

**Decision: Noted.**

[**R4-2320822**](file:///D:\RAN4%23109\Docs\R4-2320822.zip) **Draft LS reply on coherence between PUSCH and 8-ports SRS with partial dropping**

*Type: LS out For: Approval  
 to RAN1  
 Source: Ericsson India Private Limited*

*Not available*

**Decision: Noted.**

**Draft CRs**

[**R4-2318741**](file:///D:\RAN4%23109\Docs\R4-2318741.zip) **Draft CR for UL MIMO 8Tx Coherence correction**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: InterDigital, Inc.*

**Abstract:**

Change the wording in the requirement, so the current requirement becomes applicable between any pair of antenna connectors.

The content can be capture in [R4-2320901](file:///D:\RAN4%23109\Docs\R4-2320901.zip).

**Decision: Not pursued.**

#### 8.29.2 RRM core requirements

#### 8.29.3 RRM performance requirements

#### 8.29.4 Demodulation performance requirements

#### 8.29.5 Moderator summary and conclusions

[**R4-2318148**](file:///D:\RAN4%23109\Docs\R4-2318148.zip) **Topic summary for [109][142] NR\_MIMO\_evo\_DL\_UL\_UERF**

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

**Abstract:**

[109][100] Main Session AI 8.29, 8.29.1

**2nd Round:**

Chair: The RF core part of WI is completed.

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.30 NR sidelink evolution

#### 8.30.1 General aspects (TR/big CR)

[**R4-2319933**](file:///D:\RAN4%23109\Docs\R4-2319933.zip) **feature list discussion for SL enhancement**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**TR**

[**R4-2319898**](file:///D:\RAN4%23109\Docs\R4-2319898.zip) **TR38.786 v1.2.0 for SL evolution**

*Type: draft TR For: Agreement  
 38.786 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

**Big CR/Draft CR**

[**R4-2319932**](file:///D:\RAN4%23109\Docs\R4-2319932.zip) **Big CR for NR SL evoluation**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1936 rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Agreed.**

[**R4-2318996**](file:///D:\RAN4%23109\Docs\R4-2318996.zip) **Draft CR on introduction of definitions, symbols and abbreviations for SL evolution**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

**TP**

[**R4-2318995**](file:///D:\RAN4%23109\Docs\R4-2318995.zip) **Maintenance TP to TR 38.786**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Approved.**

#### 8.30.2 UE RF requirements

##### 8.30.2.1 Sidelink on a single unlicensed spectrum

[**R4-2319501**](file:///D:\RAN4%23109\Docs\R4-2319501.zip) **On PSFCH power control**

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

**Decision: Noted.**

[**R4-2319924**](file:///D:\RAN4%23109\Docs\R4-2319924.zip) **remaining issue for SL-U MPR**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**LS**

[**R4-2319502**](file:///D:\RAN4%23109\Docs\R4-2319502.zip) **[draft]Reply LS on PSFCH power control**

*Type: LS out For: Approval  
 to RAN1  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321767**](file:///D:\RAN4%23109\Docs\R4-2321767.zip) **(from** [**R4-2319502**](file:///D:\RAN4%23109\Docs\R4-2319502.zip)**).**

[**R4-2321767**](file:///D:\RAN4%23109\Docs\R4-2321767.zip) **[draft]Reply LS on PSFCH power control**

*Type: LS out For: Approval  
 to RAN1  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**Draft CR**

[**R4-2318445**](file:///D:\RAN4%23109\Docs\R4-2318445.zip) **Draft CR to TS38.101-1 on UE RF requirements for SL-U features**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Meta Ireland, OPPO*

**Abstract:**

This draftCR is to update the contents and correct some typos from the big Draft CR ([R4-2317793](file:///D:\RAN4%23109\Docs\R4-2317793.zip)) for SL-U feature.

**Decision: Endorsed.**

**[R4-2321768](file:///D:\\RAN4%23109\\Docs\\R4-2321768.zip) Draft CR to TS38.101-1 on UE RF requirements for SL-U features**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Meta Ireland, OPPO*

**Abstract:**

This draftCR is to update the contents and correct some typos from the big Draft CR ([R4-2317793](file:///D:\RAN4%23109\Docs\R4-2317793.zip)) for SL-U feature.

**Decision: Withdrawn.**

###### 8.30.2.1.1 System parameters (channel bandwidth, channel arrangement)

[**R4-2318997**](file:///D:\RAN4%23109\Docs\R4-2318997.zip) **Discussion on PSFCH power control**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319252**](file:///D:\RAN4%23109\Docs\R4-2319252.zip) **Discussion on LS on PSFCH power control**

*Type: discussion For: Discussion  
 Source: LG Electronics Finland*

**Abstract:**

Views on PSFCH power control linked with incoming LS from RAN1.

**Decision: Noted.**

**Draft CRs**

[**R4-2318316**](file:///D:\RAN4%23109\Docs\R4-2318316.zip) **Draft CR for 38.101-1: SL-U RB set and intra-cell guard band determination**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CATT,CICTCI*

**Decision: Not pursued.**

[**R4-2321769**](file:///D:\RAN4%23109\Docs\R4-2321769.zip) **Draft CR for 38.101-1: SL-U RB set and intra-cell guard band determination**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: CATT,CICTCI*

**Decision: Withdrawn.**

[**R4-2318446**](file:///D:\RAN4%23109\Docs\R4-2318446.zip) **Draft CR to TS38.101-1 on operating band and system parameters for SL-U features**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Meta Ireland*

**Abstract:**

This draftCR is to add some missing operaing bands, Channel bandwidths and system parameters in section 5 based on big Draft CR ([R4-2317793](file:///D:\RAN4%23109\Docs\R4-2317793.zip)) for SL-U feature.

**Decision: Revised to** [**R4-2321770**](file:///D:\RAN4%23109\Docs\R4-2321770.zip) **(from** [**R4-2318446**](file:///D:\RAN4%23109\Docs\R4-2318446.zip)**).**

[**R4-2321770**](file:///D:\RAN4%23109\Docs\R4-2321770.zip) **Draft CR to TS38.101-1 on operating band and system parameters for SL-U features**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Meta Ireland, OPPO, LG Electronics, vivo*

**Abstract:**

This draftCR is to add some missing operaing bands, Channel bandwidths and system parameters in section 5 based on big Draft CR ([R4-2317793](file:///D:\RAN4%23109\Docs\R4-2317793.zip)) for SL-U feature.

**Decision: Endorsed.**

**LS**

[**R4-2318998**](file:///D:\RAN4%23109\Docs\R4-2318998.zip) **Draft reply LS on PSFCH power control**

*Type: LS out For: Approval  
 to RAN1  
 Source: vivo*

**Decision: Noted.**

[**R4-2319253**](file:///D:\RAN4%23109\Docs\R4-2319253.zip) **Reply LS on PSFCH power control**

*Type: LS out For: Approval  
 to RAN1  
 Source: LG Electronics Finland*

**Abstract:**

Response to [R4-2318011](file:///D:\RAN4%23109\Docs\R4-2318011.zip)/R1-2310595

**Decision: Noted.**

[**R4-2319934**](file:///D:\RAN4%23109\Docs\R4-2319934.zip) **on the PSFCH power issue of RAN1 LS**

*Type: LS out For: Approval  
 to R1  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320048**](file:///D:\RAN4%23109\Docs\R4-2320048.zip) **LS reply on PSFCH power control**

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

**Decision: Noted.**

###### 8.30.2.1.2 Tx requirements

[**R4-2318879**](file:///D:\RAN4%23109\Docs\R4-2318879.zip) **Discussion on MPR of SL-U**

*Type: discussion For: Discussion  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2319170**](file:///D:\RAN4%23109\Docs\R4-2319170.zip) **On Tx requirements for NR sidelink evolution**

*Type: discussion For: Approval  
 Source: LG Electronics Finland*

**Abstract:**

This contribution proposes MPR and A-MPR values for NR SL-U single carrier operation.

**Decision: Revised to** [**R4-2321771**](file:///D:\RAN4%23109\Docs\R4-2321771.zip) **(from** [**R4-2319170**](file:///D:\RAN4%23109\Docs\R4-2319170.zip)**).**

[**R4-2321771**](file:///D:\RAN4%23109\Docs\R4-2321771.zip) **On Tx requirements for NR sidelink evolution**

*Type: discussion For: Approval  
 Source: LG Electronics Finland*

**Abstract:**

This contribution proposes MPR and A-MPR values for NR SL-U single carrier operation.

**Decision: Noted.**

[**R4-2319500**](file:///D:\RAN4%23109\Docs\R4-2319500.zip) **MPR for PSFCH and S-SSB for SL-U**

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

**Decision: Noted.**

[**R4-2319925**](file:///D:\RAN4%23109\Docs\R4-2319925.zip) **remaining issue for SL-U A-MPR**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**TPs**

[**R4-2319503**](file:///D:\RAN4%23109\Docs\R4-2319503.zip) **TP to TR38.786 updated MPR simulation assumptions for PSFCH transmission**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321772**](file:///D:\RAN4%23109\Docs\R4-2321772.zip) **(from** [**R4-2319503**](file:///D:\RAN4%23109\Docs\R4-2319503.zip)**).**

[**R4-2321772**](file:///D:\RAN4%23109\Docs\R4-2321772.zip) **TP to TR38.786 updated MPR simulation assumptions for PSFCH transmission**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

[**R4-2321818**](file:///D:\RAN4%23109\Docs\R4-2321818.zip) **TP for TR 38.786 updated PSFCH MPR and A-MPR simulation results**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: LGE*

**Decision: Approved.**

**Draft CRs**

[**R4-2319236**](file:///D:\RAN4%23109\Docs\R4-2319236.zip) **draft CR on SL-U MPR and A-MPR (alt1)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics Finland*

**Abstract:**

Alt-1: SL-U MPR for PSSCH/PSCCH, PSFCH, and S-SSB and A-MPR with NS\_51/53/58/60/61 for PSSCH/PSCCH, PSFCH, and S-SSB.

**Decision: Not pursued.**

[**R4-2319237**](file:///D:\RAN4%23109\Docs\R4-2319237.zip) **draft CR on SL-U MPR and A-MPR (alt2)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics Finland*

**Abstract:**

Alt-2: SL-U MPR for PSSCH/PSCCH, PSFCH, and S-SSB and A-MPR with NS\_51/53/58/60/61 for PSSCH/PSCCH, PSFCH, and S-SSB.

**Decision: Revised to** [**R4-2321773**](file:///D:\RAN4%23109\Docs\R4-2321773.zip) **(from** [**R4-2319237**](file:///D:\RAN4%23109\Docs\R4-2319237.zip)**).**

[**R4-2321773**](file:///D:\RAN4%23109\Docs\R4-2321773.zip) **draft CR on SL-U MPR and A-MPR (alt2)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics Finland*

**Abstract:**

Alt-2: SL-U MPR for PSSCH/PSCCH, PSFCH, and S-SSB and A-MPR with NS\_51/53/58/60/61 for PSSCH/PSCCH, PSFCH, and S-SSB.

**Decision: Endorsed.**

[**R4-2319926**](file:///D:\RAN4%23109\Docs\R4-2319926.zip) **DraftCR for SL-U**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Revised to** [**R4-2321774**](file:///D:\RAN4%23109\Docs\R4-2321774.zip) **(from** [**R4-2319926**](file:///D:\RAN4%23109\Docs\R4-2319926.zip)**).**

**[R4-2321774](file:///D:\\RAN4%23109\\Docs\\R4-2321774.zip) DraftCR for SL-U**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Endorsed.**

###### 8.30.2.1.3 Rx requirements

**Draft CR**

[**R4-2318999**](file:///D:\RAN4%23109\Docs\R4-2318999.zip) **Draft CR on Rx requirements for SL-U single carrier operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Merged (with R4-23xxxxx).**

##### 8.30.2.2 Con-current operation on Uu and sidelink

[**R4-2319927**](file:///D:\RAN4%23109\Docs\R4-2319927.zip) **on the remaining issue for the LTE NR SL coexistence**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**TP**

[**R4-2319928**](file:///D:\RAN4%23109\Docs\R4-2319928.zip) **TP on LTE NR SL co-existence**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: OPPO*

**Decision: Approved.**

**Draft CRs**

[**R4-2318807**](file:///D:\RAN4%23109\Docs\R4-2318807.zip) **draft CR on UE RF requirements of con-current operation on Uu and sidelink**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is draft CR on UE RF requirements of con-current operation on Uu and sidelink.

Meta: remove secion 5.

**Decision: Revised to** [**R4-2321776**](file:///D:\RAN4%23109\Docs\R4-2321776.zip) **(from** [**R4-2318807**](file:///D:\RAN4%23109\Docs\R4-2318807.zip)**).**

[**R4-2321776**](file:///D:\RAN4%23109\Docs\R4-2321776.zip) **draft CR on UE RF requirements of con-current operation on Uu and sidelink**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is draft CR on UE RF requirements of con-current operation on Uu and sidelink.

Meta: remove secion 5.

**Decision: Endorsed.**

[**R4-2319000**](file:///D:\RAN4%23109\Docs\R4-2319000.zip) **Draft CR on RF requirements for SL-U con-current operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Revised to** [**R4-2321777**](file:///D:\RAN4%23109\Docs\R4-2321777.zip) **(from** [**R4-2319000**](file:///D:\RAN4%23109\Docs\R4-2319000.zip)**).**

[**R4-2321777**](file:///D:\RAN4%23109\Docs\R4-2321777.zip) **Draft CR on RF requirements for SL-U con-current operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

[**R4-2319929**](file:///D:\RAN4%23109\Docs\R4-2319929.zip) **DraftCR for LTE NR SL co-existence**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Not pursued.**

##### 8.30.2.3 Sidelink CA

[**R4-2318808**](file:///D:\RAN4%23109\Docs\R4-2318808.zip) **UE RF requirements of SL CA**

*Type: discussion For: Discussion  
 Source: LG Electronics*

**Abstract:**

It discusses UE RF requirements of SL intra-band contiguous CA in n47.

**Decision: Noted.**

[**R4-2319504**](file:///D:\RAN4%23109\Docs\R4-2319504.zip) **On sidelink CA**

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

**Decision: Noted.**

**TPs**

[**R4-2318811**](file:///D:\RAN4%23109\Docs\R4-2318811.zip) **TP for TR 38.786 on SLCA MPR and A-MPR**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is TP to TR on SLCA UE requirements.

**Decision: Revised to** [**R4-2321778**](file:///D:\RAN4%23109\Docs\R4-2321778.zip) **(from** [**R4-2318811**](file:///D:\RAN4%23109\Docs\R4-2318811.zip)**).**

[**R4-2321778**](file:///D:\RAN4%23109\Docs\R4-2321778.zip) **TP for TR 38.786 on SLCA MPR and A-MPR**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is TP to TR on SLCA UE requirements.

**Decision: Approved.**

[**R4-2319505**](file:///D:\RAN4%23109\Docs\R4-2319505.zip) **TP to TR38.786 sidelink CA**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321779**](file:///D:\RAN4%23109\Docs\R4-2321779.zip) **(from** [**R4-2319505**](file:///D:\RAN4%23109\Docs\R4-2319505.zip)**).**

[**R4-2321779**](file:///D:\RAN4%23109\Docs\R4-2321779.zip) **TP to TR38.786 sidelink CA**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**Draft CRs**

[**R4-2318447**](file:///D:\RAN4%23109\Docs\R4-2318447.zip) **Draft CR on TS38.101-1 to update configured Tx power for SL-CA operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Meta Ireland, Huawei, OPPO, LG Electronics, Xiaomi, vivo*

**Abstract:**

Based on the endorsed big CR([R4-2317793](file:///D:\RAN4%23109\Docs\R4-2317793.zip)), the configured Transitted power requirements for NR SL CA UE are introduced in TS38.101-1

**Decision: Endorsed.**

[**R4-2318809**](file:///D:\RAN4%23109\Docs\R4-2318809.zip) **draft CR on SL CA UE RF requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is a draft CR on SL CA UE RF requirements.

**Decision: Revised to** [**R4-2321783**](file:///D:\RAN4%23109\Docs\R4-2321783.zip) **(from** [**R4-2318809**](file:///D:\RAN4%23109\Docs\R4-2318809.zip)**).**

[**R4-2321783**](file:///D:\RAN4%23109\Docs\R4-2321783.zip) **draft CR on SL CA UE RF requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is a draft CR on SL CA UE RF requirements.

**Decision: Endorsed.**

[**R4-2319001**](file:///D:\RAN4%23109\Docs\R4-2319001.zip) **Draft CR on RF requirements for SL CA operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Merged (with R4-23xxxxx).**

[**R4-2321780**](file:///D:\RAN4%23109\Docs\R4-2321780.zip) **Draft CR on RF requirements for SL CA operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: vivo*

**Decision: Withdrawn.**

[**R4-2319506**](file:///D:\RAN4%23109\Docs\R4-2319506.zip) **draftCR to 38.101-1 Tx requirements for SL CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321781**](file:///D:\RAN4%23109\Docs\R4-2321781.zip) **(from** [**R4-2319506**](file:///D:\RAN4%23109\Docs\R4-2319506.zip)**).**

[**R4-2321781**](file:///D:\RAN4%23109\Docs\R4-2321781.zip) **draftCR to 38.101-1 Tx requirements for SL CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2319931**](file:///D:\RAN4%23109\Docs\R4-2319931.zip) **DraftCR for SL-CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Merged (with R4-23xxxxx).**

**[R4-2321782](file:///D:\\RAN4%23109\\Docs\\R4-2321782.zip) DraftCR for SL-CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Withdrawn.**

##### 8.30.2.4 Co-channel coexistence for LTE sidelink and NR sidelink

[**R4-2318806**](file:///D:\RAN4%23109\Docs\R4-2318806.zip) **Co-channel coexistence for LTE SL and NR SL**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

Discusses addition of 3GPP RAN4 specifications to cover co-channel coexistence of LTE SL and NR SL for NR operation at 30 kHz SCS

**Decision: Noted.**

[**R4-2319258**](file:///D:\RAN4%23109\Docs\R4-2319258.zip) **on NR SL co-channel coexistence with LTE SL**

*Type: discussion For: Approval  
 Source: LG Electronics Finland*

**Abstract:**

Discussion and proposal on defining PCMAX,f,c tolerances and relative slot power tolerance for NR SL co-channel coexistence with LTE SL.

**Decision: Noted.**

**TPs**

[**R4-2319263**](file:///D:\RAN4%23109\Docs\R4-2319263.zip) **TP for TR 38.786 on NR SL co-channel coexistence with LTE SL**

*Type: pCR For: Approval  
 38.786 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: LG Electronics Finland*

**Abstract:**

Text proposal for the co-channel coexistence of LTE SL and NR SL

**Decision: Approved.**

**Draft CRs**

[**R4-2319265**](file:///D:\RAN4%23109\Docs\R4-2319265.zip) **Draft CR on NR SL co-channel coexistence with LTE SL**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics Finland*

**Abstract:**

Adding the definitions and requirements for PCMAX,f,c tolerances and Relative slot power tolerance for NR V2X UE supporting co-channel coexistence with LTE SL.

**Decision: Revised to** [**R4-2321775**](file:///D:\RAN4%23109\Docs\R4-2321775.zip) **(from** [**R4-2319265**](file:///D:\RAN4%23109\Docs\R4-2319265.zip)**).**

[**R4-2321775**](file:///D:\RAN4%23109\Docs\R4-2321775.zip) **Draft CR on NR SL co-channel coexistence with LTE SL**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: LG Electronics, Qualcomm*

**Abstract:**

Adding the definitions and requirements for PCMAX,f,c tolerances and Relative slot power tolerance for NR V2X UE supporting co-channel coexistence with LTE SL.

**Decision: Endorsed.**

[**R4-2319930**](file:///D:\RAN4%23109\Docs\R4-2319930.zip) **DraftCR for SL concurrent operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: OPPO*

**Decision: Merged (with R4-23xxxxx).**

#### 8.30.3 RRM core requirements

#### 8.30.4 RRM performance requirements

#### 8.30.5 UE demodulation performance requirements

#### 8.30.6 Moderator summary and conclusions

[**R4-2318149**](file:///D:\RAN4%23109\Docs\R4-2318149.zip) **Topic summary for [109][143] NR\_SL\_enh2\_UERF\_part1**

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

**Abstract:**

[109][100] Main Session AI 8.30, 8.30.1, 8.30.2, 8.30.2.1

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321736**](file:///D:\RAN4%23109\Docs\R4-2321736.zip) **WF for NR\_SL\_enh2\_UERF\_part1**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Revised to** [**R4-2321766**](file:///D:\RAN4%23109\Docs\R4-2321766.zip) **(from** [**R4-2321736**](file:///D:\RAN4%23109\Docs\R4-2321736.zip)**).**

[**R4-2321766**](file:///D:\RAN4%23109\Docs\R4-2321766.zip) **WF for NR\_SL\_enh2\_UERF\_part1**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

[**R4-2318150**](file:///D:\RAN4%23109\Docs\R4-2318150.zip) **Topic summary for [109][144] NR\_SL\_enh2\_UERF\_part2**

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

**Abstract:**

[109][100] Main Session AI 8.30.2.2, 8.30.2.4

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

[**R4-2318151**](file:///D:\RAN4%23109\Docs\R4-2318151.zip) **Topic summary for [109][145] NR\_SL\_enh2\_UERF\_part3**

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

**Abstract:**

[109][100] Main Session AI 8.30.2.3

**Decision: Noted.**

**2nd Round:**

Chair: The RF core part work for SL enh WI is completed.

**Discussions of issues and conclusions in the first round**

### 8.31 Enhanced support of reduced capability NR devices

#### 8.31.1 UE RF requirements

[**R4-2318359**](file:///D:\RAN4%23109\Docs\R4-2318359.zip) **Views on further reduction of UE complexity for eRedcap**

*Type: other For: Approval  
 Source: Sony*

**Decision: Noted.**

[**R4-2320529**](file:///D:\RAN4%23109\Docs\R4-2320529.zip) **eRedcap remaining Redcap RF issue**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Noted.**

[**R4-2320645**](file:///D:\RAN4%23109\Docs\R4-2320645.zip) **eRedCap UE RF impacts**

*Type: other For: Approval  
 Source: Qualcomm Inc.*

**Decision: Noted.**

**Big CR**

[**R4-2320528**](file:///D:\RAN4%23109\Docs\R4-2320528.zip) **bigCR for eRedCap RF requirement**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1954 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

this CR incorporate other draftCR endorsed in this meeting

**Decision: Withdrawn.**

**Draft CRs/CRs**

[**R4-2318356**](file:///D:\RAN4%23109\Docs\R4-2318356.zip) **CR to TS 38.101-1: Co-existence for eRedCap**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1823 rev Cat: F (Rel-18)  
  
 Source: Sony*

**Decision: Not pursued.**

[**R4-2318357**](file:///D:\RAN4%23109\Docs\R4-2318357.zip) **CR to TS 38.101-1: IBB requirements on eRedCap for n71**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1824 rev Cat: F (Rel-18)  
  
 Source: Sony*

**Decision: Not pursued.**

[**R4-2320644**](file:///D:\RAN4%23109\Docs\R4-2320644.zip) **CR to 38.101-1: Introduction of eRedCap**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1964 rev Cat: B (Rel-18)  
  
 Source: Qualcomm Inc., Xiaomi, Oppo, Nokia, Nokia Shanghai Bell, Ericsson, Huawei, HiSilicon, Apple*

*Remove the [ ] on the note*

**Decision: Revised to R4-2321922 (from R4-2320644).**

[**R4-2321922**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321922.zip) **CR to 38.101-1: Introduction of eRedCap**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1964 rev Cat: B (Rel-18)  
  
 Source: Qualcomm Inc., Xiaomi, Oppo, Nokia, Nokia Shanghai Bell, Ericsson, Huawei, HiSilicon, Apple*

*Remove the [ ] on the note*

**Decision: Agreed.**

**LS**

[**R4-2320116**](file:///D:\RAN4%23109\Docs\R4-2320116.zip) **Discussion paper on LS to RAN5**

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

**Decision: Noted.**

#### 8.31.2 RRM core requirements

#### 8.31.3 Moderator summary and conclusions

[**R4-2318152**](file:///D:\RAN4%23109\Docs\R4-2318152.zip) **Topic summary for [109][146] NR\_redcap\_enh\_UERF**

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

**Abstract:**

[109][100] Main Session AI 8.31, 8.31.1

**2nd Round:**

Chair: The RF core part work for this WI is completed.

**Decision: Noted.**

### 8.32 Enhanced NR Sidelink Relay

### 8.33 Mobile IAB (Integrated Access and Backhaul) for NR

### 8.34 Network energy saving for NR

#### 8.34.1 BS RF requirements

[**R4-2318252**](file:///D:\RAN4%23109\Docs\R4-2318252.zip) **Discussion on BS requirements for Network Energy Saving**

*Type: other For: Approval  
 Source: Fujitsu Limited*

**Decision: Noted.**

[**R4-2318507**](file:///D:\RAN4%23109\Docs\R4-2318507.zip) **Discussion on BS RF requirement for NES**

*Type: discussion For: Discussion  
 38.104 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, Hisilicon*

**Decision: Noted.**

[**R4-2319111**](file:///D:\RAN4%23109\Docs\R4-2319111.zip) **Discussion on RF impact from NES perspective**

*Type: discussion For: Discussion  
 Source: LG Electronics UK*

**Decision: Noted.**

[**R4-2319799**](file:///D:\RAN4%23109\Docs\R4-2319799.zip) **Discussion on NES BS RF requirement**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Network energy savings WI has been approved in RAN#98, and since then it has been discussed in multiple meetings in RAN1/2/3. Implementing the energy-saving features may impact the RF requirements of BSs and UEs, e.g., on network performance and user expe

**Decision: Noted.**

[**R4-2320262**](file:///D:\RAN4%23109\Docs\R4-2320262.zip) **On BS RF requirements for NES**

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

**Decision: Noted.**

[**R4-2320341**](file:///D:\RAN4%23109\Docs\R4-2320341.zip) **Further discussion on RF requirement impacts from NES perspective**

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

**Decision: Noted.**

#### 8.34.2 BS conformance testing requirements

[**R4-2318508**](file:///D:\RAN4%23109\Docs\R4-2318508.zip) **Discussion on conformance testing for NES**

*Type: discussion For: Discussion  
 38.141-1 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, Hisilicon*

**Decision: Noted.**

[**R4-2320261**](file:///D:\RAN4%23109\Docs\R4-2320261.zip) **On Network energy savings conformance testing**

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

**Decision: Noted.**

#### 8.34.3 RRM core requirements

#### 8.34.4 RRM performance requirements

#### 8.34.5 UE demodulation performance and CSI requirements

#### 8.34.6 Moderator summary and conclusions

[**R4-2318153**](file:///D:\RAN4%23109\Docs\R4-2318153.zip) **Topic summary for [109][147] Netw\_Energy\_NR**

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

**Abstract:**

[109][100] Main Session AI 8.34, 8.34.1, 8.34.2

**2nd Round**

Chair: The RF core part for this WI is completed.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321824**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321824.zip) **WF on NES RF requirements**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 8.35 NR Support for UAV

#### 8.35.1 General aspects (big CR)

[**R4-2319588**](file:///D:\RAN4%23109\Docs\R4-2319588.zip) **Aerial UE - NR definition update**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution proposes some updates of Aerial UE definitions for LTE and NR

**Decision: Noted.**

[**R4-2320734**](file:///D:\RAN4%23109\Docs\R4-2320734.zip) **Clarification of the applicability of NS\_UAV\_01 for aerial UEs**

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

**Decision: Noted.**

[**R4-2320836**](file:///D:\RAN4%23109\Docs\R4-2320836.zip) **Discussion on UAV operating bands**

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

**Abstract:**

In this contribution we provide discussion on UAV operating bands in relation to the content of CRs for E-UTRA and NR UE specifications.

**Decision: Noted.**

**Big CR/draft CR**

[**R4-2319587**](file:///D:\RAN4%23109\Docs\R4-2319587.zip) **Running CR to TS 38.101-1 - Introduction of Aerial UEs support**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1909 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Nokia, Huawei*

**Abstract:**

This running CR is based on RAN4 agreements made in this and previous meetings, introducing a new Aerial UE type and considering ECC Decision(22)07

**Decision: Revised to** [**R4-2321742**](file:///D:\RAN4%23109\Docs\R4-2321742.zip) **(from** [**R4-2319587**](file:///D:\RAN4%23109\Docs\R4-2319587.zip)**).**

[**R4-2321742**](file:///D:\RAN4%23109\Docs\R4-2321742.zip) **Running CR to TS 38.101-1 - Introduction of Aerial UEs support**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1909 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Nokia, Huawei, Murata, Qualcomm*

**Abstract:**

This running CR is based on RAN4 agreements made in this and previous meetings, introducing a new Aerial UE type and considering ECC Decision(22)07

**Decision: Revised to R4-2321991 (from R4-2321742).**

[**R4-2321991**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321991.zip) **Running CR to TS 38.101-1 - Introduction of Aerial UEs support**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1909 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Nokia, Huawei, Murata, Qualcomm*

**Abstract:**

This running CR is based on RAN4 agreements made in this and previous meetings, introducing a new Aerial UE type and considering ECC Decision(22)07

**Decision: Revised to R4-2322011 (from R4-2321991).**

[**R4-2322011**](ftp://10.10.10.10/ftp/tsg_ran/WG4_Radio/TSGR4_109/Inbox/R4-2322011.zip) **Running CR to TS 38.101-1 - Introduction of Aerial UEs support**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1909 rev Cat: B (Rel-18)  
  
 Source: Ericsson, Nokia, Huawei, Murata, Qualcomm*

**Abstract:**

This running CR is based on RAN4 agreements made in this and previous meetings, introducing a new Aerial UE type and considering ECC Decision(22)07

**Decision: Agreed.**

[**R4-2320837**](file:///D:\RAN4%23109\Docs\R4-2320837.zip) **Draft CR to TS 38.101-1: harmonized MFCN bands for UAV operation in ECC countries, Rel-18**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on related discussion, in this draft CR we provide NR UAV operating bands for communications in the bands 703-733 MHz, 832-862 MHz, 880-915 MHz, 1710-1785 MHz, 1920-1980 MHz, 2500-2570 MHz and 2570-2620 MHz harmonised for MFCN in ECC countries based

**Decision: Not pursued.**

[**R4-2321743**](file:///D:\RAN4%23109\Docs\R4-2321743.zip) **Draft CR to TS 38.101-1: harmonized MFCN bands for UAV operation in ECC countries, Rel-18**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on related discussion, in this draft CR we provide NR UAV operating bands for communications in the bands 703-733 MHz, 832-862 MHz, 880-915 MHz, 1710-1785 MHz, 1920-1980 MHz, 2500-2570 MHz and 2570-2620 MHz harmonised for MFCN in ECC countries based

**Decision: Withdrawn.**

**LS**

[**R4-2320839**](file:///D:\RAN4%23109\Docs\R4-2320839.zip) **draft LS on the UAV OOBE implementation for MFCN harmonized bands**

*Type: LS out For: Approval  
 to ETSI TC MSG/TFES, 3GPP TSG RAN, cc 3GPP TSG SA, 3GPP RAN WG2, 3GPP RAN WG5, 3GPP SA WG2, 3GPP CT1, GSMA, ERMTG AERO  
 Source: Huawei, HiSilicon*

**Abstract:**

In relation to the LS sent by 3GPP TSG RAN in RP-230804 (reply to RP-230026 from ETSI TC MSG/TFES), 3GPP RAN WG4 would like to inform that the requested Out-Of-Band Emission (OOBE) limits for UAV were implemented into E UTRA UE RF and NR UE RF specificati

**Decision: Noted.**

#### 8.35.2 Necessary UE types and additional OOBE requirements for aerial UEs (resubmitted CR)

[**R4-2318810**](file:///D:\RAN4%23109\Docs\R4-2318810.zip) **UAV AMPR comparison CP-OFDMA**

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

**Decision: Noted.**

[**R4-2320027**](file:///D:\RAN4%23109\Docs\R4-2320027.zip) **On power back off for aerial NR UEs**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**Draft CR**

[**R4-2320028**](file:///D:\RAN4%23109\Docs\R4-2320028.zip) **draftCR for remaining open issues for power back off for aerial NR UEs**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to** [**R4-2321744**](file:///D:\RAN4%23109\Docs\R4-2321744.zip) **(from** [**R4-2320028**](file:///D:\RAN4%23109\Docs\R4-2320028.zip)**).**

**[R4-2321744](file:///D:\\RAN4%23109\\Docs\\R4-2321744.zip) draftCR for remaining open issues for power back off for aerial NR UEs**

*Type: draftCR For: Endorsement  
 38.101-1 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

#### 8.35.3 Moderator summary and conclusions

[**R4-2318154**](file:///D:\RAN4%23109\Docs\R4-2318154.zip) **Topic summary for [109][148] NR\_LTE\_UAV**

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

**Abstract:**

[109][100] Main Session AI 8.35, AI 9.7

2nd Round:

Chair: WI can be closed.

**Decision: Noted.**

**Discussions of issues and conclusions in the first round**

### 8.36 Enhancement of NR dynamic spectrum sharing

## 9 Rel-18 on-going work Items for LTE

### 9.1 Rel-18 LTE-Advanced Carrier Aggregation for x bands (2<=x<= 6) DL with y bands (y=1, 2) UL

#### 9.1.1 Rapporteur input (WID/TR/big CR)

**Big CR**

**[R4-2320515](file:///D:\\RAN4%23109\\Docs\\R4-2320515.zip) Draft BigCr to TS 36.101: Introduction of completed new LTE-A CA combinations**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6027 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2321740**](file:///D:\RAN4%23109\Docs\R4-2321740.zip) **(from** [**R4-2320515**](file:///D:\RAN4%23109\Docs\R4-2320515.zip)**).**

[**R4-2321740**](file:///D:\RAN4%23109\Docs\R4-2321740.zip) **Draft BigCr to TS 36.101: Introduction of completed new LTE-A CA combinations**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6027 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**[R4-2318726](file:///D:\\RAN4%23109\\Docs\\R4-2318726.zip) Big CR on Introduction of completed R18 x(x<=6) DL y(y<=2) UL CA band combinations to TS 36.101**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6025 rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Abstract:**

Note: Change request number on CR coversheet for TDoc [R4-2318726](file:///D:\RAN4%23109\Docs\R4-2318726.zip) missing on and should be value : 6025.

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

**TR**

[**R4-2318728**](file:///D:\RAN4%23109\Docs\R4-2318728.zip) **TR 36.718-02-01 LTE-A CA for x(x=123456) DL y(y=12) UL**

*Type: WID revised For: Endorsement  
 Source: Huawei Technologies France*

**Decision: Withdrawn.**

**Revised WID**

[**R4-2318727**](file:///D:\RAN4%23109\Docs\R4-2318727.zip) **Revised WID Rel-18 LTE-A CA for x(x<=6) DL y(y<=2) UL**

*Type: WID revised For: Endorsement  
 Source: Huawei Technologies France*

**Decision: Endorsed.**

#### 9.1.2 UE RF requirements for 1 UL

##### 9.1.2.1 Requirements with specific issues

##### 9.1.2.2 Requirements without specific issues

**Draft CR**

[**R4-2319619**](file:///D:\RAN4%23109\Docs\R4-2319619.zip) **Draft CR for TS 36.101 to add CA\_1-1-20-28 configuration**

*Type: draftCR For: Endorsement  
 36.101 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

#### 9.1.3 UE RF requirements for 2UL

##### 9.1.3.1 Requirements with specific issues

##### 9.1.3.2 Requirements without specific issues

#### 9.1.4 Moderator summary and conclusions

[**R4-2318113**](file:///D:\RAN4%23109\Docs\R4-2318113.zip) **Topic summary for [109][107] LTE\_Baskets**

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

**Abstract:**

[109][100] Main Session AI 9.1

**Decision: Noted.**

### 9.2 Additional LTE bands for UE categories M1/M2/NB1/NB2 in Rel-18

#### 9.2.1 Rapporteur input (WID/TR/big CR)

#### 9.2.2 UE RF requirements

#### 9.2.3 BS RF and MSR requirements

### 9.3 Introduction of the Extended L-band (UL 1668-1675, DL 1518-1525) for IoT NTN

#### 9.3.1 General aspects (TR)

#### 9.3.2 Band definition and system parameters

#### 9.3.3 UE RF requirements (resubmitted CR)

[**R4-2318362**](file:///D:\RAN4%23109\Docs\R4-2318362.zip) **ETSI blocking requirement for IoT NTN in extended L band**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

[**R4-2319561**](file:///D:\RAN4%23109\Docs\R4-2319561.zip) **Discussion on UE RF requirements for the Extended L-band**

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

**Decision: Noted.**

[**R4-2320180**](file:///D:\RAN4%23109\Docs\R4-2320180.zip) **Discussion on UE RF blocking requirements for NTN Extended L-band**

*Type: discussion For: Decision  
 Source: Inmarsat, Viasat*

**Decision: Noted.**

[**R4-2320646**](file:///D:\RAN4%23109\Docs\R4-2320646.zip) **Co-existence between Extended L-band and TN networks**

*Type: other For: Approval  
 Source: Qualcomm Inc.*

**Decision: Noted.**

**CR**

[**R4-2319562**](file:///D:\RAN4%23109\Docs\R4-2319562.zip) **CR to TS36.102 Introduction of the Extended L-band**

*Type: CR For: Agreement  
 36.102 v18.3.0 CR-0023 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2321812**](file:///D:\RAN4%23109\Docs\R4-2321812.zip) **(from** [**R4-2319562**](file:///D:\RAN4%23109\Docs\R4-2319562.zip)**).**

**[R4-2321812](file:///D:\\RAN4%23109\\Docs\\R4-2321812.zip) CR to TS36.102 Introduction of the Extended L-band**

*Type: CR For: Agreement  
 36.102 v18.3.0 CR-0023 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 9.3.4 SAN RF requirements (resubmitted CR)

**CR**

[**R4-2319563**](file:///D:\RAN4%23109\Docs\R4-2319563.zip) **CR to TS36.108 Introduction of the Extended L-band**

*Type: CR For: Agreement  
 36.108 v18.3.0 CR-0014 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 9.3.5 RRM core requirements (resubmitted CR)

**CR**

[**R4-2319564**](file:///D:\RAN4%23109\Docs\R4-2319564.zip) **CR to TS36.133 Introduction of the Extended L-band**

*Type: CR For: Agreement  
 36.133 v18.3.1 CR-7258 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 9.3.6 Moderator summary and conclusions

[**R4-2318126**](file:///D:\RAN4%23109\Docs\R4-2318126.zip) **Topic summary for [109][120] IoT\_NTN\_extLband**

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

**Abstract:**

[109][100] Main Session AI 9.3

**2nd Round:**

Chair: The WI may be extended.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321813**](file:///D:\RAN4%23109\Docs\R4-2321813.zip) **WF on IoT\_NTN\_extLband**

*Type: other For: Approval  
 Source: Inmarsat*

**Decision: Approved.**

[**R4-2321814**](file:///D:\RAN4%23109\Docs\R4-2321814.zip) **LS on blocking requirements for extended L band**

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

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 9.4 Introduction of a new FDD band (L+S band) for IoT NTN operation

#### 9.4.1 General aspects (TR)

[**R4-2318707**](file:///D:\RAN4%23109\Docs\R4-2318707.zip) **Draft TR 36.764 for IoT NTN bands v0.0.5**

*Type: draft TR For: Agreement  
 36.764 v0.0.5 CR- rev Cat: (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Revised to R4-2321959 (from R4-2318707).**

**[R4-2321959](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321959.zip) Draft TR 36.764 for IoT NTN bands v0.0.5**

*Type: draft TR For: Agreement  
 36.764 v0.0.6 CR- rev Cat: (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Agreed.**

#### 9.4.2 Band definition and system parameters

#### 9.4.3 UE RF requirements (resubmitted CR)

[**R4-2318363**](file:///D:\RAN4%23109\Docs\R4-2318363.zip) **Analysis on ETSI emission requirement for NB-IoT in IoT NTN band b254**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Revised to** [**R4-2321798**](file:///D:\RAN4%23109\Docs\R4-2321798.zip) **(from** [**R4-2318363**](file:///D:\RAN4%23109\Docs\R4-2318363.zip)**).**

[**R4-2321798**](file:///D:\RAN4%23109\Docs\R4-2321798.zip) **Analysis on ETSI emission requirement for NB-IoT in IoT NTN band b254**

*Type: other For: Discussion  
 Source: Sony*

**Decision: Noted.**

[**R4-2318708**](file:///D:\RAN4%23109\Docs\R4-2318708.zip) **Further discussion on UE RF requirements for B254 for IoT NTN operation**

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

**Decision: Noted.**

[**R4-2319558**](file:///D:\RAN4%23109\Docs\R4-2319558.zip) **Discussion on UE RF requirements for FDD band (L+S band) for IoT NTN operation**

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

**Decision: Noted.**

**TP**

[**R4-2318709**](file:///D:\RAN4%23109\Docs\R4-2318709.zip) **TP on A-MPR evaluation results for B254 for IoT NTN operation**

*Type: other For: Endorsement  
 Source: MediaTek Inc.*

**Decision: Revised to** [**R4-2321815**](file:///D:\RAN4%23109\Docs\R4-2321815.zip) **(from** [**R4-2318709**](file:///D:\RAN4%23109\Docs\R4-2318709.zip)**).**

[**R4-2321815**](file:///D:\RAN4%23109\Docs\R4-2321815.zip) **TP on A-MPR evaluation results for B254 for IoT NTN operation**

*Type: other For: Endorsement  
 Source: MediaTek Inc.*

**Decision: Approved.**

**Big CR/draft CRs/CRs**

[**R4-2318704**](file:///D:\RAN4%23109\Docs\R4-2318704.zip) **Running draftCR to TS 36.102 on introducing L+S FDD band for IoT NTN operation**

*Type: draftCR For: Endorsement  
 36.102 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Not pursued.**

[**R4-2318705**](file:///D:\RAN4%23109\Docs\R4-2318705.zip) **CR to TS 36.102 on intrdoucing L+S FDD band for IoT NTN operation**

*Type: CR For: Agreement  
 36.102 v18.3.0 CR-0021 rev Cat: B (Rel-18)  
  
 Source: MediaTek Inc., Apple, GlobalStar*

**Decision: Agreed.**

[**R4-2318706**](file:///D:\RAN4%23109\Docs\R4-2318706.zip) **DraftCR to TS 36.102 on A-MPR for B254 for IoT NTN operation**

*Type: draftCR For: Endorsement  
 36.102 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Revised to** [**R4-2321816**](file:///D:\RAN4%23109\Docs\R4-2321816.zip) **(from** [**R4-2318706**](file:///D:\RAN4%23109\Docs\R4-2318706.zip)**).**

**[R4-2321816](file:///D:\\RAN4%23109\\Docs\\R4-2321816.zip) DraftCR to TS 36.102 on A-MPR for B254 for IoT NTN operation**

*Type: draftCR For: Endorsement  
 36.102 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Endorsed.**

#### 9.4.4 SAN RF requirements (resubmitted CR)

**CR**

[**R4-2319559**](file:///D:\RAN4%23109\Docs\R4-2319559.zip) **CR to TS36.108 Introduction of a new FDD band (L+S band) for IoT NTN operation**

*Type: CR For: Agreement  
 36.108 v18.3.0 CR-0013 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 9.4.5 RRM core requirements (resubmitted CR)

**CR**

[**R4-2319560**](file:///D:\RAN4%23109\Docs\R4-2319560.zip) **CR to TS36.133 Introduction of a new FDD band (L+S band) for IoT NTN operation**

*Type: CR For: Agreement  
 36.133 v18.3.1 CR-7257 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 9.4.6 Moderator summary and conclusions

[**R4-2318127**](file:///D:\RAN4%23109\Docs\R4-2318127.zip) **Topic summary for [109][121] IoT\_NTN\_FDD\_LS\_band**

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

**Abstract:**

[109][100] Main Session AI 9.4

**2nd Round:**

Chair: The RF core part work for this WI is completed.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321817**](file:///D:\RAN4%23109\Docs\R4-2321817.zip) **WF on IoT\_NTN\_FDD\_LS\_band**

*Type: other For: Approval  
 Source: Mediatek*

Qualcomm: will we need send LS to ETSI.

Apple: somehow it needs correction for the actions. We should not depend on output of ETSI.

**Conclusions:** for how to handle ETSI emission requirements for B254, RAN4 won’t depend on the output of ETSI and can have further discussions.

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 9.5 High Power UE (Power Class 2) for LTE FDD Band 14

#### 9.5.1 General aspects (TR)

**TR**

[**R4-2318087**](file:///D:\RAN4%23109\Docs\R4-2318087.zip) **TR 36.770 v.0.1.0**

*Type: draft TR For: Agreement  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T*

**Abstract:**

Post Meeting Document to capture approved TPs at RAN#109.

**Decision: Agreed.**

**TP**

[**R4-2318088**](file:///D:\RAN4%23109\Docs\R4-2318088.zip) **TP for TR 36.770 Scope and Background**

*Type: pCR For: Approval  
 36.770 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet*

**Decision: Approved.**

#### 9.5.2 UE RF requirements

[**R4-2319028**](file:///D:\RAN4%23109\Docs\R4-2319028.zip) **Discussion on the maximum output power and tolerance of band 14**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

**Draft CR**

[**R4-2319029**](file:///D:\RAN4%23109\Docs\R4-2319029.zip) **Draft CR on Introduction of power class 2 UE in Band 14**

*Type: draftCR For: Endorsement  
 36.101 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: vivo*

**Decision: Not pursued.**

##### 9.5.2.1 Tx requirements

**TPs**

[**R4-2318089**](file:///D:\RAN4%23109\Docs\R4-2318089.zip) **TP for TR 36.770 SAR Scheme**

*Type: pCR For: Approval  
 36.770 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet*

**Decision: Approved.**

[**R4-2318090**](file:///D:\RAN4%23109\Docs\R4-2318090.zip) **TP for TR 36.770 UE maximum output power**

*Type: pCR For: Approval  
 36.770 v0.0.1 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet*

**Decision: Noted.**

##### 9.5.2.2 Rx requirements

#### 9.5.3 Release independency

[**R4-2319030**](file:///D:\RAN4%23109\Docs\R4-2319030.zip) **Discussion on the release independency of band 14 PC2 UE**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

**Draft CR**

[**R4-2319031**](file:///D:\RAN4%23109\Docs\R4-2319031.zip) **Draft CR on the release independency of band 14 PC2 UE**

*Type: draftCR For: Endorsement  
 36.307 v18.2.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

#### 9.5.4 Moderator summary and conclusions

[**R4-2318128**](file:///D:\RAN4%23109\Docs\R4-2318128.zip) **Topic summary for [109][122] HPUE\_LTE\_FDD\_B14**

*Type: other For: Information  
 Source: Moderator (AT&T)*

**Abstract:**

[109][100] Main Session AI 9.5

**2nd Round:**

Chair: This WI needs be extended.

**Decision: Noted.**

**New allocated Tdocs**

[**R4-2321716**](file:///D:\RAN4%23109\Docs\R4-2321716.zip) **WF on HPUE\_LTE\_FDD\_B14**

*Type: other For: Approval  
 Source: AT&T*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

### 9.6 IoT (Internet of Things) NTN (non-terrestrial network) enhancements

#### 9.6.1 General aspects

#### 9.6.2 UE RF requirements

#### 9.6.3 SAN RF requirements

#### 9.6.4 RRM core requirements

#### 9.6.5 RRM performance requirements

#### 9.6.6 Demodulation performance requirements

#### 9.6.7 Moderator summary and conclusions

### 9.7 Enhanced LTE Support for UAV

#### 9.7.1 General aspects

[**R4-2319589**](file:///D:\RAN4%23109\Docs\R4-2319589.zip) **Aerial UE - LTE definition update**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution proposes some updates of Aerial UE definitions for LTE and NR

**Decision: Noted.**

**LS**

[**R4-2320735**](file:///D:\RAN4%23109\Docs\R4-2320735.zip) **LS response to RAN2 and Clarifications on the mapping of NS\_UAV for LTE**

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

**Decision: Noted.**

[**R4-2321745**](file:///D:\RAN4%23109\Docs\R4-2321745.zip) **LS response to RAN2 and Clarifications on the mapping of NS\_UAV for LTE**

*Type: LS out For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Withdrawn.**

**Draft CR**

[**R4-2320838**](file:///D:\RAN4%23109\Docs\R4-2320838.zip) **Draft CR to TS 36.101: harmonized MFCN bands for UAV operation in ECC countries, Rel-18**

*Type: draftCR For: Endorsement  
 36.101 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on related discussion, in this draft CR we provide E-UTRA UAV operating bands for communications in the bands 703-733 MHz, 832-862 MHz, 880-915 MHz, 1710-1785 MHz, 1920-1980 MHz, 2500-2570 MHz and 2570-2620 MHz harmonised for MFCN in ECC countries b

**Decision: Not pursued.**

**[R4-2321746](file:///D:\\RAN4%23109\\Docs\\R4-2321746.zip) Draft CR to TS 36.101: harmonized MFCN bands for UAV operation in ECC countries, Rel-18**

*Type: draftCR For: Endorsement  
 36.101 v18.3.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on related discussion, in this draft CR we provide E-UTRA UAV operating bands for communications in the bands 703-733 MHz, 832-862 MHz, 880-915 MHz, 1710-1785 MHz, 1920-1980 MHz, 2500-2570 MHz and 2570-2620 MHz harmonised for MFCN in ECC countries b

**Decision: Withdrawn.**

[**R4-2322001**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2322001.zip) **Big CR for introduction of aerial UE for LTE**

*Type: CR For: Agreement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-1x)  
  
 Source: Nokia, Huawei, Ericsson, Qualcomm, Murata*

**Decision: Agreed.**

#### 9.7.2 Necessary UE types and additional OOBE requirements for aerial UEs (resubmitted CR)

[**R4-2320029**](file:///D:\RAN4%23109\Docs\R4-2320029.zip) **On power back off for aerial LTE UEs**

*Type: discussion For: Discussion  
 36.101 v CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**Draft CR/CR**

[**R4-2320030**](file:///D:\RAN4%23109\Docs\R4-2320030.zip) **draftCR for remaining open issues for power back off for aerial LTE UEs**

*Type: draftCR For: Endorsement  
 36.101 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to** [**R4-2321747**](file:///D:\RAN4%23109\Docs\R4-2321747.zip) **(from** [**R4-2320030**](file:///D:\RAN4%23109\Docs\R4-2320030.zip)**).**

[**R4-2321747**](file:///D:\RAN4%23109\Docs\R4-2321747.zip) **draftCR for remaining open issues for power back off for aerial LTE UEs**

*Type: draftCR For: Endorsement  
 36.101 v18.3.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

[**R4-2320835**](file:///D:\RAN4%23109\Docs\R4-2320835.zip) **CR to TS 36.101: Additional OOBE requirements for Aerial Ues, Rel-18**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6028 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the Draft CR which was Endorsed in [R4-2317628](file:///D:\RAN4%23109\Docs\R4-2317628.zip) during RAN4#108bis meeting, in this contribution we provide formal CR.

**Decision: Merged (with R4-23xxxxx).**

**[R4-2321748](file:///D:\\RAN4%23109\\Docs\\R4-2321748.zip) CR to TS 36.101: Additional OOBE requirements for Aerial Ues, Rel-18**

*Type: CR For: Agreement  
 36.101 v18.3.0 CR-6028 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the Draft CR which was Endorsed in [R4-2317628](file:///D:\RAN4%23109\Docs\R4-2317628.zip) during RAN4#108bis meeting, in this contribution we provide formal CR.

**Decision: Withdrawn.**

#### 9.7.3 Moderator summary and conclusions

**2nd Round:**

Chair: WI can be closed.

## 10 Rel-18 feature list

**Topic summary**

[**R4-2318156**](file:///D:\RAN4%23109\Docs\R4-2318156.zip) **Topic summary for [109][150] NR\_LTE\_Rel-18\_feature\_list**

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

**Abstract:**

[109][100] Main Session AI 10

Intel: timeline is important. We need send LS to RAN2 in this meeting.

Chair: the plan is to approve the first versio of feature list by Wednesday and approve the second one by Friday according to the request from RAN2 chair.

Moderator: the draft feature list will be provided and please companies contact moderators if there is any comment.

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

**New allocated Tdocs**

**[R4-2321729](file:///D:\\RAN4%23109\\Docs\\R4-2321729.zip) RAN4 UE feature list for Rel-18**

*Type: other For: Approval  
 Source: CMCC*

**Decision: Revised to** [**R4-2321797**](file:///D:\RAN4%23109\Docs\R4-2321797.zip) **(from** [**R4-2321729**](file:///D:\RAN4%23109\Docs\R4-2321729.zip)**).**

[**R4-2321797**](file:///D:\RAN4%23109\Docs\R4-2321797.zip) **RAN4 UE feature list for Rel-18**

*Type: other For: Approval  
 Source: CMCC*

**Decision: Approved.**

[**R4-2321730**](file:///D:\RAN4%23109\Docs\R4-2321730.zip) **LS on RAN4 UE feature list for Rel-18,**

*Type: LS out For: Approval  
 Source:*

**Abstract:**

to RAN2 cc RAN1

**Decision: Approved.**

[**R4-2321822**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321822.zip) **RAN4 UE feature list for Rel-18 (version 2)**

*Type: other For: Approval  
 Source:*

**Decision: Revised to R4-2321956 (from R4-2321822).**

[**R4-2321956**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321956.zip) **RAN4 UE feature list for Rel-18 (version 2)**

*Type: other For: Approval  
 Source:*

**Decision: Revised to R4-2321993 (from R4-2321956).**

[**R4-2321993**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321993.zip) **RAN4 UE feature list for Rel-18 (version 2)**

*Type: other For: Approval  
 Source:*

**Decision: Approved.**

[**R4-2321823**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321823.zip) **LS on RAN4 UE feature list for Rel-18 (version 2)**

*Type: other For: Approval  
 Source:*

**Decision: Approved.**

**Discussions of issues and conclusions in the first round**

**Discussion papers**

[**R4-2318344**](file:///D:\RAN4%23109\Docs\R4-2318344.zip) **Discussion on Rel-18 feature list**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2318400**](file:///D:\RAN4%23109\Docs\R4-2318400.zip) **Input to Rel-18 RAN4 UE feature list for Rel-18 NR\_MIMO\_evo\_DL\_UL and NR\_HST\_FR2\_enh WI**

*Type: discussion For: Information  
 Source: Samsung*

**Decision: Noted.**

[**R4-2318465**](file:///D:\RAN4%23109\Docs\R4-2318465.zip) **Discussion on Rel-18 feature list**

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

**Decision: Noted.**

[**R4-2318487**](file:///D:\RAN4%23109\Docs\R4-2318487.zip) **Rel-18 RAN4 UE feature list for NR\_MC\_enh**

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

**Abstract:**

The same content is submitted in AI for NR\_MC\_enh according to Chairman’s guidance.

**Decision: Noted.**

[**R4-2318488**](file:///D:\RAN4%23109\Docs\R4-2318488.zip) **Proposals on Rel-18 feature list**

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

**Abstract:**

This contribution provides our proposals on the Rel-18 feature list regarding the WI NR\_RF\_FR2\_req\_Ph3 where Nokia is the rapporteur.

**Decision: Noted.**

[**R4-2318498**](file:///D:\RAN4%23109\Docs\R4-2318498.zip) **Rel-18 RAN4 UE feature list for NR**

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

**Decision: Noted.**

[**R4-2318703**](file:///D:\RAN4%23109\Docs\R4-2318703.zip) **On Rel-18 UE feature list**

*Type: discussion For: Decision  
 Source: Apple*

**Decision: Noted.**

[**R4-2318898**](file:///D:\RAN4%23109\Docs\R4-2318898.zip) **UE Feature List**

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

**Decision: Noted.**

[**R4-2318918**](file:///D:\RAN4%23109\Docs\R4-2318918.zip) **Rel-18 RAN4 ATG UE feature list for NR**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2318976**](file:///D:\RAN4%23109\Docs\R4-2318976.zip) **Discussions on Rel-18 UE feature list**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2319438**](file:///D:\RAN4%23109\Docs\R4-2319438.zip) **Input to the Rel-18 RAN4 UE feature list for NR**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution contains proposed descriptions for the RAN4 feature set

**Decision: Noted.**

[**R4-2319811**](file:///D:\RAN4%23109\Docs\R4-2319811.zip) **Views on RAN4 Rel-18 UE feature list**

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

**Decision: Noted.**

[**R4-2319912**](file:///D:\RAN4%23109\Docs\R4-2319912.zip) **Rel-18 RAN4 UE feature list for 3T4R and eSL**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320349**](file:///D:\RAN4%23109\Docs\R4-2320349.zip) **Initial summary of Rel-18 RAN4 UE feature list for NR**

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

**Decision: Noted.**

## 11 Liaison and output to other groups

### 11.1 R18 related

#### 11.1.1 LS on combination of HST and RRM relaxation (R2-2311435)

#### 11.1.2 LS on the CA Aggregated BW capability signaling by the UE (R2-2311440)

[**R4-2318438**](file:///D:\RAN4%23109\Docs\R4-2318438.zip) **Views on RAN2 LS on the CA aggregated BW capability**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318535**](file:///D:\RAN4%23109\Docs\R4-2318535.zip) **Discussion on ReplyLS on the CA Aggregated BW capability signaling by the UE**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Noted.**

[**R4-2319895**](file:///D:\RAN4%23109\Docs\R4-2319895.zip) **Discussion on how to clarify the RAN2's question about max. aggregated BW**

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

**Decision: Noted.**

[**R4-2319903**](file:///D:\RAN4%23109\Docs\R4-2319903.zip) **R18 reply LS on CA Aggregated BW capability signaling**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320393**](file:///D:\RAN4%23109\Docs\R4-2320393.zip) **Discussion on CA aggregated BW capability**

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

**Decision: Noted.**

[**R4-2320447**](file:///D:\RAN4%23109\Docs\R4-2320447.zip) **Discussion on the Maximum Aggregated Bandwidth capability signalling LS**

*Type: discussion For: Approval  
 Source: T-Mobile USA*

**Decision: Noted.**

**LS**

[**R4-2318536**](file:///D:\RAN4%23109\Docs\R4-2318536.zip) **ReplyLS on the CA Aggregated BW capability signaling by the UE**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia*

**Decision: Revised to R4-2321910 (from R4-2318536).**

[**R4-2321910**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321910.zip) **ReplyLS on the CA Aggregated BW capability signaling by the UE**

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

**Decision: Revised to R4-2322003 (from R4-2321910).**

[**R4-2322003**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2322003.zip) **ReplyLS on the CA Aggregated BW capability signaling by the UE**

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

**Decision: Approved.**

[**R4-2318717**](file:///D:\RAN4%23109\Docs\R4-2318717.zip) **Draft reply LS on the CA Aggregated BW capability signaling by the UE**

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

**Decision: Noted.**

[**R4-2319106**](file:///D:\RAN4%23109\Docs\R4-2319106.zip) **[Draft] Reply LS on the CA aggregated BW capability**

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

**Decision: Noted.**

[**R4-2319896**](file:///D:\RAN4%23109\Docs\R4-2319896.zip) **Replied LS on the CA Aggregated BW capability signaling by the UE**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

### 11.2 R17 related

#### 11.2.1 Applicability of pre-configured measurement gaps for RedCap UE (R3-233478)

#### 11.2.2 Monitoring of paging occasions for CG-SDT with HD-FDD Redcap UEs (R2-2304562)

#### 11.2.3 LS on CG-SDT RRM test procedure (R5-235340)

#### 11.2.4 Reply LS on monitoring of paging occasions for CG-SDT with HD-FDD Redcap UEs (R2-2311424)

#### 11.2.5 Power class related topics

[**R4-2318038**](file:///D:\RAN4%23109\Docs\R4-2318038.zip) **On R2-2211023 on ue-PowerClassPerBandPerBC-r17**

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

**Abstract:**

This contribution addresses questions enclosed in R2-2211023.

**Decision: Noted.**

[**R4-2318039**](file:///D:\RAN4%23109\Docs\R4-2318039.zip) **Power Class in UL intra band CA within UL inter band CA**

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

**Abstract:**

This paper mainly focuses on addressing to identify an achievable highest power for Intra band contiguous UL CA part within UL inter-band CA. This is needed to apply higherPowerLimit-r17 to UL inter-band CA including intra band contiguous UL CA, which has

**Decision: Noted.**

[**R4-2318439**](file:///D:\RAN4%23109\Docs\R4-2318439.zip) **Views on RAN2 LS on the ue-PowerClassPerBandPerBC-r17(R4 16-8)**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318440**](file:///D:\RAN4%23109\Docs\R4-2318440.zip) **Views on RAN2 reply LS on higherPowerLimit capability for inter-band**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2318891**](file:///D:\RAN4%23109\Docs\R4-2318891.zip) **Discussion on reply LS on higher power limit capability for inter-band UL DC**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Xiaomi*

**Decision: Noted.**

[**R4-2319439**](file:///D:\RAN4%23109\Docs\R4-2319439.zip) **Proposed text for the Reply LS on the ue-PowerClassPerBandPerBC-r17**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose text for the Reply LS to RAN2 on the per-band-per-BC capability

**Decision: Noted.**

[**R4-2319440**](file:///D:\RAN4%23109\Docs\R4-2319440.zip) **On the extensions of the higherPowerLimit beyond UL CA**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we consider ambiguous power-class indications for band combinations.

**Decision: Noted.**

[**R4-2319725**](file:///D:\RAN4%23109\Docs\R4-2319725.zip) **Views on ue-PowerClassPerbandperBC-17 related power class IE applicability issues**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2319900**](file:///D:\RAN4%23109\Docs\R4-2319900.zip) **R17 power class applicability for inter-band CA**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2319901**](file:///D:\RAN4%23109\Docs\R4-2319901.zip) **R17 reply LS on highpowerlimit for NR DC**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2320647**](file:///D:\RAN4%23109\Docs\R4-2320647.zip) **Powerclasses and maximum output power**

*Type: other For: Approval  
 Source: Qualcomm Inc.*

**Decision: Noted.**

**LS out**

[**R4-2318037**](file:///D:\RAN4%23109\Docs\R4-2318037.zip) **Draft LS to R2-2311441 on higherPowerLimit-r17**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution addresses questions enclosed in R2-2311441

**Decision: Noted.**

[**R4-2318716**](file:///D:\RAN4%23109\Docs\R4-2318716.zip) **[Power\_Limit\_CA\_DC] Draft reply LS on higher power limit capability for inter-band UL DC**

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

**Decision: Noted.**

[**R4-2318960**](file:///D:\RAN4%23109\Docs\R4-2318960.zip) **[Draft] Reply LS on the reply of higher power limit capability for inter-band UL DC**

*Type: LS out For: Approval  
 to RAN2  
 Source: vivo*

**Decision: Noted.**

[**R4-2319107**](file:///D:\RAN4%23109\Docs\R4-2319107.zip) **[Draft] Reply LS on the ue-PowerClassPerBandPerBC-r17(R4 16-8)**

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

**Decision: Noted.**

[**R4-2319108**](file:///D:\RAN4%23109\Docs\R4-2319108.zip) **[Draft] Further reply LS on higherPowerLimit capability for inter-band**

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

**Decision: Revised to R4-2321905 (from R4-2319108).**

[**R4-2321905**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321905.zip) **[Draft] Further reply LS on higherPowerLimit capability for inter-band**

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

**Decision: Approved.**

[**R4-2319407**](file:///D:\RAN4%23109\Docs\R4-2319407.zip) **Reply LS on higher power limit capability for NR-DC**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung*

**Decision: Noted.**

[**R4-2319409**](file:///D:\RAN4%23109\Docs\R4-2319409.zip) **LS on further clarification for ue-PowerClassPerBandPerBC-r17**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung*

**Decision: Revised to R4-2321909 (from R4-2319409).**

[**R4-2321909**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2321909.zip) **LS on further clarification for ue-PowerClassPerBandPerBC-r17**

*Type: LS out For: Approval  
 to RAN2  
 Source: Samsung*

Huawei: we still have remaining issues and suggest to postpone it.

OPPO: share the similar view.

Ericsson: We have discussed it for one year. In RAN2 spec, there is actually three different ways to indicate the power class for a band. So different ways. We propose to address it once for all.

**Decision: Noted.**

**CRs**

[**R4-2320666**](file:///D:\RAN4%23109\Docs\R4-2320666.zip) **[NR\_RF\_FR1-Core] CR for TS38101-1 Clarifying applicable power classes for NR CA**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1967 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

[**R4-2320667**](file:///D:\RAN4%23109\Docs\R4-2320667.zip) **[NR\_RF\_FR1-Core] CR for TS38101-1 Clarifying applicable power classes for NR CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1968 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**Treat** [**R4-2319427**](file:///D:\RAN4%23109\Docs\R4-2319427.zip)**/9429 in [149] with tdocs under AI 11.2.5**

[**R4-2319427**](file:///D:\RAN4%23109\Docs\R4-2319427.zip) **[NR\_RF\_FR1-Core] Corrections to configured maximum power and MPR for serving cells of UL CA**

*Type: CR For: Agreement  
 38.101-1 v17.11.0 CR-1888 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the Pcmax,f,c for serving cells of a BC such that the PH reports become correct

Huawei: we have no enough time to discuss the CR.

**Decision: Not pursued.**

[**R4-2319428**](file:///D:\RAN4%23109\Docs\R4-2319428.zip) **[NR\_RF\_FR1-Core] Corrections to configured maximum power and MPR for serving cells of UL CA**

*Type: CR For: Agreement  
 38.101-1 v18.3.0 CR-1889 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the Pcmax,f,c for serving cells of a BC such that the PH reports become correct

**Decision: Not pursued.**

#### 11.2.6 Others

### 11.3 R15, R16 related

#### 11.3.1 LS on RRM test cases with testability issues (R5-233782)

#### 11.3.2 LS on SRS antenna switching for TDD-FDD band combinations (R1-2308582)

#### 11.3.3 Reply LS on intraBandENDC-Support (R2-2308855)

#### 11.3.4 Reply LS on update for “interBandMRDC-WithOverlapDL-Bands-r16” in 38.306 (R2-2309218)

#### 11.3.5 Reply LS on report quantity parameter setting for CQI reporting with 1Tx (R1-2310649)

#### 11.3.6 Reply LS on power scaling and PHR in 38.213 (R1-2310555)

[**R4-2318961**](file:///D:\RAN4%23109\Docs\R4-2318961.zip) **Discussion on the status of the power scaling issue**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

#### 11.3.7 Others

**LS out**

[**R4-2320545**](file:///D:\RAN4%23109\Docs\R4-2320545.zip) **Reply LS on applicability of requirements for RedCap UE**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

this paper, the questions in by RAN5 is discussed and proposal of LS is followed.

**Conclusion:** Stop discussion on LS Reply for this issue due to lack of consensus.

**Decision: Noted.**

### 11.4 Moderator summary and conclusions

[**R4-2318155**](file:///D:\RAN4%23109\Docs\R4-2318155.zip) **Topic summary for [109][149] NR\_reply\_LS\_UE\_RF**

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

**Abstract:**

[109][100] Main Session AI 11

**Decision: Noted.**

## 12 RAN task

### 12.1 NTN testing work for NGSO deployments

## 13 Revision of the Work Plan

There is 1 work plan under agenda item 9.6.5 which is provided below.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Type** | **For** | **Abstract** | **Agenda item** | **TDoc Status** | **Decision** |
| [**R4-2318075**](file:///D:\RAN4%23109\Docs\R4-2318075.zip) | Work Plan on RRM performance part for IoT NTN enhancements | MediaTek inc. | Work Plan | Approval |  | 9.6.5 | **available** |  |

There are 3 work plans under agenda item 8 which is provided below.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Type** | **For** | **Abstract** | **Agenda item** | **TDoc Status** | **Decision** |
| [**R4-2318830**](file:///D:\RAN4%23109\Docs\R4-2318830.zip) | RRM performance requirements for mobile IAB | Qualcomm Incorporated | Work Plan | Approval |  | 8.33.5 | **available** |  |
| [**R4-2319238**](file:///D:\RAN4%23109\Docs\R4-2319238.zip) | Work plan on RRM performance part for R18 MUSIM | vivo | Work Plan | Approval |  | 8.25.3 | **available** |  |
| [**R4-2319402**](file:///D:\RAN4%23109\Docs\R4-2319402.zip) | Work plan for RRM Performance of Rel-18 NR Sidelink relay | LG Electronics Inc. | Work Plan | Approval |  | 8.32.2 | **available** |  |

[**R4-2318480**](file:///D:\RAN4%23109\Docs\R4-2318480.zip) **Normative Topics of the Ku Band: A Gap Analysis**

*Type: discussion For: Information  
 Source: Intelsat*

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

[**R4-2320973**](file:///D:\RAN4%23109\Docs\R4-2320973.zip) **VSAT and Satellite parameters for Ku-band Scenario**

*Type: discussion For: Information  
 Source: THALES*

**Abstract:**

The current technical document aims to introduce Ku-band VSAT and Satellite parameters as future part of Rel-19. The goal of this document is to provide initial assumptions to use for coexistence scenarios and future requirement definition as part of NTN

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

## 14 Any other business

The 8 contributions below are proposals related to new potential RAN4 led items for Rel-19.

[**R4-2318589**](file:///D:\RAN4%23109\Docs\R4-2318589.zip) **R19 study on AI/ML based RRM enahncement**

*Type: SID new For: Information  
 Source: Apple*

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

[**R4-2318590**](file:///D:\RAN4%23109\Docs\R4-2318590.zip) **Motivation paper for R19 demod evolution WI**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2318659**](file:///D:\RAN4%23109\Docs\R4-2318659.zip) **Motivation paper for R19 RRM enhancement**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2319397**](file:///D:\RAN4%23109\Docs\R4-2319397.zip) **NR BS RF enhancements in Rel-19**

*Type: WID new For: Information  
 Source: Ericsson*

**Abstract:**

In this contribution we present some proposals for BS RF requirement evaluation to be included within RAN4 Rel-19 schedule.

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

[**R4-2320703**](file:///D:\RAN4%23109\Docs\R4-2320703.zip) **NR RRM enhancements in Rel-19**

*Type: WID new For: Information  
 Source: Ericsson*

**Abstract:**

Proposals for Rel-19 WI on RRM enhancements covering FR2 measurement delay reduction and UE power saving

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

[**R4-2320823**](file:///D:\RAN4%23109\Docs\R4-2320823.zip) **NR UE RF enhancements in Rel-19**

*Type: WID new For: Information  
 Source: Ericsson India Private Limited*

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

[**R4-2319913**](file:///D:\RAN4%23109\Docs\R4-2319913.zip) **Motivation of R19 3Tx enhancements**

*Type: other For: Information  
 Source: OPPO*

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

[**R4-2319914**](file:///D:\RAN4%23109\Docs\R4-2319914.zip) **draft WID for Rel-19 NR 3Tx enhancement**

*Type: WID new For: Information  
 Source: OPPO*

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

[**R4-2320350**](file:///D:\RAN4%23109\Docs\R4-2320350.zip) **Rel-19 RAN4-led topics**

*Type: other For: Information  
 Source: ZTE Corporation , Sanechips*

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

[**R4-2320351**](file:///D:\RAN4%23109\Docs\R4-2320351.zip) **Motivation of introduction of NR based AeroMacs system**

*Type: other For: Information  
 Source: ZTE Corporation , Sanechips*

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

[**R4-2320352**](file:///D:\RAN4%23109\Docs\R4-2320352.zip) **New WID on NR based AeroMACS**

*Type: WID new For: Information  
 Source: ZTE Corporation , Sanechips*

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

[**R4-2320494**](file:///D:\RAN4%23109\Docs\R4-2320494.zip) **WID on Introduction of 1.4 GHz Band**

*Type: WID new For: Information  
 Source: MidWave Wireless*

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

## 15 Close of the meeting

The RAN4 Chair Xizeng Dai (Huawei) formally closed the RAN4#109 meeting on Friday, 17/11/2023 at 16h00.

## Annex A: Contribution documents and status of block allocated tdocs

## Annex B: List of change requests

## Annex C: Outgoing liaision statements

## Annex D: List of agreed/approved new and revised Work Items

## Annex E: List of draft Technical Specifications and Reports

## Annex F: List of actions – Post-meeting

Report prepared by: MCC